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## Half Yearly EC Compliance Report Submission - APSEZ, Mundra - MSEZ 2014 (Apr'20 to Sep'20)

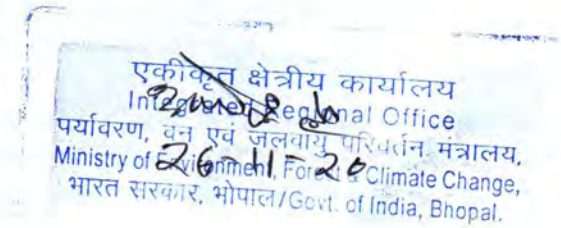
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Wed 11/25/2020 12:33 PM

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1 attachments (15 MB)

8. EC Compliance Report\_MSEZ-2014\_Apr'20 to Sep'20.pdf;





Ports and  
Logistics

APSEZL/EnvCell/2020-21/098

Date: 25.11.2020

To

**Deputy Director General of Forest (Central),**

Ministry of Environment, Forest and Climate Change,

Regional Office (WZ), E-5, Kendriya

Paryavaran Bhawan, Arera Colony,

Link Road No. – 3, Bhopal – 462 016.

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**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-2020 to September-2020 is being submitted through soft copy (e-mail communication).

Kindly consider above submission and acknowledge.

Thank you,

Yours Faithfully,

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

**Douglas Charles Smith**  
**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, Vadodara – 390 023
- 3) Member Secretary, GPCB – Head Office, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar – 382 010
- 4) The Director, 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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# Environmental Clearance Compliance Report



Multi Product SEZ,  
Mundra, Dist. Kutch, Gujarat

Adani Ports and SEZ Limited

For the period of  
April–2020 to September–2020

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</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'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

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

**F. No. 10-132/2008-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.

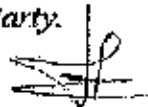
8. Further, Hon'ble Supreme Court video order dated 02.05.2014 in SLP 1526 of 2013 had ordered for stay of Ministry's letter dated 3.04.2014 addressed to Government of Gujarat to initiate legal action for the violation, also directed that the Ministry to complete the process of EC within eight weeks.

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. 1526/2011 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.*



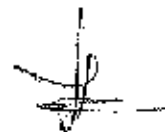
- (ix) *The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.*
- (x) *Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate 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 CCWB 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 fulfil 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 effluent 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 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.*
- (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'20  
To : Sep'20**

**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'20 To : Sep'20</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:

Facilities / Components Approved	Capacity	Status as on 30.09.2020
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.

Other utility developments and modification, as a part of SEZ, to facilitate various units coming as a part of SEZ are being done on continuous basis.

**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.

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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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.

APSEZ has been granted Environment and CRZ clearance for 'Expansion of notified Multi-product SEZ by adding 1840 Ha notified SEZ with existing approved area of 6641.2784 ha to make it 8481.2784 ha at Mundra vide letter no. F. No. 10-138/200E-IA.III, dated 12<sup>th</sup> February, 2020.

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.

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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### 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	Aanya Composites Private Limited		Under Construction
8	Raa Overseas Pvt. Ltd.		Not in Operation
9	M.D. Equipments	Engineering	Under Construction
10	Thermax Ltd.		In Operation
11	Oilfield Warehouse Services Pvt. Ltd.	Ware House	In Operation
12	Oilfield Warehouse Services LLP		Under Construction
13	Rudrax Terminal		Under Construction
14	Avesta Eng. Pvt. Ltd.	Engineering	Not in Operation
15	MD equipment		Under Construction
16	Alstom Bharat Forge Power Ltd. & Kalyani Alstom Power Ltd.		Under Construction
17	Dorf Ketel Specialty Catalyst Pvt. Ltd.	Chemical	In Operation
18	Oriental Carbon and Chemicals Ltd.		In Operation
19	Gujarat CREDO Alumina Chemicals Pvt. Ltd.		In Operation
20	Mundra Oil Pvt. Ltd.		In Operation
21	Garg Tubes Exports LLP		In Operation
22	Jasons Industries		In Operation
23	Seabird Marine Services Pvt. Ltd.	CFS	In Operation
24	Honeycomb Logistics Pvt. Ltd.		In Operation
25	All Cargo Global Logistics Ltd.		In Operation
26	Mundhra CFS		In Operation
27	Saurashtra Containers Pvt. Ltd.		In Operation
28	Transworld Terminals Pvt. Ltd.		In Operation
29	Mundra International Container Terminal (DP World)		In Operation
30	Central Warehousing Corp. Ltd.		In Operation
31	Maruti Suzuki India Limited (PDI Yard)	Pre Delivery Inspection Yard	In Operation
32	Britannia Industries Limited	Food Products	In Operation
33	Mundra Solar Photo Voltaic Ltd.	Electronics Manufacturing Cluster	In Operation
34	Mundra Solar Technopark Pvt. Ltd.		In Operation
35	Vishakha Renewable Pvt Ltd		In Operation
36	Vishakha Solar Films Pvt Ltd		In Operation
37	Vishakha Metals Pvt Ltd		In Operation
38	Empezar Logistics	Ware House	In Operation
39	Steinweige Sharaf		In Operation
40	Kerry Indev Logistic Pvt. Ltd.		In Operation
41	Fast Track CFS		In Operation
42	Adani Power (Mundra) Limited	Thermal Power Plant	In Operation
43	Samudra Township (including residential units, hospital, hotel, commercial complex, school etc.)	Social Infrastructure	In Operation
44	Mundra International Airport Pvt. Ltd.	Private Airstrip	In Operation
45	MPSEZ Utilities Pvt. Ltd.	Common Effluent Treatment Plant	In Operation

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

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.

Sr. No.	Conditions	Compliance Status as on 30.09.2020
<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 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>



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
		<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.</li> </ul> <p>The action plan for conservation of creeks and mangrove was submitted to GCZMA and MoEF&amp;CC for their final examination and recommendation. Presentation on the findings of the report was made to GCZMA committee on 4<sup>th</sup> October 2019 and the recommendation for the same has been received vide email dtd 22nd Sept 2020 from GCZMA with following conditions:</p> <ul style="list-style-type: none"> <li>✓ The APSEZL shall carry out annual compliance monitoring of the mangrove conservation area.</li> <li>✓ The APSEZL shall explore the possibility for taking necessary adequate measures to reduce the erosion near Bocha Island.</li> <li>✓ The approval of mangrove conservation plan shall not be considered as any permission under CRZ Notification for dredging activity.</li> <li>✓ There should not be blockage of any drainage line and free flow of water is to be maintained, as flushing of mangrove areas is very essential.</li> <li>✓ The APSEZL shall carry out mangrove monitoring every two</li> </ul>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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Sr. No.	Conditions	Compliance Status as on 30.09.2020
		<p>years and submit the data to Forest Department/GCZMA and MOEF&amp;CC, GOI.</p> <p>APSEZ is under the process of complying above recommendations - Inline to the compliance of the action plan "Monitoring of mangrove cover in Jan/Mar, 2020 using latest satellite images and validation with field observations", Work has already been already been assigned to NSCSM, for amount of INR. 23,56,000/- vide PO no 4800050718, dtd. 31<sup>st</sup> December 2019 and same is under progress.</p>
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>
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.	<p>Not applicable</p> <p>This reply covers condition no iv, v, vi.</p> <p>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&amp;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>.</p>
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.	<p>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&amp;CC vide letters dated 23.05.2016 and 07.11.2016. Copies of the said letters were submitted along with</p>
vi.	Any direction issued by	

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020												
	the MoEF with respect to the report submitted by Ms Sunita Narain Committee shall be complied with by the Proponent as applicable.	compliance submission for the period from Oct'16 to Mar'17. Further there are no directions from MoEF&CC.												
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.	<p>Complied.</p> <p>NEERI has been appointed to carry out the inspection study up to the year 2020 at a cost of INR 12 Lacs.</p> <p>Compliance report of the period from Apr'19 to Sep'19 was reviewed by NEERI. Accordingly the study undertaken during the period Oct'19 to Mar'20 and concluded that all the conditions stipulated in EC has been complied and details of the same were submitted along with last half yearly EC compliance report for the period Oct'19 to Mar'20. Due to COVID – 19 lockdown situation, they were unable to conduct the onsite audit during this compliance period.</p>												
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.	<p>Complied.</p> <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 5<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 CtO and CtE were submitted along with half yearly EC Compliance report for the Oct'18 to Mar'19 and there is no</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											

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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Sr. No.	Conditions	Compliance Status as on 30.09.2020
		further change.
ix.	<p>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>	<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 of creeks / rivers)</li> <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</p>

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Sr. No.	Conditions	Compliance Status as on 30.09.2020
		<p>hearing has been submitted to GCZMA vide letter dated 4<sup>th</sup> Jan 2019. 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> <p>The action plan for conservation of creeks and mangrove areas is prepared by NCSCM and the same was submitted to GCZMA and MoEF&amp;CC for their examination and recommendation. 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>Please refer specific condition no. ii above for further details.</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>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&amp;CC by APSEZ.</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.	<p>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.</p>	<p>Complied</p> <p>The action plan for conservation of creeks and mangrove areas is 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</li> </ul>

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Sr. No.	Conditions	Compliance Status as on 30.09.2020
		<p>velocity.</p> <p>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>Please refer specific condition no. ii above for further details.</p> <p>No development is carried out in the 'No Development Zone' (i.e. CRZ area of SEZ).</p>
xii.	<p>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>	<p>Point noted and will be complied</p> <p>The action plan for conservation of creeks and mangrove areas is prepared by NCSCM and the same was submitted to GCZMA and MoEF&amp;CC for their examination and recommendation.</p> <p>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>Please refer specific condition no. ii above for further details.</p> <p>Based on the outcome and findings of this study, further action plans will be considered for implementation.</p>
xiii.	<p>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>	<p>Point noted and will be complied</p> <p>A separate budget has been allocated for implementation of action plan, Work has already been assigned to NCSCM, for amount INR. 23,56,000/- vide PO no 4800050718, dtd. 31<sup>st</sup> December 2019 and same is under progress and compliance report in this regard will be submitted to all the concerned authorities as part of the six monthly compliance report. Based on the outcome and findings of this study, further action plans will be considered for implementation.</p> <p>Please refer specific condition no. ii above for further details.</p>
xiv.	<p>All the industry in SEZ shall be connected through impervious drainage lines to the STP/CETP for the</p>	<p>Complied.</p> <p>As per the Lease Deed agreement, existing industries are well connected with impervious pipeline to discharge their effluent / sewage after confirming to the inlet norms of CETP. Typical</p>



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Sr. No.	Conditions	Compliance Status as on 30.09.2020
	<p>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.</p>	<p>copy of the Lease Deed (Agreement) was submitted along with compliance report submission for the duration of Oct'16 to Mar'17.</p> <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 half yearly EC compliance report for the period Oct'19 to Mar'20. 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.	<p>PP shall not carry out any river course modification.</p>	<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.	<p>The individual industrial units shall obtain prior EC under EIA Notification, 2006 as applicable.</p>	<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 Oct'19 to March' 20, 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.	<p>Proponent shall identify 200 ha of land for mangrove plantation as per the condition laid by SEAC.</p>	<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>

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

Sr. No.	Conditions	Compliance Status as on 30.09.2020
		<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 yearly compliance report for the period Oct'18 to Mar'19.</p>
xviii.	<p>50 meter buffer from the existing mangrove area should be provided for any developmental activity.</p>	<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.	<p>Proponent shall develop the green belt with 3 layers of canopy all along the periphery.</p>	<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. 2.47 Lacs trees is developed within SEZ area till date. So, far APSEZ has developed 469 Ha area as greenbelt with plantation 8.8 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. for the financial year of 2020-21 (Till Sep'20) have been INR 490 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</p>



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020																					
		<p>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>																					
xx.	<p>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>	<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" data-bbox="662 1056 1417 1287"> <thead> <tr> <th>Sr. no.</th><th>Compliance period</th><th>Date of submission</th></tr> </thead> <tbody> <tr> <td>1</td><td>Apr'17 to Sep'17</td><td>01.12.2017</td></tr> <tr> <td>2</td><td>Oct'17 to Mar'18</td><td>29.05.2018</td></tr> <tr> <td>3</td><td>Apr'18 to Sep'18</td><td>30.11.2018</td></tr> <tr> <td>4</td><td>Oct'18 to Mar'19</td><td>31.05.2019</td></tr> <tr> <td>5</td><td>Apr'19 to Sep'19</td><td>28.11.2019</td></tr> <tr> <td>6</td><td>Oct'19 to Mar'20</td><td>20.05.2020</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'17 to Sep'17	01.12.2017	2	Oct'17 to Mar'18	29.05.2018	3	Apr'18 to Sep'18	30.11.2018	4	Oct'18 to Mar'19	31.05.2019	5	Apr'19 to Sep'19	28.11.2019	6	Oct'19 to Mar'20	20.05.2020
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xxi.	<p>There shall be no disturbance to the sand dunes.</p> <p>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>	<p>Complied.</p> <p>There is no sand dune in the SEZ area.</p> <p>Point noted.</p> <p>No pipelines for intake and outfall of sea water are laid till now and same will be studied as and when required. HDD method will be explored for creek crossing for other pipelines.</p>																					
<b>Part – B: General Conditions</b>																							
	<b>Construction Phase</b>																						
i	<p>Provision shall be made for the housing of</p>	<p>Not applicable at present.</p>																					

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
	<p>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 structures to be removed after the completion of the project.</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>
ii	<p>A first aid room will be provided in the project both during construction and operation of the project.</p>	<p>Complied.</p> <p>APSEZ has established Occupational Health Center &amp; 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 (Multi Specialty) located with SEZ area can be utilized.</p>
iii	<p>All the topsoil excavated during construction phase should be stored for use in horticulture/landscape development within the project site.</p>	<p>Complied.</p> <p>Excavated topsoil, if any, will be used for the horticulture /landscape development within the project site.</p>
iv	<p>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.</p>	<p>Complied.</p> <p>No excavated muck has been generated and disposed-off. Construction waste, if any, is utilized for area development within the project site.</p>
v	<p>Soil and ground water samples will be tested to</p>	<p>Complied.</p>

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

Sr. No.	Conditions	Compliance Status as on 30.09.2020																																																																																																																																																																										
	ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	<p>Environment Monitoring 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. Summary of the ground water as well as soil assessment for duration from Apr'20 to Sep'20 is mentioned below.</p> <p><b><u>Bore Hole Water Sampling:</u></b></p> <p><b>Sampling locations &amp; frequency: 3 nos. (Half Yearly)</b></p> <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>8.31</td><td>7.68</td></tr><tr><td>2</td><td>Salinity</td><td>ppt</td><td>21.00</td><td>4.10</td></tr><tr><td>3</td><td>Oil &amp; Grease</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>4</td><td>Hydrocarbon</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>5</td><td>Lead as Pb</td><td>mg/L</td><td>0.03</td><td>0.03</td></tr><tr><td>6</td><td>Arsenic as As</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>7</td><td>Nickel as Ni</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>8</td><td>Total Chromium as Cr</td><td>mg/L</td><td>0.06</td><td>0.02</td></tr><tr><td>9</td><td>Cadmium as Cd</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>10</td><td>Mercury as Hg</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>11</td><td>Zinc as Zn</td><td>mg/L</td><td>0.49</td><td>0.09</td></tr><tr><td>12</td><td>Copper as Cu</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>13</td><td>Iron as Fe</td><td>mg/L</td><td>0.28</td><td>0.11</td></tr><tr><td>14</td><td>Insecticides/Pesticides</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>15</td><td>Depth of Water Level from Ground Level</td><td>meter</td><td>2.50</td><td>2.35</td></tr></table> <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>7.6</td><td>8.1</td></tr><tr><td>2</td><td>Lead as Pb</td><td>mg/L</td><td>ND*</td><td>ND*</td></tr><tr><td>3</td><td>Nickel as Ni</td><td>mg/L</td><td>ND*</td><td>0.146</td></tr><tr><td>4</td><td>Total Chromium as Cr</td><td>mg/L</td><td>0.036</td><td>0.039</td></tr><tr><td>5</td><td>Iron as Fe</td><td>mg/L</td><td>0.39</td><td>0.258</td></tr><tr><td>6</td><td>Insecticides/Pesticides</td><td>mg/L</td><td>Absent</td><td>ND*</td></tr><tr><td>7</td><td>Depth of Water Level from GL</td><td>meter</td><td>2.6</td><td>1.7</td></tr></table> <p style="text-align: right;">*ND = Not Detectable</p> <p><b><u>Soil Sampling:</u></b></p> <p><b>Sampling locations &amp; frequency: 4 nos. (Half Yearly)</b></p> <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>9.3</td><td>8.7</td></tr><tr><td>2</td><td>Nitrogen as N</td><td>%</td><td>0.05</td><td>0.019</td></tr><tr><td>3</td><td>Phosphorus as P</td><td>mg/kg</td><td>210</td><td>110</td></tr><tr><td>4</td><td>Potassium as K</td><td>mg/kg</td><td>198</td><td>80</td></tr><tr><td>5</td><td>Baron as B</td><td>mg/kg</td><td>2.1</td><td>1.5</td></tr><tr><td>6</td><td>Calcium as Ca</td><td>mg/kg</td><td>545</td><td>420</td></tr><tr><td>7</td><td>Magnesium as Mg</td><td>mg/kg</td><td>560</td><td>505</td></tr><tr><td>8</td><td>Iron as Fe</td><td>%</td><td>0.55</td><td>0.35</td></tr><tr><td>9</td><td>Moisture</td><td>%</td><td>12.4</td><td>10.9</td></tr></table>	Sr. No.	Parameter	Unit	Max. Value	Min. Value	1	pH	--	8.31	7.68	2	Salinity	ppt	21.00	4.10	3	Oil & Grease	mg/L	ND*	ND*	4	Hydrocarbon	mg/L	ND*	ND*	5	Lead as Pb	mg/L	0.03	0.03	6	Arsenic as As	mg/L	ND*	ND*	7	Nickel as Ni	mg/L	ND*	ND*	8	Total Chromium as Cr	mg/L	0.06	0.02	9	Cadmium as Cd	mg/L	ND*	ND*	10	Mercury as Hg	mg/L	ND*	ND*	11	Zinc as Zn	mg/L	0.49	0.09	12	Copper as Cu	mg/L	ND*	ND*	13	Iron as Fe	mg/L	0.28	0.11	14	Insecticides/Pesticides	mg/L	ND*	ND*	15	Depth of Water Level from Ground Level	meter	2.50	2.35	Sr. No.	Parameter	Unit	Dhrub station	Zarpara village	1	pH	--	7.6	8.1	2	Lead as Pb	mg/L	ND*	ND*	3	Nickel as Ni	mg/L	ND*	0.146	4	Total Chromium as Cr	mg/L	0.036	0.039	5	Iron as Fe	mg/L	0.39	0.258	6	Insecticides/Pesticides	mg/L	Absent	ND*	7	Depth of Water Level from GL	meter	2.6	1.7	Sr. No.	Parameter	Unit	Max. Value	Min. Value	1	pH	--	9.3	8.7	2	Nitrogen as N	%	0.05	0.019	3	Phosphorus as P	mg/kg	210	110	4	Potassium as K	mg/kg	198	80	5	Baron as B	mg/kg	2.1	1.5	6	Calcium as Ca	mg/kg	545	420	7	Magnesium as Mg	mg/kg	560	505	8	Iron as Fe	%	0.55	0.35	9	Moisture	%	12.4	10.9
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2020				
		10	Organic Matter	%	0.3	0.18
		11	CEC	meq/100 gm	10.4	9.6
		12	TVC	CFU/gm	9.3	8.7
		<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	ND*	ND*
		18	Chromium (VI) as Cr	mg/kg	ND*	ND*
		19	Cobalt as Co	mg/kg	31.6	13.6
		20	Copper as Cu	mg/kg	48.2	9.4
		21	Nickel as Ni	mg/kg	21.6	9.4
		22	Manganese as Mn	mg/kg	418	290
		23	Vanadium as V	mg/kg	9.4	7.15
		*ND = Not Detected				
		Comparison of the present data with baseline data for the nearest locations for Soil.				
		<b>Sr. No.</b>	<b>Parameter</b>	<b>Unit</b>	<b>Dhrub station</b>	<b>Zarpara village</b>
		1	pH	--	8.96	6.45
		2	Nitrogen as N	%	0.036	1.38 gm/kg
		3	Phosphorus as P	mg/kg	84	1230
		4	Potassium as K	mg/kg	89	62120
		5	Calcium as Ca	mg/kg	520	1500
		6	Magnesium as Mg	mg/kg	568	1580
		7	Iron as Fe	%	0.46	1.34
		8	Organic Matter	%	0.12	0.98
		9	CEC	meq/100 gm	9.5	7.4
		<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 8.46 Lakh is spent for all environmental monitoring activities during the FY 2020-21 (Till Sep'20).</p> <p>The environmental monitoring within Adani Ports &amp; SEZ Limited has been stopped from 23<sup>rd</sup> March, 2020 to 12<sup>th</sup> May, 2020 considering COVID-19 Pandemic lockdown and the same has already been intimated to the regulatory authorities vide our e-mail dated 06.04.2020 &amp; 13.05.2020. The details of the same is attached as <b>Annexure – 4</b>.</p>				
vi	Construction spoils, including bituminous	Complied.				

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
	<p>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>	<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 through co-processing at cement industries namely M/s. Ambuja Cement Ltd., Kodinar and/or M/s. Sanghi Industries Ltd., Kutch. 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> <p>Individual units within SEZ are handling their hazardous wastes as per Hazardous waste rules – 2016 after obtaining necessary permissions from GPCB.</p>
vii	<p>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>	<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	<p>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>	<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 within SEZ area is 3410 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 is attached as <b>Annexure –</b></p>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020																				
		5. DG sets are being used in conformance to the EPA norms and proof for the same was submitted along with compliance period i.e. Apr'17 to Sep'17.																				
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 (P283539) dated 23.01.2020 and is valid till 31.12.2022. Details of the same were submitted along with last half yearly EC Compliance report for the period Oct'19 to Mar'20.</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 operate only during non-peak hours.	<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, Horne, 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 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	<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'20 to Sep'20 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>94.51</td><td>35.34</td><td>100</td></tr><tr><td>PM<sub>2.5</sub></td><td>µg/m<sup>3</sup></td><td>51.52</td><td>12.13</td><td>60</td></tr><tr><td>SO<sub>2</sub></td><td>µg/m<sup>3</sup></td><td>27.4</td><td>6.27</td><td>80</td></tr></table>	Parameter	Unit	Max	Min	Perm. Limit <sup>\$</sup>	PM <sub>10</sub>	µg/m <sup>3</sup>	94.51	35.34	100	PM <sub>2.5</sub>	µg/m <sup>3</sup>	51.52	12.13	60	SO <sub>2</sub>	µg/m <sup>3</sup>	27.4	6.27	80
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	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020				
	to the stipulated standards by CPCB/GPCB.	NO <sub>2</sub>	µg/m <sup>3</sup>	42.31	12.50	80
		<b>Noise</b>	<b>Unit</b>	<b>Max</b>	<b>Min</b>	<b>Perm. Limit</b>
		Day Time	dB(A)	74.1	54.3	75
		Night Time	dB(A)	69.8	50.4	70
		<sup>§</sup> as per NAAQ standards, 2009 Values recorded confirms to the stipulated standards.				
		<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 8.46 Lakh is spent for all environmental monitoring activities during the FY 2020-21 (Till Sep'20).</p> <p>Following safeguard measures are taken for abatement of dust 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 through mechanized equipments</li> <li>• Development of greenbelt along the periphery of the storage yards/back up area</li> <li>• D.G. Sets having Acoustic enclosures</li> <li>• Regular maintenance of plant machineries and equipments</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	<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 approx. 179 MT of fly ash to manufacture paver block during the period of Apr'20 to Sep'20. Details of methodology for manufacturing of paver blocks were submitted along with half yearly EC compliance report for the</p>				



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
	Stations).	<p>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 consumption for entire APSEZ area is 4.3 MLD during the compliance period Apr'20 to Sep'20.</p>
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 be continued 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>



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
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 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.	<p>Complied</p> <p>Majority of the building envelopes (including walls) are constructed with ECBC compliant building materials having appropriate thermal insulation.</p>
xxii	The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake,	<p>Complied</p> <p>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</p>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
	adequacy of firefighting equipments, etc. as per National Building Code including protection measures from lightning etc.	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.	<p>Complied.</p> <p>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.</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 and ensures strict compliance of the stipulated conditions by individual industries.</p> <p>EMS and Compliance verification of individual SEZ units carried out during the compliance period w.r.t. Water &amp; Wastewater Management, Air Management, Hazardous &amp; Non-Hazardous Waste Management, Greenbelt, etc. in line with their statutory permissions and there was no any major non-compliance observed.</p>
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.	<p>Point noted.</p> <p>Wherever applicable, construction activities have started only after obtaining environmental clearance.</p>
	<b>Operation Phase</b>	
i.	The PP while issuing the allotment letter to	Complied.

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020									
	individual member units shall specifically mention the allowable maximum quantity of water usage and effluent generated by each member unit.	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>APSEZL has a well structured Environment Management Cell, staffed with qualified manpower for implementation of the Environment Management Plan at site. Site team report to General Manager (Environment) at Corporate, who heads the Environment Management Cell who directly reports to the top management. The details of the same were submitted along with last half yearly compliance report for the period Oct'19 to Mar'19. And there is no further change.</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 2020-21 is to the tune of INR 1401 lakh. Out of which, Approx. INR 679 lakh are spent during this compliance period. Detailed breakup of the expenditures for the past 3 years 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 unused treated effluent shall conform to the norms and	<p>Complied.</p> <p>APSEZ has total installed capacity of 6.02 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.</p> <table border="1" data-bbox="646 1818 1435 1913"> <thead> <tr> <th>Location</th><th>Capacity</th><th>Technology</th></tr> </thead> <tbody> <tr> <td>CETP</td><td>2.5 MLD</td><td>Aerobic Digestion</td></tr> <tr> <td>Shantivan Colony STP</td><td>350 KLD</td><td>Aerobic Digestion</td></tr> </tbody> </table>	Location	Capacity	Technology	CETP	2.5 MLD	Aerobic Digestion	Shantivan Colony STP	350 KLD	Aerobic Digestion
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**Status of the conditions stipulated in Environment and CRZ Clearance**

Sr. No.	Conditions	Compliance Status as on 30.09.2020																															
	standards of the Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.	<table><tr><td>Shantivan Colony STP</td><td>250 KLD</td><td colspan="2">Aerobic Digestion</td></tr><tr><td>Adani House STP</td><td>150 KLD</td><td colspan="2">PVA Gel Technology</td></tr><tr><td>Samudra Township STP</td><td>2.5 MLD</td><td colspan="2">MBR</td></tr><tr><td>Liquid Terminal ETP</td><td>265 KLD</td><td colspan="2">Aerobic Digestion</td></tr><tr><td>West Port STP</td><td>55 KLD</td><td colspan="2">FAB</td></tr></table>				Shantivan Colony STP	250 KLD	Aerobic Digestion		Adani House STP	150 KLD	PVA Gel Technology		Samudra Township STP	2.5 MLD	MBR		Liquid Terminal ETP	265 KLD	Aerobic Digestion		West Port STP	55 KLD	FAB									
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		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 half yearly EC compliance report for the period Oct'19 to Mar'20.																															
		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.																															
		Treated Water Analysis (Frequency Twice in a Month – 2 STPs)																															
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Greenbelt area developed around the treatment plants act as barrier for odour. In addition to this, regular supervision is done to ensure there is no odour problem from any of the treatment plants.																																	

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
iv.	<p>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>	<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 and Sabnam Enterprise respectively.</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>• Solid hazardous waste i.e. Tank bottom sludge is being disposed through co-processing through common facility i.e. M/s. Saurashtra Enviro Projects Pvt. Ltd., Bhachau and/or cement industries of Ambuja Cement Ltd., Kodinar and/or being sold to authorized recycler namely M/s. Mundra Oil, Mundra.</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</li> </ul>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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Sr. No.	Conditions	Compliance Status as on 30.09.2020																																						
		<p>was no disposal of downgrade chemicals.</p> <ul style="list-style-type: none"> <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> <p>Details of permissions / agreements of hazardous waste authorized vendors were submitted along with half yearly EC Compliance Report for the period Apr'18 to Sep'18.</p> <p>The following table summarizes the waste management practice (from Apr'20 to Sep'20) 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>3.90</td><td rowspan="3">Co-processing at cement industries</td></tr> <tr> <td>Oily Cotton waste</td><td>24.82</td></tr> <tr> <td>ETP Sludge</td><td>Nil</td></tr> <tr> <td>Tank Bottom Sludge</td><td>Nil</td><td>Co-processing at cement industries and/or Sell to registered recycler</td></tr> <tr> <td>Used / Spent Oil</td><td>30.935</td><td rowspan="3">Sell to registered recycler</td></tr> <tr> <td>Discarded Containers</td><td>3.135</td></tr> <tr> <td>Battery Waste</td><td>Nil</td></tr> <tr> <td>Bio Medical Waste</td><td>2.224</td><td>To approved CBWTF Site</td></tr> <tr> <td colspan="3"><b>Municipal Solid Waste</b></td></tr> <tr> <td>Recyclables</td><td>487.642</td><td>After recovery sent for recycling / Reuse within premises</td></tr> <tr> <td>Refuse Derived Fuel</td><td>61.86</td><td>Co-processing at Cement Industries</td></tr> <tr> <td>Wet Waste (Food waste + Organic waste)</td><td>458.565</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	3.90	Co-processing at cement industries	Oily Cotton waste	24.82	ETP Sludge	Nil	Tank Bottom Sludge	Nil	Co-processing at cement industries and/or Sell to registered recycler	Used / Spent Oil	30.935	Sell to registered recycler	Discarded Containers	3.135	Battery Waste	Nil	Bio Medical Waste	2.224	To approved CBWTF Site	<b>Municipal Solid Waste</b>			Recyclables	487.642	After recovery sent for recycling / Reuse within premises	Refuse Derived Fuel	61.86	Co-processing at Cement Industries	Wet Waste (Food waste + Organic waste)	458.565	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	<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:</p>																																						

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

Sr. No.	Conditions	Compliance Status as on 30.09.2020																																																																														
	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.	<p>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>Sr. No.</th><th>DG Location</th><th>Capacity/KVA</th></tr> </thead> <tbody> <tr><td>1</td><td>Adani House</td><td>750</td></tr> <tr><td>2</td><td>PUB</td><td>500</td></tr> <tr><td>3</td><td>PMC Store</td><td>82.5</td></tr> <tr><td>4</td><td>R&amp;D Yard</td><td>50</td></tr> <tr><td>5</td><td>North Gate</td><td>320</td></tr> <tr><td>6</td><td>CRC North Gate</td><td>5</td></tr> <tr><td>7</td><td>North in Gate</td><td>5</td></tr> <tr><td>8</td><td>North Outgate</td><td>5</td></tr> <tr><td>9</td><td>WTP</td><td>380</td></tr> <tr><td>10</td><td>East Gate</td><td>30</td></tr> <tr><td>11</td><td>Airport</td><td>140</td></tr> <tr><td>12</td><td>Airport</td><td>125</td></tr> <tr><td>13</td><td>Gohersama Gate</td><td>5</td></tr> <tr><td>14</td><td>Airport crossing Gate</td><td>5</td></tr> <tr><td>15</td><td>Kharimithi Road Gate</td><td>5</td></tr> <tr><td>16</td><td>Adani Hospital</td><td>500</td></tr> <tr><td>17</td><td>Old port Gate</td><td>5</td></tr> <tr><td>18</td><td>West Gate</td><td>30</td></tr> <tr><td>19</td><td>MRSS</td><td>250</td></tr> <tr><td>20</td><td>MITAP Substation</td><td>62.5</td></tr> <tr><td>21</td><td>Zarpara Gate</td><td>5</td></tr> <tr><td>22</td><td>Navinal Gate</td><td>5</td></tr> <tr><td>23</td><td>Culvert NO 109</td><td>5</td></tr> <tr><td>24</td><td>Culvert NO 109</td><td>15</td></tr> <tr><td>25</td><td>Agri Park</td><td>125</td></tr> </tbody> </table>	Sr. No.	DG Location	Capacity/KVA	1	Adani House	750	2	PUB	500	3	PMC Store	82.5	4	R&D Yard	50	5	North Gate	320	6	CRC North Gate	5	7	North in Gate	5	8	North Outgate	5	9	WTP	380	10	East Gate	30	11	Airport	140	12	Airport	125	13	Gohersama Gate	5	14	Airport crossing Gate	5	15	Kharimithi Road Gate	5	16	Adani Hospital	500	17	Old port Gate	5	18	West Gate	30	19	MRSS	250	20	MITAP Substation	62.5	21	Zarpara Gate	5	22	Navinal Gate	5	23	Culvert NO 109	5	24	Culvert NO 109	15	25	Agri Park	125
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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>																																																																														



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
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.	<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> <p>Please refer condition no. xix (Specific Condition) for further details.</p>
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 were submitted along with half yearly EC compliance report for the period Apr'19 to Sep'19. During last compliance period Approx. 6.5 ML of rain water has been recharged to increase the ground water table.</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 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>



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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		<p>Total cost of these efforts was approx. INR 320 lakh.</p> <p>Since 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain in current year 1.11 mtr ground water table increased as per Government Figures.</p> <p><b>Our water conservation work is as Below.</b></p> <ul style="list-style-type: none"> <li>• A large number of water harvesting structure ( 18 Nos. of check dams in coordination with salinity department)</li> <li>• Ground recharge activities (pond deepening work for more than 52 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers</li> <li>• Roof Top Rain Water Harvesting 54 Nos. which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family.</li> <li>• Recharge Bore well 75 Nos which is best ever option to conserve ground water</li> <li>• Drip Irrigation 823 Farmers benefitted in coordination with Gujrat Green Revolution Company</li> <li>• Participatory Ground Water Management in ten villages with holistic approach for Kankavati Sandstone Aquifer Programme</li> <li>• As per Average Calculation more than 450 hac. area benefitted with increased in 109 MCFT water Quantity.</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 – 7</b> for full details of CSR activities carried out by Adani Foundation in the Mundra region. Budget for CSR Activity for the FY 2020-21 is to the tune of INR 1429.3 lakh. Out of which, Approx. INR 416.7 lakh are spent during the year FY 2020-21 (Till Sep'20).</p>

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		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.
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> <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 being carried out on regular basis. 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</li> </ul>

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		and therefore there is no need to install AVC
xiii.	<p>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.</p>	<p>Complied</p> <p>Energy Conservation through Installation of Motion Sensor (Occu switch) &amp; AC Temp. controls in few of the buildings are provided.</p> <p>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 sunlight and less heat</li> <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 7.8 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 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.	<p>Adequate measures should be taken to prevent odour problems from solid waste processing plant and STP.</p>	<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</p>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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Sr. No.	Conditions	Compliance Status as on 30.09.2020
		surrounding area. Furthermore, greenbelt on the periphery of the treatment plant as well as waste management sites help to prevent odour problems.
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>
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 – 2</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 7.8 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>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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Sr. No.	Conditions	Compliance Status as on 30.09.2020
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>
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> <p>APSEZ was 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, 7<sup>th</sup> June 2018, there was no major non-compliance observed.</p> <p>Inline to the compliance certification process of Environment Clearance condition of Waterfront Development Plan, RO, MoEF&amp;CC Bhopal had visited the site on 27<sup>th</sup> &amp; 28<sup>th</sup> January, 2020 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer MoEF&amp;CC). During the said compliance verification visit and as per the compliance certification received, there was no major non-compliance observed.</p>
13	In the case of any change(s) in the scope of the project, the project would require a fresh	Point noted and agreed.

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
	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 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 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.	<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 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.</p>
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	Point noted and agreed.

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
	(Insurance) Act, 1991 and EIA Notification, 2006.	
17	<p>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>. 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.</p>	<p>Complied</p> <p>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 &amp; Climate Change, Bhopal.</p>
18	<p>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.</p>	<p>Point noted and agreed.</p>
19	<p>Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under</p>	<p>Point noted and agreed.</p>



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	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.	<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>																					
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'19 to Mar'20 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 19.05.2020. 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 19.05.2020 to all the concern authorities. Please refer below for the details regarding past six compliance submissions.</p>																					
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	<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'17 to Sep'17</td><td>01.12.2017</td></tr> <tr> <td>2</td><td>Oct'17 to Mar'18</td><td>29.05.2018</td></tr> <tr> <td>3</td><td>Apr'18 to Sep'18</td><td>30.11.2018</td></tr> <tr> <td>4</td><td>Oct'18 to Mar'19</td><td>31.05.2019</td></tr> <tr> <td>5</td><td>Apr'19 to Sep'19</td><td>28.11.2019</td></tr> <tr> <td>6</td><td>Oct'19 to Mar'20</td><td>20.05.2020</td></tr> </tbody> </table>	Sr. no.	Compliance period	Date of submission	1	Apr'17 to Sep'17	01.12.2017	2	Oct'17 to Mar'18	29.05.2018	3	Apr'18 to Sep'18	30.11.2018	4	Oct'18 to Mar'19	31.05.2019	5	Apr'19 to Sep'19	28.11.2019	6	Oct'19 to Mar'20	20.05.2020
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	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Conditions	Compliance Status as on 30.09.2020
	CPCB and the SPCB.	
23	<p>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 of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.</p>	<p>Complied.</p> <p>Environmental statement for each financial year is submitted to GPCB. The same for the FY ending 31.03.2020 in Form-V is submitted to GPCB vide our letter dated 29<sup>th</sup> August, 2020. Copy of the same is attached as <b>Annexure – 8</b>. 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>.</p>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
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# **ANNEXURE A** **Compliance Report of CRZ** **Recommendation**

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</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.

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## 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.

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Sr. No.	Condition	Compliance Status
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.	<p>Complied</p> <p>After receipt of this order, so far APSEZ has not done any application to MoEF&amp;CC for the proposed North port.</p>
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.	<p>Complied</p> <p>This reply covers condition no ii, iv and v.</p> <p>Based on the MoEF&amp;CC directions,</p> <ol style="list-style-type: none"> <li>1. APSEZ, vide letter dtd. 19<sup>th</sup> October 2015 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.</li> <li>3. APSEZ, vide its letter dtd. 25<sup>th</sup> April 2016, submitted the proposal to GCZMA along with Scope of work, as submitted by NCSCM.</li> </ol>
iv	A comprehensive and integrated 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	<ol style="list-style-type: none"> <li>4. Service Order was issued to NCSCM vide SO dtd. 29th Aug 2016. 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) for their consideration and recommendation if any.</li> <li>7. A reminder letter was submitted to GCZMA vide letter dated 4<sup>th</sup> Jan 2019.</li> </ol> <p>Details of above chronology were submitted along with last half yearly compliance report for the period Apr'19 to Sep'19.</p>

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	<p>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>	<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>
v	<p>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.</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>NCSCM study same was submitted to the GCZMA on 04.06.2018. Details of the same were submitted along with half yearly EC Compliance report for the period Apr'19 to Sep'19.</p> <p>The action plan for conservation of creeks and mangrove was submitted to GCZMA and MoEF&amp;CC for their final examination and recommendation.</p>

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		<p>Presentation on the findings of the report was made to GCZMA committee on 4<sup>th</sup> October 2019 and the recommendation for the same has been received vide email dtd 22nd Sept 2020 from GCZMA with following conditions:</p> <ul style="list-style-type: none"> <li>✓ The APSEZL shall carry out annual compliance monitoring of the mangrove conservation area.</li> <li>✓ The APSEZL shall explore the possibility for taking necessary adequate measures to reduce the erosion near Bocha Island.</li> <li>✓ The approval of mangrove conservation plan shall not be considered as any permission under CRZ Notification for dredging activity.</li> <li>✓ There should not be blockage of any drainage line and free flow of water is to be maintained, as flushing of mangrove areas is very essential.</li> <li>✓ The APSEZL shall carry out mangrove monitoring every two years and submit the data to Forest Department/GCZMA and MOEF&amp;CC, GOI.</li> </ul> <p>APSEZ is under the process of complying above recommendations -</p> <p>Inline to the compliance of the action plan "Monitoring of mangrove cover in Jan/Mar, 2020 using latest satellite images and validation with field observations", Work has already been assigned to NSCSM, for amount of INR. 23,56,000/- vide PO no 4800050718, dtd. 31<sup>st</sup> December 2019 and same is under progress.</p> <p>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&amp;CC by APSEZ.</p>
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</p>



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		<p>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>Inline to the compliance certification process of Environment Clearance condition of Waterfront Development Plan, RO, MoEF&amp;CC Bhopal had visited the site on 27<sup>th</sup> &amp; 28<sup>th</sup> January, 2020 for compliance verification. APSEZ provided all requisite information and documents required by the Regional Officer MoEF&amp;CC). During the said compliance verification visit and as per the compliance certification received, there was no major non-compliance observed.</p> <p>It may also be noted that GPCB, Regional Office does regular site visit for various components. Last visit of Regional Office, GPCB was done on 16.03.2020 for SEZ. Details of the same were submitted along with last half yearly compliance report for the period Oct'19 to Mar'20.</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 EC Compliance report for the period Apr'18 to Sep'18.</p> <p>Considering the above status and in line to submission of compliance of all the directions under this order, this condition is closed.</p>

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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). Copy of the same is already submitted to MoEF&amp;CC vide our letter dated 10.09.2016.</p> <p>Till, Sep 2020 approx. 8.62 Cr. INR, has already been invested. Further, details regarding the expenditure incurred against the commitment are attached as <b>Annexure – 9</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 abided diseased due to exposure to unhygienic working conditions.</li> </ul>

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		<p>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. Adani Foundation has also worked for</p>

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		<p>fight against COVID – 19 pandemic situation during this compliance period Activities carried out for the same are summarized as below.</p> <table><tr><th>Area</th><th>Activity</th></tr><tr><td>Fight Against COVID-19</td><td><ul style="list-style-type: none"><li>• <b>24 villages</b> of Mundra block Sanitized.</li><li>• <b>45000+</b> Mask prepared by SHG group.</li><li>• <b>1800+</b> food packet per day two time for the workers, drivers and labours of APSEZ and AWL Cost free Fresh Food Support (Breakfast, Lunch and Dinner)</li><li>• <b>9000+</b> ration kit support Ration Kit support to Daily Wage Labours and Needy people</li><li>• Mobile health care unit is providing primary treatment to community at door step and also creating awareness to fight against Corona virus - <b>150+ beneficiaries</b> covered</li><li>• <b>12500 people</b> connected By Awaz De software creating awareness in people in local kutchhi language.</li><li>• <b>1400+</b> patient covered - AHMPL is providing all services IPD and OPD during lockdown period.</li><li>• Important of handwashing &amp; hygiene by Sangini</li><li>• <b>57 senior citizens</b> of old age home - During lockdown period our team providing medical facility to senior citizens at old age home in Mandvi and Gundala</li></ul></td></tr><tr><td>Community Health</td><td><p><b><u>Community Health – Mundra</u></b></p><ul style="list-style-type: none"><li>• 11 Rural Clinic – 8 from Mundra &amp; 3 from Anjar block treated; <b>8196 patients</b>.</li><li>• <b>31 villages</b> covered, with <b>109 types</b> of general and lifesaving medicines through Mobile healthcare unit <b>6879 patients</b> benefited during six month.</li><li>• Provided dialysis treatment to <b>6 patients</b> of kidney failure <b>236 times</b>.</li><li>• <b>Citizen project - 8672 Card holders</b> of <b>68 villages</b> get benefit under this project.</li><li>• <b>2921 sr. citizen patients</b> benefited during six month - <b>8000 limit</b> for three year per patients</li><li>• <b>470</b> Needy patients had been facilitated with Medical Support OPD &amp; IPD treatment with token charges during this six month.</li><li>• <b>1150</b> health calendar were distributed to various PHC, CHC and ICDS department of Mundra, Mandvi, Nakhtrana, Lakhpat, Abadasa, Anjar &amp; Gandidham block.</li><li>• <b>594 Protein Powder packet</b> distributed to ANC woman of Utthan villages and TB patient of Mundra block.</li><li>• Total <b>18698 &amp; 10380</b> IPD / OPD facilities provided project wise and AHMPL subsequently during six months.</li></ul></td></tr><tr><td>Sustainable Livelihood – Fisher folk</td><td><ul style="list-style-type: none"><li>• Average <b>70 KL</b> of water was supplied to <b>717</b> households at 4 fisherman vasahat on a daily basis under Machhimar Shudhh Jal Yojana</li></ul></td></tr></table>	Area	Activity	Fight Against COVID-19	<ul style="list-style-type: none"><li>• <b>24 villages</b> of Mundra block Sanitized.</li><li>• <b>45000+</b> Mask prepared by SHG group.</li><li>• <b>1800+</b> food packet per day two time for the workers, drivers and labours of APSEZ and AWL Cost free Fresh Food Support (Breakfast, Lunch and Dinner)</li><li>• <b>9000+</b> ration kit support Ration Kit support to Daily Wage Labours and Needy people</li><li>• Mobile health care unit is providing primary treatment to community at door step and also creating awareness to fight against Corona virus - <b>150+ beneficiaries</b> covered</li><li>• <b>12500 people</b> connected By Awaz De software creating awareness in people in local kutchhi language.</li><li>• <b>1400+</b> patient covered - AHMPL is providing all services IPD and OPD during lockdown period.</li><li>• Important of handwashing &amp; 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			<ul style="list-style-type: none"> <li>• <b>55 Higher secondary Fishermen students</b> of Sekhadiya, Navinal, Zarpara &amp; Junabandar benefitted with book support. Mother meeting and telephone Discussion for their wards discussion.</li> <li>• <b>4830 Man-days</b> work was provided over <b>236 Fishermen family</b> during this six months.</li> <li>• To avail Fishermen Government scheme (Fishermen Credit card) one day program was arranged with social distancing and all precaution. <b>30 KCC</b> form fill-up at Navinal. Created awareness with Telephonic about same.</li> <li>• To create option livelihood over fishermen with co-ordination of VRTI. Pilot phase – <b>3500 Kg sea weed</b> was harvested</li> <li>• Total <b>85 Acre Gauchar Land</b> was approved by GP for Development by decision taken in Gram Sabha. Among them <b>72 Acre</b> land Has been Sowed and Remaining land would be Grow with Wild Grass.</li> <li>• Government Scheme Facilitation - Facilitate widows, senior Citizens and Divyang to various schemes of government like widow pension, free bus pass, Senior citizen pension scheme sankat mocha sahay etc. support for process and documentation – Total <b>66 Nos.</b> of beneficiaries.</li> <li>• <b>60,000+</b> three layer mask has been prepared and sold by Umang SHG group @ <b>Rs.10.00</b> per mask.</li> <li>• <b>5-SHG</b> had been facilitated for <b>Rs 1.0 lac</b> bank loan through DRDA to start-up new business for women empowerment.</li> <li>• Fodder support in <b>20 villages</b> of Mundra and Anjar block. Dry fodder <b>6.70 lacs kg</b> &amp; Green fodder <b>11.60 lacs kg</b>.</li> <li>• To Doubling the farmer income by aviling "Barahi Varities Tissue plant" has good productivity <b>850 plants</b> have been distributed to <b>34 farmers</b> <b>25 plants / Farmers</b> cost of a plants is <b>Rs. 3500</b>.</li> <li>• Installation of <b>53 Home Bio-gas</b> with SOP Awareness and trouble shoot of problem as well.</li> <li>• <b>10,000 dragon food sapling</b>, Pole and wire have been supported to 5 farmers.</li> </ul>
		Education	<ul style="list-style-type: none"> <li>• Apart from CPD Utthan Sahayks attended <b>30+ educational webinar</b> during lockdown.</li> <li>• Arrange various competition and celebration for Priya VidyarthiSchool Visit and Home Visit by Utthan Sahayak.</li> <li>• Conduct meeting with Principal / Teacher of Utthan schools, TPEO, BRC, CSR Head, Education Coordinator, Project Officer and Utthan Sahayaks through Microsoft Team.</li> <li>• 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 2020-21 <b>490 students</b> are studying. 82.60% - Result SSC Board Exam</li> </ul>

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Sr. No.	Condition	Compliance Status	
			<ul style="list-style-type: none"> <li>• Tablet provide to students of std. 10<sup>th</sup> for online study through Employee Volunteering Programme</li> <li>• Admission process of std 1 students through draw system. 80 students selected out of 91. remain 11 students in waiting list</li> <li>• Online Class through WhatsApp and you tube video</li> </ul>
		Rural Infrastructure	<p><b><u>WORK COMPLETED</u></b></p> <ul style="list-style-type: none"> <li>• Development of Prisha Park at Mundra.</li> <li>• Pond Bund strengthening at Zarpara Village</li> </ul> <p><b><u>WORK IN PROGRESS</u></b></p> <ul style="list-style-type: none"> <li>• Drainage Line and Chamber work at Bhopavandh.</li> <li>• Drainage Maintenance &amp; JCB Hiring &amp; Other Mis. Work.</li> <li>• Road Repairing at Kutdi Bandar.</li> <li>• Road Repairing at Zarapra Fisherman Vashat.</li> <li>• Road Repairing at Luni Pagadiya Fisherman</li> </ul> <p><b><u>WATER CONSERVATION PROJECTS</u></b></p> <ul style="list-style-type: none"> <li>• A large number of water harvesting structure (<b>18 Nos. of check dams</b> in coordination with salinity department)</li> <li>• Ground recharge activities (<b>pond deepening work for more than 52 ponds</b>) individually and 26 ponds under Sujlam Suflam Jal Abhiyan leading to a significant increase in water table and higher returns to the farmers</li> <li>• <b>Roof Top Rain Water Harvesting 54 Nos.</b> which is having <b>10,000 litre</b> storage which is sufficient for one year drinking water purpose for 5 people family.</li> <li>• Recharge Bore well <b>75 Nos</b> which is best ever option to conserve ground water Drip Irrigation 823 Farmers benefitted in coordination with Gujrat Green Revolution Company</li> <li>• Participatory Ground Water Management in ten villages with holistic approach for Kankavati Sandstone Aquifer Programme</li> <li>• As per Average Calculation more than <b>450 hac. area</b> benefitted with increased in <b>109 MCFT</b> water Quantity.</li> </ul> <p><b><u>Bio Diversity Park – Mundra</u></b></p> <ul style="list-style-type: none"> <li>• Adani Foundation, Mundra-Kutchh proposed a biodiversity park at 5 acres Nandi Sarovar area and approached to Sahjeevan, Bhuj for technical support for same.</li> <li>• Sahjeevan team visited this proposed site for development of greenbelt to support biodiversity and enhancement of overall ecological food web existing in and around the landscape in first phase.</li> </ul>
		Skill Development	<ul style="list-style-type: none"> <li>• Adani Skill Development Centre (ASDC) is playing a pivotal role in implementing sustainable development in the state. The objective of this Centre is to impart different kinds of training to the students of 10<sup>th</sup>, 12<sup>th</sup>, college or ITI from</li> </ul>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Condition	Compliance Status	
			<p>surrounding areas.</p> <ul style="list-style-type: none"> <li>• During this year Total 440 people trained in various trainings to enhance socio economic development.</li> <li>• 324 students Enrolled in Online Training.</li> <li>• The students of DDU-GKY (GDA) creating awareness regarding COVID-19 in their own village through various activity. 27students get placement in GAIMS (sodexo), Alilance Hospital, Shreeji Hospital, Bhuj Fire Academy, Divine Hospital etc. 3 students are working in COVID-19 Hospital.</li> </ul>
		<p>Please refer <b>Annexure – 7</b> for full details of CSR activities carried out by Adani Foundation in the Mundra region. Budget for CSR Activity for the FY 2020-21 is to the tune of INR 1429.3 lakh. Out of which, Approx. INR 416.7 lakh are spent during the year FY 2020-21 (Till Sep'20).</p>	
viii	APSEZ will voluntarily return the grazing land, if any, in their possession.	<p>Point noted.</p> <p>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 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 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. Details of the same were submitted along with last half yearly compliance report for the period Apr'19 to Sep'19.</p>	
ix  x.	<p>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.</p> <p>In the subject matter of thermal power plant, the proposed</p>	<p>Complied</p> <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 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, 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.</li> </ol>	



	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Condition	Compliance Status
	<p>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>	<p>Cholamandalam MS Risk Services Ltd. to carry out the studies, vide SO dtd 10<sup>th</sup> Feb 2016 as stated in these directions.</p> <ol style="list-style-type: none"> <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.</li> <li>6. Reminder letter has been submitted to GCZMA for their comments and consideration vide letter dated 4<sup>th</sup> Jan 2019.</li> </ol> <p>Details of above chronology were submitted along with last half yearly compliance report for the period Apr'19 to Sep'19.</p> <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> <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> </ul>

	<b>Adani Ports and Special Economic Zone Limited, Mundra.</b>	<b>From : Apr'20 To : Sep'20</b>
<b>Status of the conditions stipulated in Environment and CRZ Clearance</b>		

Sr. No.	Condition	Compliance Status
		<ul style="list-style-type: none"> <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 Report was prepared inline to the ToR by Chola MS and the same was submitted to the GCZMA on 30.04.2018. Details of the same were submitted along with half yearly EC Compliance report for the period Apr'18 to Sep'18. Presentation on the findings of the report was made to GCZMA committee on 4<sup>th</sup> October 2019 and after detailed discussion, authority has decided to constitute committee to discuss the details of the report further.</p> <p>However, APSEZ is already complying with the Environment Management Plan (applicable to APSEZ) suggested in Cumulative Impact Assessment report. The detailed compliance, applicable to APSEZ is attached as <b>Annexure – 10</b>.</p>

# **Annexure – 1**

## Details of Greenbelt Development at APSEZ, Mundra

LOCATION	Total Green Zone Detail Till Up to Sep - 2020				
	Area (In Ha.)	Trees (Nos.)	Palm (Nos.)	Shrubs (SQM)	Lawn (SQM)
SV COLONY	70.81	33920.00	7962.00	69426.00	92791.00
PORT & NON SEZ	81.51	149192.00	19220.00	75061.78	61982.38
SEZ	116.60	227120.00	20489.00	220583.60	28162.03
MITAP	2.48	8168.00	33.00	3340.00	4036.00
WEST PORT	94.47	210022.00	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	56.03	53922.00	11834.00	20908.89	47520.07
Productive Farming (Vadala Farm)	23.79	27976.00	--	--	--
<b>TOTAL (APSEZL)</b>	<b>469.05</b>	<b>755094.00</b>	<b>127671.00</b>	<b>422714.27</b>	<b>262794.33</b>
		<b>882765.00</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	Energy efficient pumps and HDPE Pipelines are used for supply of utilities. Refer point no. xii of EC & CRZ



Sr. No.	Suggested Measures	Compliance Status
	pumps shall be used. Pipe material shall be such as to minimize friction losses.	Clearance in Part – B (Operation Phase) 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.	<p>HDPE pipelines are used for supply of utility. Regular visual surveillance along the utility lines corridor is being done to check leakage or damage.</p> <p>Third party analysis of the ground water is being carried out at every three month by NABL and MoEF&amp;CC accredited agency namely M/s. Pollucon Laboratories Pvt. Ltd.</p> <p>Please refer Condition No. v of Part-B (General Conditions: Construction phase) of EC and CRZ Clearance.</p>
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**



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Clearer Production & Waste Minimization Facilitator

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

**FOR**



**ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED  
TAL: MUNDRA, KUTCH, MUNDRA – 370 421**

**MONITORING PERIOD:  
APRIL 2020 TO SEPTEMBER 2020**

**PREPARED BY:**



**POLLUCON LABORATORIES PVT.LTD.**

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**TC - 5945**

**ISO 9001:2015**

**ISO 14001:2015**

**OHSAS 18001:2007**

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**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	12/05/2020	77.58	44.52	17.29	34.57
2	14/05/2020	68.23	28.28	24.26	38.62
3	18/05/2020	84.62	40.23	14.23	31.28
4	20/05/2020	78.58	46.56	18.22	35.28
5	25/05/2020	71.22	32.57	22.46	39.27
6	27/05/2020	80.22	43.48	20.21	29.55
7	03/06/2020	86.45	51.52	18.37	32.44
8	06/06/2020	74.75	31.53	16.37	36.42
9	10/06/2020	89.28	41.57	20.60	39.55
10	13/06/2020	79.8	38.65	17.55	34.24
11	17/06/2020	87.62	33.44	14.38	31.54
12	20/06/2020	76.53	48.23	22.45	40.25
13	24/06/2020	69.52	32.4	15.74	28.42
14	27/06/2020	94.51	39.48	11.38	33.52
15	01/07/2020	66.37	28.61	15.18	33.43
16	04/07/2020	71.27	42.36	19.61	37.37
17	08/07/2020	68.34	37.19	17.2	28.3
18	11/07/2020	76.25	47.23	20.43	36.37
19	15/07/2020	82.34	44.52	18.46	39.35
20	18/07/2020	69.3	39.4	16.64	30.37
21	22/07/2020	79.38	49.23	12.65	27.67
22	25/07/2020	84.21	40.28	14.65	24.36
23	29/07/2020	75.26	34.24	10.34	31.2
24	01/08/2020	70.24	35.50	14.20	30.22
25	05/08/2020	80.35	44.27	22.36	39.24
26	08/08/2020	74.26	31.24	15.35	36.45
27	19/08/2020	84.27	45.36	19.54	28.52
28	22/08/2020	77.26	42.52	21.53	33.27
29	26/08/2020	59.52	26.78	17.53	29.39
30	29/08/2020	68.21	37.57	11.25	22.63

Continue ...

H. T. Shah

Lab Manager



Dr. Arun Bajpai

Lab Manager (Q)

**POLLUCON** LABORATORIES PVT. LTD.Environmental Auditors, Consultants & Analysts.  
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WTP- NEAR CETP					
Sr.No.	Date of Sampling	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM2.5) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$
31	02/09/2020	82.65	42.36	21.54	38.53
32	05/09/2020	76.27	38.65	25.33	41.31
33	09/09/2020	69.32	32.45	16.38	33.54
34	12/09/2020	85.36	48.23	18.31	31.52
35	16/09/2020	75.36	40.32	24.57	37.57
36	19/09/2020	68.46	27.53	13.53	40.27
37	23/09/2020	73.62	34.53	17.5	25.87
38	26/09/2020	64.34	31.53	19.29	34.24
39	30/09/2020	77.51	29.4	22.27	42.31
LIMIT <sup>#</sup>		100	60	80	80
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-NaAsO <sub>2</sub> )

<sup>#</sup>: Industrial, Residential, Rural and other Area Notification Dated 16<sup>th</sup> Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

H. T. Shah

Lab Manager



Dr. Arun Bajpai

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**RESULT OF AMBIENT AIR QUALITY MONITORING**

AIR STRIP								
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 (SO2) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO2) $\mu\text{g}/\text{m}^3$	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	12/05/2020	54.29	21.60	11.22	29.34	0.65	ND*	ND*
2	14/05/2020	72.35	43.51	14.32	26.37	0.36	ND*	ND*
3	18/05/2020	60.26	32.61	9.65	15.36	0.17	ND*	ND*
4	20/05/2020	70.28	36.20	7.54	18.61	0.29	ND*	ND*
5	25/05/2020	49.69	24.39	13.26	23.60	0.63	ND*	ND*
6	27/05/2020	63.47	29.48	12.44	17.52	0.41	ND*	ND*
7	03/06/2020	74.55	42.59	8.27	22.61	0.26	ND*	ND*
8	06/06/2020	56.36	21.55	10.28	18.37	0.48	ND*	ND*
9	10/06/2020	66.35	31.24	16.39	28.65	0.32	ND*	ND*
10	13/06/2020	72.21	35.37	12.22	23.66	0.18	ND*	ND*
11	17/06/2020	83.4	30.23	18.22	26.52	0.21	ND*	ND*
12	20/06/2020	64.55	41.22	9.43	20.66	0.38	ND*	ND*
13	24/06/2020	76.28	36.25	6.54	17.52	0.14	ND*	ND*
14	27/06/2020	60.25	24.51	15.42	29.61	0.23	ND*	ND*
15	01/07/2020	44.26	18.29	9.3	16.53	0.18	ND*	ND*
16	04/07/2020	50.24	26.35	11.24	22.69	0.37	ND*	ND*
17	08/07/2020	63.24	35.41	7.33	19.34	0.14	ND*	ND*
18	11/07/2020	55.25	31.24	14.4	27.21	0.41	ND*	ND*
19	15/07/2020	60.36	26.43	16.62	32.6	0.3	ND*	ND*
20	18/07/2020	52.68	23.43	10.84	18.32	0.21	ND*	ND*
21	22/07/2020	68.44	44.56	15.3	23.64	0.25	ND*	ND*
22	25/07/2020	53.64	22.17	6.43	15.26	0.36	ND*	ND*
23	29/07/2020	64.23	27.64	13.7	26.54	0.44	ND*	ND*
24	01/08/2020	48.26	16.31	8.59	25.53	0.60	ND*	ND*
25	05/08/2020	60.31	35.62	16.34	29.69	0.16	ND*	ND*
26	08/08/2020	79.12	22.42	9.50	18.65	0.37	ND*	ND*
27	19/08/2020	64.26	38.50	17.85	25.36	0.23	ND*	ND*
28	22/08/2020	57.51	23.84	10.59	19.63	0.19	ND*	ND*
29	26/08/2020	65.61	30.19	7.56	20.28	0.13	ND*	ND*
30	29/08/2020	46.35	15.37	6.54	14.35	0.40	ND*	ND*

Continue ...

H. T. Shah

Lab Manager



Dr. Arun Bajpai

Lab Manager (Q)



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AIR STRIP								
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 (SO2) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO2) $\mu\text{g}/\text{m}^3$	Carbon Monoxide as CO $\text{mg}/\text{m}^3$	Hydrocarbon as CH4 $\text{mg}/\text{m}^3$	Benzene as C6H6 $\mu\text{g}/\text{m}^3$
31	02/09/2020	60.32	23.66	17.66	29.40	0.30	ND*	ND*
32	05/09/2020	72.64	32.30	15.35	34.58	0.36	ND*	ND*
33	09/09/2020	54.34	18.23	10.51	27.54	0.15	ND*	ND*
34	12/09/2020	65.31	36.30	7.60	28.59	0.18	ND*	ND*
35	16/09/2020	56.31	22.53	11.25	21.56	0.24	ND*	ND*
36	19/09/2020	48.61	19.57	9.38	24.54	0.33	ND*	ND*
37	23/09/2020	53.42	17.52	14.84	21.34	0.37	ND*	ND*
38	26/09/2020	62.37	27.5	8.59	25.38	0.13	ND*	ND*
39	30/09/2020	71.85	24.24	12.41	21.52	0.24	ND*	ND*
LIMIT#		100	60	80	80	4	Not Specified	5
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)	NDIR Digital Gas Analyzer	SOP: HC: GC/GCMS/Gas analyzer	IS 5182 (Part XI):2006/CPCB Method

\*Not Detected

#: Industrial, Residential, Rural and other Area Notification Dated 16<sup>th</sup> Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.



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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	12/05/2020	70.56	33.62	13.62	25.62
2	14/05/2020	61.29	25.64	20.37	28.36
3	18/05/2020	73.44	34.34	10.65	26.45
4	20/05/2020	67.59	30.42	8.45	30.27
5	25/05/2020	55.60	21.56	11.36	21.60
6	27/05/2020	72.66	27.59	17.28	20.58
7	03/06/2020	80.39	47.66	11.41	17.65
8	06/06/2020	63.70	24.51	8.68	32.32
9	10/06/2020	74.19	35.42	13.64	24.69
10	13/06/2020	66.53	31.51	15.39	29.34
11	17/06/2020	73.59	27.34	12.59	23.46
12	20/06/2020	69.41	34.55	18.24	30.49
13	24/06/2020	57.41	25.47	9.65	18.54
14	27/06/2020	65.79	28.14	14.48	26.31
15	01/07/2020	56.31	23.64	7.79	29.34
16	04/07/2020	62.35	34.38	17.54	34.22
17	08/07/2020	57.67	30.47	9.63	15.62
18	11/07/2020	65.66	41.29	16.27	33.48
19	15/07/2020	77.21	32.42	11.33	22.37
20	18/07/2020	64.2	35.34	14.29	25.64
21	22/07/2020	73.67	42.37	10.26	21.68
22	25/07/2020	58.26	27.64	12.4	17.42
23	29/07/2020	70.36	31.26	15.35	23.21
24	01/08/2020	64.55	29.34	11.20	20.40
25	05/08/2020	73.65	41.25	18.22	36.30
26	08/08/2020	68.20	26.35	8.66	32.35
27	19/08/2020	76.37	42.66	10.24	23.46
28	22/08/2020	69.35	39.37	16.33	28.49
29	26/08/2020	52.75	23.52	13.42	16.35
30	29/08/2020	58.35	28.68	9.53	19.35

Continue..

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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	02/09/2020	70.33	37.54	19.54	35.32
32	05/09/2020	68.66	35.42	21.52	38.57
33	09/09/2020	59.41	28.55	12.47	23.62
34	12/09/2020	74.62	40.25	15.67	25.65
35	16/09/2020	67.54	38.25	17.56	32.57
36	19/09/2020	58.32	22.43	11.50	36.33
37	23/09/2020	65.47	25.35	13.17	18.32
38	26/09/2020	55.38	20.56	14.23	28.3
39	30/09/2020	62.58	23.43	18.27	24.21
LIMIT <sup>#</sup>		100	60	80	80
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-NaAsO <sub>2</sub> )

#: Industrial, Residential, Rural and other Area Notification Dated 16<sup>th</sup> Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

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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	12/05/2020	68.22	29.34	9.48	17.55
2	14/05/2020	54.21	22.32	21.52	32.65
3	18/05/2020	66.27	27.33	18.60	28.26
4	20/05/2020	50.51	28.54	10.25	22.39
5	25/05/2020	62.63	19.28	7.53	15.26
6	27/05/2020	57.63	21.53	9.46	24.27
7	03/06/2020	59.69	36.34	15.69	28.35
8	06/06/2020	68.24	28.67	12.33	25.38
9	10/06/2020	80.27	38.26	7.67	15.63
10	13/06/2020	55.39	22.45	13.87	24.33
11	17/06/2020	64.37	25.37	8.73	19.36
12	20/06/2020	70.23	45.31	16.26	26.23
13	24/06/2020	62.75	37.51	11.50	23.44
14	27/06/2020	72.29	31.25	9.25	20.58
15	01/07/2020	61.25	25.33	11.37	23.42
16	04/07/2020	56.24	30.46	13.43	26.32
17	08/07/2020	49.23	23.24	15.33	24.24
18	11/07/2020	60.27	34.21	18.37	30.25
19	15/07/2020	71.27	38.22	6.35	15.62
20	18/07/2020	58.52	28.33	12.3	22.35
21	22/07/2020	63.32	39.39	7.61	17.24
22	25/07/2020	73.42	35.22	10.2	19.51
23	29/07/2020	54.28	24.37	8.61	16.53
24	01/08/2020	57.56	24.61	6.50	15.34
25	05/08/2020	66.51	38.39	20.31	32.58
26	08/08/2020	58.67	28.33	12.64	25.23
27	19/08/2020	71.27	35.38	7.51	19.59
28	22/08/2020	63.25	31.50	13.22	24.11
29	26/08/2020	47.52	19.82	10.35	26.45
30	29/08/2020	52.36	18.61	8.37	16.20

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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	02/09/2020	65.66	31.28	12.24	32.56
32	05/09/2020	59.36	27.56	18.69	29.44
33	09/09/2020	63.46	21.26	7.55	20.36
34	12/09/2020	70.33	33.41	13.63	21.62
35	16/09/2020	62.41	28.48	15.20	26.37
36	19/09/2020	53.68	24.35	6.43	30.16
37	23/09/2020	60.37	30.27	9.42	15.62
38	26/09/2020	49.36	18.54	11.28	22.62
39	30/09/2020	54.26	20.38	14.54	19.55
LIMIT <sup>#</sup>		100	60	80	80
	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-NaAsO <sub>2</sub> )

<sup>#</sup>: Industrial, Residential, Rural and other Area Notification Dated 16<sup>th</sup> Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

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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	12/05/2020	63.62	34.58	18.58	33.70	0.70	ND*	ND*
2	14/05/2020	58.61	37.57	11.53	19.36	0.64	ND*	ND*
3	18/05/2020	67.27	29.45	6.27	14.37	0.84	ND*	ND*
4	20/05/2020	49.39	23.24	15.27	23.51	0.74	ND*	ND*
5	25/05/2020	69.03	30.45	17.68	27.60	0.47	ND*	ND*
6	27/05/2020	76.56	28.32	19.69	30.23	0.71	ND*	ND*
7	02/06/2020	64.35	31.57	12.44	22.67	0.80	ND*	ND*
8	05/06/2020	70.25	35.65	14.34	35.42	0.44	ND*	ND*
9	09/06/2020	50.22	22.45	16.19	32.45	0.50	ND*	ND*
10	12/06/2020	77.34	42.32	8.62	20.25	0.3	ND*	ND*
11	16/06/2020	63.25	23.45	10.64	26.43	0.79	ND*	ND*
12	19/06/2020	74.27	40.32	15.19	29.54	0.42	ND*	ND*
13	23/06/2020	68.66	29.36	11.29	21.54	0.87	ND*	ND*
14	26/06/2020	57.29	32.4	9.5	18.65	0.48	ND*	ND*
15	30/06/2020	62.59	24.24	6.36	31.24	0.62	ND*	ND*
16	03/07/2020	58.68	21.57	15.34	30.54	0.36	ND*	ND*
17	10/07/2020	45.36	16.7	10.34	24.26	0.34	ND*	ND*
18	14/07/2020	79.52	40.23	16.17	19.61	0.22	ND*	ND*
19	17/07/2020	56.31	22.62	14.29	27.64	0.26	ND*	ND*
20	21/07/2020	62.81	38.65	11.61	20.31	0.61	ND*	ND*
21	24/07/2020	70.31	35.28	13.81	33.53	0.73	ND*	ND*
22	28/07/2020	69.31	25.61	7.6	16.64	0.23	ND*	ND*
23	31/07/2020	72.34	29.61	12.67	29.64	0.49	ND*	ND*
24	04/08/2020	55.37	28.24	14.22	29.26	0.64	ND*	ND*
25	07/08/2020	62.54	25.36	12.49	24.60	0.33	ND*	ND*
26	11/08/2020	51.57	21.53	18.52	27.54	0.24	ND*	ND*
27	18/08/2020	66.38	35.44	7.57	20.39	0.55	ND*	ND*
28	21/08/2020	50.22	27.66	9.17	15.63	0.31	ND*	ND*
29	25/08/2020	68.47	33.40	13.44	18.24	0.45	ND*	ND*
30	12/05/2020	63.62	34.58	18.58	33.70	0.70	ND*	ND*

Continue ...

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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 (SO2) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO2) $\mu\text{g}/\text{m}^3$	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	28/08/2020	53.36	23.41	6.54	13.47	0.23	ND*	ND*
32	01/09/2020	66.55	29.32	8.54	20.45	0.57	ND*	ND*
33	04/09/2020	52.41	20.66	16.31	34.24	0.47	ND*	ND*
34	08/09/2020	64.55	34.53	12.42	19.59	0.54	ND*	ND*
35	11/09/2020	58.35	37.53	10.20	21.51	0.42	ND*	ND*
36	15/09/2020	61.25	33.49	14.22	28.55	0.26	ND*	ND*
37	18/09/2020	72.43	30.53	9.84	22.34	0.18	ND*	ND*
38	22/09/2020	67.54	38.36	11.67	18.36	0.58	ND*	ND*
39	25/09/2020	55.34	19.66	6.9	23.57	0.25	ND*	ND*
LIMIT#		100	60	80	80	4	Not Specified	5
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)	NDIR Digital Gas Analyzer	SOP: HC: GC/GCMS/Gas analyzer	IS 5182 (Part XI):2006/CPCB Method

\*Not Detected

#: Industrial, Residential, Rural and other Area Notification Dated 16<sup>th</sup> Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

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

SR. NO.	Name of Location	WTP- NEAR CETP				
		Result [dB(A) Leq]				
	Sampling Date & Time	22/05/2020	03/06/2020	03/07/2020	01/08/2020	01/09/2020
1	6:00-7:00	65.3	63.1	68.4	60.7	62.8
2	7:00-8:00	62.4	66.1	62.4	68.7	64.7
3	8:00-9:00	68.3	68.2	63.5	63.4	69.5
4	9:00-10:00	63.2	65.7	69.4	65.8	70.1
5	10:00-11:00	69.2	69.1	62.5	62.2	65.2
6	11:00-12:00	66.5	62.8	64.1	69	63.1
7	12:00-13:00	69.3	69.5	61.2	71.4	65.5
8	13:00-14:00	67.3	66.1	63.5	68.8	68.7
9	14:00-15:00	63.2	63.7	68.4	62.4	71.4
10	15:00-16:00	66.1	68.4	66.5	63.7	69.2
11	16:00-17:00	62.4	62.4	62.4	65.2	66.2
12	17:00-18:00	70.3	69.7	68.8	62.9	63.4
13	18:00-19:00	65.3	62.8	63.3	68.4	60.4
14	19:00-20:00	65.2	64.7	68.8	61.3	65.1
15	20:00-21:00	69.2	63.8	62.1	63.8	64.1
16	21:00-22:00	63.1	61.7	62.9	65.7	68.7
Day Time Limit*		75 dB(A) Leq				

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

	Name of Location	WTP- NEAR CETP				
		Result [dB(A) Leq]				
	Sampling Date & Time	22/05/2020	03/06/2020	03/07/2020	01/08/2020	01/09/2020
1	22:00-23:00	60.4	68.4	68.4	63.1	65.1
2	23:00-00:00	59.4	66.7	65.5	65.2	62.8
3	00:00-01:00	62.4	63.8	62.1	69.2	68.4
4	01:00-02:00	61.7	60.4	60.4	66.1	64.7
5	02:00-03:00	60.3	62.9	66.3	62.7	69.5
6	03:00-04:00	62.8	65.7	63.7	66.8	66.2
7	04:00-05:00	61.8	62.4	65.4	63.7	63.4
8	05:00-06:00	60.9	61.7	62.1	62.4	65.9
Night Time Limit*		70 dB(A) Leq				

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

SR. NO.	Name of Location	AIR STRIP				
		Result [dB(A) Leq]				
	Sampling Date & Time	11/05/2020	24/06/2020	27/07/2020	05/08/2020	16/09/2020
1	6:00-7:00	56.3	58.4	55.5	57.4	57.1
2	7:00-8:00	59.3	62.7	69.8	62.1	60.5
3	8:00-9:00	65.3	60.8	60.4	60.8	62.4
4	9:00-10:00	62.2	63.7	65.4	65.4	65.8
5	10:00-11:00	59.3	66.8	67.1	62.7	64.1
6	11:00-12:00	67.4	63.8	62.4	60.1	63.9
7	12:00-13:00	54.3	60.4	64.1	62.4	65.7
8	13:00-14:00	62.7	59.4	61.5	65.1	69.4
9	14:00-15:00	68.4	62.1	63.1	60.4	62.4
10	15:00-16:00	66.3	63.4	62.4	67.4	60.4
11	16:00-17:00	63.2	60.7	68.4	66.1	63.1
12	17:00-18:00	64.3	65.5	60.1	64	61.5
13	18:00-19:00	61.3	63.8	58.4	62.7	61.8
14	19:00-20:00	65.5	60.8	60.7	60.8	60.8
15	20:00-21:00	60.2	63.7	62.4	60.1	62.8
16	21:00-22:00	62.5	62.8	61.8	63.1	64.5
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]				
	Sampling Date & Time	11/05/2020	24/06/2020	27/07/2020	05/08/2020	16/09/2020
1	22:00-23:00	68.4	60.4	63.1	60.4	63.4
2	23:00-00:00	65.1	57.1	60.7	56.1	60.8
3	00:00-01:00	58.1	58.4	54.1	59.4	56.4
4	01:00-02:00	53.4	54.8	52.7	62.7	54.1
5	02:00-03:00	62.1	59.4	59.8	60.8	50.4
6	03:00-04:00	60.4	62.1	55.1	57.1	56.8
7	04:00-05:00	61.4	60.7	62.4	62.4	59.9
8	05:00-06:00	60.8	58.4	60.4	61.5	61.7
Night Time Limit*		70 dB(A) Leq				

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 STP				
		Result [Leq dB(A)]				
	Sampling Date & Time	29/05/2020	17/06/2020	08/07/2020	22/08/2020	11/09/2020
1	6:00-7:00	60.2	60.4	60.8	62.4	58.4
2	7:00-8:00	64.2	58.4	65.1	62.1	62.8
3	8:00-9:00	65.7	62.8	63.4	68.5	64.1
4	9:00-10:00	68.4	69.4	68.4	63.4	61.3
5	10:00-11:00	66.2	65.4	62.1	69.4	65.2
6	11:00-12:00	62.1	62.8	61.3	65.5	68.4
7	12:00-13:00	61.7	66.7	62.2	62.8	65.1
8	13:00-14:00	69.3	63.4	60.7	63.1	68.7
9	14:00-15:00	65.4	61.4	68.3	61.8	62.8
10	15:00-16:00	63.8	64.8	67.7	65.5	66.2
11	16:00-17:00	69.3	65.7	62.1	69.8	61.4
12	17:00-18:00	64.4	62.4	65.5	70.5	68.7
13	18:00-19:00	62.1	65.2	69.9	65.2	66.1
14	19:00-20:00	66.8	68.7	63.5	69.4	60.7
15	20:00-21:00	68.5	62.4	62.4	63.4	64.1
16	21:00-22:00	65.8	65.7	66.1	64.1	61.5
		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	29/05/2020	17/06/2020	08/07/2020	22/08/2020	11/09/2020
1	22:00-23:00	58.4	63.7	63.1	65.5	62.1
2	23:00-00:00	60.4	65.1	64.7	62.7	64.3
3	00:00-01:00	60.2	61.4	67.1	63.1	67.7
4	01:00-02:00	63.4	62.8	62.8	60.1	66.1
5	02:00-03:00	61.4	63.4	60.2	62.4	63.1
6	03:00-04:00	63.2	65.5	64.5	62.8	65.1
7	04:00-05:00	61.7	62.1	62.7	63.7	69.8
8	05:00-06:00	60.3	64.8	61.8	61.5	62.4
Night Time Limit*		70 dB(A) Leq				

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	SAMUNDRA TOWNSHIP CUSTOMER CARE				
		Result [Leq dB(A)]				
	Sampling Date & Time	26/05/2020	10/06/2020	15/07/2020	08/08/2020	09/09/2020
1	6:00-7:00	57.2	58.4	57.4	65.7	60.4
2	7:00-8:00	60.2	60.4	60.1	62.8	59.4
3	8:00-9:00	64.1	63.7	63.1	60.4	65.1
4	9:00-10:00	67.4	68.4	62.5	68.7	68.4
5	10:00-11:00	65.5	65.1	65.3	65.5	66.3
6	11:00-12:00	62.3	63.7	64.8	68.4	68.4
7	12:00-13:00	68.9	68.1	65.1	62.3	67.1
8	13:00-14:00	69.4	64.8	62.7	66.1	72.1
9	14:00-15:00	66.9	66.8	61.5	68.7	68.4
10	15:00-16:00	64.4	62.8	68.4	62.7	65.2
11	16:00-17:00	62.2	64.8	62.8	60.4	62.8
12	17:00-18:00	60.2	62.2	63.1	62.8	68.4
13	18:00-19:00	64.5	68.4	60.8	65.2	61.3
14	19:00-20:00	68.3	62.7	65.8	63.7	63.2
15	20:00-21:00	64.2	60.1	68.8	64.8	62.6
16	21:00-22:00	61.6	63.4	65.5	62.4	66.8
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)]				
	Sampling Date & Time	26/05/2020	10/06/2020	15/07/2020	08/08/2020	09/09/2020
1	22:00-23:00	60.1	62.4	65.8	65.5	65.6
2	23:00-00:00	57.1	66.7	62.7	62.1	63.4
3	00:00-01:00	55.1	65.1	58.4	59.4	60.7
4	01:00-02:00	51.4	62.7	55.1	55.1	58.4
5	02:00-03:00	55.7	58.1	60.7	62.7	53.4
6	03:00-04:00	62.7	57.1	61.8	60.7	59.4
7	04:00-05:00	60.7	60.4	59.9	58.4	62.4
8	05:00-06:00	59.1	59.9	60.2	59.9	55.7
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	18/05/2020	23/06/2020	07/07/2020	11/08/2020	08/09/2020
1	6:00-7:00	65.3	65.2	67.1	65.1	65.5
2	7:00-8:00	62.1	63.8	62.8	68.4	62.4
3	8:00-9:00	68.4	66.1	61.8	69.4	68.7
4	9:00-10:00	70.3	61.8	65.8	72.9	70.1
5	10:00-11:00	68.7	62.8	68.1	70.6	73.4
6	11:00-12:00	64.2	69.1	62.4	65.8	70.4
7	12:00-13:00	62.7	62.8	68.4	62.4	74.1
8	13:00-14:00	69.3	67.1	69.4	61.8	69.8
9	14:00-15:00	63.1	64.3	65.1	64.8	68.1
10	15:00-16:00	61.6	61.8	68.1	68.4	65.4
11	16:00-17:00	68.3	64.5	71.7	63.4	62.1
12	17:00-18:00	63.2	68.9	69.1	65.8	61.8
13	18:00-19:00	62.4	63.1	65.1	62.8	65.7
14	19:00-20:00	66.8	67.2	62.4	63.4	62.2
15	20:00-21:00	68.2	69.9	68.4	61.8	68.7
16	21:00-22:00	65.5	62.8	64.1	68.7	64.2
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	18/05/2020	23/06/2020	07/07/2020	11/08/2020	08/09/2020
1	22:00-23:00	65.1	67.2	64.1	68.4	68.5
2	23:00-00:00	62.7	63.8	60.1	63.4	66.2
3	00:00-01:00	66.4	64.1	62.4	61.5	63.7
4	01:00-02:00	66.9	60.4	58.8	63.1	64.1
5	02:00-03:00	60.1	63.8	63.1	62.4	62.1
6	03:00-04:00	62.4	65.2	65.1	65.5	63.8
7	04:00-05:00	62.8	61.8	62.1	62.4	62.1
8	05:00-06:00	63.7	64.2	60.4	63.1	61.8
Night Time Limit*		70Leq dB(A)				

H. T. Shah

Lab Manager



Dr. ArunBajpai

Lab Manager (Q)

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**RESULTS OF STP WATER OUTLET**

SR. NO	TEST PARAMETERS	Unit	ADANI HOUSE STP OUTLET					
			May-20		June-20		GPCB permissible Limit	TEST METHOD
			--	20/05/2020	04/06/2020	16/06/2020		
1	pH	--	--	7.72	7.31	7.49	6.5 to 9.0	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	--	11	12	19	100	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	--	18	16	12	30	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	--	0.8	0.6	0.8	--	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	--	350	540	430	1000	APHA (22ndEdi) 9221 C&E

SR. NO	TEST PARAMETERS	Unit	ADANI HOUSESTP OUTLET							
			July-20		August-20		September-20		GPCB Permissible Limit	TEST METHOD
			06/07/2020	16/07/2020	04/08/2020	29/08/2020	05/09/2020	18/09/2020		
1	pH	--	7.39	7.53	7.71	7.47	7.32	7.49	6.5 to 9.0	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	8	16	18	14	10	10	100	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	10	15	12	9	13	12	30	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	0.6	0.8	0.6	0.8	0.6	0.6	--	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	350	350	240	280	430	340	1000	APHA (22ndEdi) 9221 C&E

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Lab Manager



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**RESULTS OF STP WATER OUTLET**

SR. NO	TEST PARAMETERS	Unit	AMSIPL SAMUNDRA TOWNSHIP STP OUTLET					
			May-20		June-20		GPCB permissible Limit	TEST METHOD
			--	20/05/2020	04/06/2020	16/06/2020		
1	pH	--	--	7.87	7.61	7.52	<b>6.5 to 9.0</b>	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	--	22	17	14	<b>100</b>	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	--	14	18	11	<b>30</b>	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	--	0.6	0.6	0.6	--	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	--	150	430	350	<b>1000</b>	APHA (22ndEdi) 9221 C&E

SR. NO	TEST PARAMETERS	Unit	AMSIPL SAMUNDRA TOWNSHIP STP OUTLET							
			July-20		August-20		September-20		GPCB Permissible Limit	TEST METHOD
			06/07/2020	16/07/2020	04/08/2020	29/08/2020	05/09/2020	18/09/2020		
1	pH	--	7.49	7.33	7.56	7.40	7.33	7.49	6.5 to 9.0	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	15	9	12	18	15	10	100	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	16	9	6	10	9	12	30	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	0.8	0.6	0.8	0.8	0.6	0.6	--	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	540	430	570	460	540	450	1000	APHA (22ndEdi) 9221 C&E

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**RESULT OF CETP INTLET**

SR. NO.	TEST PARAMETERS	UNIT	CETP INLET					TEST METHOD
			May-20	June-20	July-20	Aug-20	Sep-20	
1	pH	--	7.39	7.01	7.3	7.84	7.92	IS3025(P11)83Re.02
2	Temperature	°C	31.3	30.9	31.2	30.7	29.8	IS3025(P9)84Re.02
3	Colour	Co-pt	80	90	80	90	85	IS3025(P4)83Re.02
4	Total Suspended Solids	mg/L	128	174	193	214	202	IS3025(P17)84Re.02
5	Oil & Grease	mg/L	4.8	6.4	7.1	5.8	5.2	APHA(22 <sup>nd</sup> Edi)5520D
6	Phenolic Compound	mg/L	Not Detected	0.012	Not Detected	Not Detected	Not Detected	IS3025(P43)92Re.03
7	Fluorides	mg/L	0.60	1.70	1.64	1.25	1.18	APHA(22 <sup>nd</sup> Edi) 4500 F D SPANDS
8	Iron	mg/L	0.075	3.58	3.2	0.81	1.1	AAS APHA(22 <sup>nd</sup> Edi)3111 B
9	Zinc as Zn	mg/L	0.042	0.075	0.098	0.072	0.095	AAS APHA(22 <sup>nd</sup> Edi)3111 B
10	Trivalent Chromium	mg/L	0.098	0.12	0.16	0.12	0.1	AAS APHA(22 <sup>nd</sup> Edi)3111 B
11	Sulphide as S	mg/L	1.10	1.6	2.3	1.5	1.3	APHA(22 <sup>nd</sup> Edi) 4500-S
12	Ammonical Nitrogen as NH <sub>3</sub>	mg/L	42	49	49	16	36	IS3025(P34)88Cla.2.3
13	BOD (3 Days @ 27°C)	mg/L	138	118	104	88	94	IS 3025 (P44)1993Re.03Edition2.1
14	COD	mg/L	496	383	396	318	330	APHA(22 <sup>nd</sup> Edi) 5520-D Open Reflux
15	Chloride as Cl	mg/L	729	769	792	712	770	IS3025(P32)88Re.99
16	Sulphate as SO <sub>4</sub>	mg/L	149	69.4	78	56	62	APHA(22 <sup>nd</sup> Edi)4500 SO <sub>4</sub> E
17	Total Dissolved Solids	mg/L	2096	2072	2093	1755	1820	IS3025(P16)84Re.02
18	Total Residual Chlorine	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	APHA(22 <sup>nd</sup> Edi)4500 Cl
19	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	AAS APHA(22 <sup>nd</sup> Edi)3111 B

H. T. Shah

Lab Manager



Dr. ArunBajpai

Lab Manager (Q)



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### RESULT OF CETP OUTLET

SR. NO.	TEST PARAMETERS	UNIT	CETP OUTLET					GPCB Permissible Limit CETP OUTLET	TEST METHOD
			May-20	June-20	July-20	Aug-20	Sep-20		
1	pH	--	7.88	7.68	7.73	7.81	7.7	6 to 9	IS3025(P11)83Re.02
2	Temperature	°C	31.6	31.7	31.8	30.7	29.2	Shall Not exceed more than 5 °C above ambient water temperature	IS3025(P9)84Re.02
3	Colour	Co-pt	30	40	30	50	40	100	IS3025(P4)83Re.02
4	Total Suspended Solids	mg/L	41	59	48	56	48	100	IS3025(P17)84Re.02
5	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	10	APHA(22 <sup>nd</sup> Edi)5520D
6	Phenolic Compound	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	1	IS3025(P43)92Re.03
7	Fluorides	mg/L	0.62	1.58	1.28	1.10	0.92	2	APHA(22 <sup>nd</sup> Edi) 4500 F D SPANDS
8	Iron	mg/L	0.032	0.18	0.200	0.520	0.680	3	AAS APHA(22 <sup>nd</sup> Edi)3111 B
9	Zinc as Zn	mg/L	Not Detected	Not Detected	0.069	0.044	0.072	15	AAS APHA(22 <sup>nd</sup> Edi)3111 B
10	Trivalent Chromium	mg/L	0.025	0.044	Not Detected	Not Detected	Not Detected	2	AAS APHA(22 <sup>nd</sup> Edi)3111 B
11	Sulphide as S	mg/L	0.6	0.8	Not Detected	Not Detected	Not Detected	2	APHA(22 <sup>nd</sup> Edi) 4500-S
12	Ammonical Nitrogen as NH <sub>3</sub>	mg/L	28	43	45	23	31	50	IS3025(P34)88Cla.2.3
13	BOD (3 Days @ 27°C)	mg/L	32	68	53	45	52	100	IS 3025 (P44)1993Re.03Edition2.1
14	COD	mg/L	165	249	228	210	198	250	APHA(22 <sup>nd</sup> Edi) 5520-D Open Reflux
15	Chloride as Cl	mg/L	719	749	774	719	712	1000	IS3025(P32)88Re.99
16	Sulphate as SO <sub>4</sub>	mg/L	131	58.98	62	46	48	1000	APHA(22 <sup>nd</sup> Edi)4500 SO <sub>4</sub> E
17	Total Dissolved Solids	mg/L	2011	2044	2078	1829	1730	2100	IS3025(P16)84Re.02
18	Total Residual Chlorine	mg/L	Not Detected	Not Detected	Not Detected	0.6	0.8	1	APHA(22 <sup>nd</sup> Edi)4500 Cl
19	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	3	AAS APHA(22 <sup>nd</sup> Edi)3111 B

\*Below Detection Limit

H. T. Shah

Lab Manager



Dr. Arun Bajpai

Lab Manager (Q)



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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	
	Sampling Date		15/07/2020	15/07/2020	15/07/2020	
1	pH	--	7.68	7.75	8.31	IS3025(P11)83Re.02
2	Salinity	ppt	21	11.4	4.1	APHA 2520B
3	Oil & Grease	mg/L	Not Detected	Not Detected	Not Detected	APHA(22ndEdi)5520D
4	Hydrocarbon	mg/L	Not Detected	Not Detected	Not Detected	GC/GC-MS
5	Lead as Pb	mg/L	Not Detected	0.025	0.031	AAS APHA(22ndEdi)3111 B
6	Arsenic as As	mg/L	Not Detected	Not Detected	Not Detected	AAS APHA 3114 B
7	Nickel as Ni	mg/L	Not Detected	Not Detected	Not Detected	AAS APHA(22ndEdi)3111 B
8	Total Chromium as Cr	mg/L	0.025	0.058	Not Detected	AAS 3111B
9	Cadmium as Cd	mg/L	Not Detected	Not Detected	Not Detected	AAS APHA(22ndEdi)3111 B
10	Mercury as Hg	mg/L	Not Detected	Not Detected	Not Detected	AAS APHA- 3112 B
11	Zinc as Zn	mg/L	0.49	0.094	0.36	AAS APHA(22ndEdi)3111 B
12	Copper as Cu	mg/L	Not Detected	Not Detected	Not Detected	AAS APHA(22ndEdi)3111 B
13	Iron as Fe	mg/L	0.28	0.11	0.23	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	2.5	2.35	2.45	--

H. T. Shah

Lab Manager



Dr. Arun Bajpai

Lab Manager (Q)

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

			19/07/2020	19/07/2020		
SR. NO.	TEST PARAMETERS	Unit	WTP-CETP	Adani Hospital	GPCB Limit	Test Method
			D.G. Set (380 KVA)	D.G. Set (500 KVA)		
1	Particulate Matter	mg/Nm <sup>3</sup>	23.62	26.75	150	IS:11255 (Part-I):1985
2	Sulphur Dioxide	ppm	6.79	5.63	100	IS:11255 (Part-II):1985
3	Oxide of Nitrogen	ppm	32.41	39.76	50	IS:11255 (Part-VII):2005

\*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 %

27/08/2020					
SR. NO.	TEST PARAMETERS	Unit	Adani House	GPCB Limit	Test Method
			D.G. Set-6 (750 KVA)		
1	Particulate Matter	mg/Nm <sup>3</sup>	23.68	150	IS:11255 (Part-I):1985
2	Sulphur Dioxide	ppm	5.84	100	IS:11255 (Part-II):1985
3	Oxide of Nitrogen	ppm	31.86	50	IS:11255 (Part-VII):2005
4	Carbon Monoxide	mg/m <sup>3</sup>	12.05	Not Specified	Digital Gas Analyzer
5	Hydro Carbon NMHC	ppm	Not Detected	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. 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	1
6	Phenolic Compound	0.01
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	0.1
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. Arun Bajpai

Lab Manager (Q)



**POLLUCON** LABORATORIES PVT. LTD.

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

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

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. Arun Bajpai

Lab Manager (Q)

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

**FOR**



**ADANI MUNDRA SEZ INFRASTRUCTURE PVT. LTD.  
TAL: MUNDRA, KUTCH, MUNDRA – 370 421**

**MONITORING PERIOD:  
APRIL 2020 TO SEPTEMBER 2020**

**PREPARED BY:**



**POLLUCON LABORATORIES PVT.LTD.**

**PLOT NO.5/6 "POLLUCON HOUSE", OPP. BALAJI INDUSTRIAL SOCIETY,  
OLD SHANTINATH SILK MILL LANE, NEAR GAYTRI FARSAN MART,  
NAVJIVAN CIRCLE, UDHANA MAGDALLA ROAD, SURAT-395007.  
PHONE/FAX – (+91 261) 2455 751, 2601 106, 2601 224.  
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.  
Clearance Production & Waste Modernization Facilities

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

**RESULTS OF SOIL**

SR. NO.	TEST PARAMETERS	UNIT	RESULT			
			15/07/2020			
			Pub Building	Dhrub	Near Flyover Bridge	CETP
1	pH	--	8.95	9.30	8.75	8.70
2	Nitrogen as N	%	0.021	0.020	0.05	0.019
3	Phosphorus as P	mg/kg	145	110	140	210
4	Potassium as K	mg/kg	198	114	80	105
5	Baron as B	mg/kg	2.1	1.8	1.5	2.10
6	Calcium as Ca	mg/kg	440	490	420	545
7	Magnesium as Mg	mg/kg	550	545	505	560
8	Iron as Fe	%	0.35	0.40	0.55	0.48
9	Moisture	%	12.4	11.8	10.9	11.90
10	Organic Matter	%	0.21	0.18	0.3	0.18
11	CEC	meq/100 gm	10.1	9.60	10.4	9.80
12	TVC	CFU/gm	4.4 x 10 <sup>4</sup>	3.8 x 10 <sup>4</sup>	5.8 x 10 <sup>3</sup>	4.0 x 10 <sup>4</sup>
<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	Not Detected	Not Detected	Not Detected	Not Detected
18	Chromium (VI) as Cr	mg/kg	Not Detected	Not Detected	Not Detected	Not Detected
19	Cobalt as Co	mg/kg	13.6	16.10	19.4	31.6
20	Copper as Cu	mg/kg	15.8	9.4	39.6	48.2
21	Nickel as Ni	mg/kg	9.4	15.8	20.8	21.6
22	Manganese as Mn	mg/kg	312	392	290	418
23	Vanadium as V	mg/kg	7.5	8.2	9.4	7.15

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)**

**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 - 2020

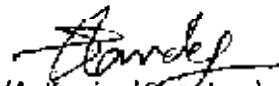
**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-20/04/001

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.	07/04/2020	62.1	24.8	14.7	20.3	13.8	BDL
Average		62.1	24.8	14.7	20.3		

**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 - 2020

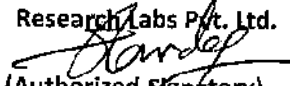
**Name of Location** : Village - Kandagara

**ID No.** : URA/ID/A-20/04/002

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.	07/04/2020	66.4	27.6	14.8	22.6	18.6	BDL
Average		66.4	27.6	14.8	22.6		--

**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 :** April - 2020

**Name of Location :** Village - Wandh

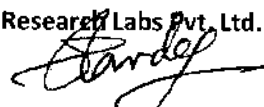
**ID No. :** URA/ID/A-20/04/003

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.	07/04/2020	69.3	30.8	17.3	22.9	20.3	BDL
Average		69.3	30.8	17.3	22.9		--

**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.

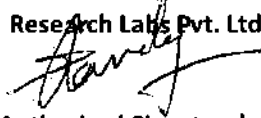
**Month of Monitoring** : May - 2020

**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-20/05/001

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.	19/05/2020	66.5	25.4	11.2	21.3		--
2.	22/05/2020	75.7	31.2	16.1	23.8		--
3.	26/05/2020	71.9	26.9	12.4	19.7	18.3	BDL
4.	29/05/2020	59.4	23.3	13.2	20.4		--
Average		68.4	26.7	13.2	21.3		--

**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** : May - 2020

**Name of Location** : Village - Kandagara

**ID No.** : **URA/ID/A-20/05/002**

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.	19/05/2020	61.3	23.6	13.9	21.2		--
2.	22/05/2020	74.3	30.9	14.2	20.2		--
3.	26/05/2020	76.7	32.6	14.8	22.6	17.4	BDL
4.	29/05/2020	65.9	27.7	11.7	18.5		--
Average		69.5	28.7	13.7	20.6		--

**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 :** May - 2020

**Name of Location :** Village - Wandh

**ID No. :** URA/ID/A-20/05/003

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.	19/05/2020	75.6	30.8	19.4	24.8		--
2.	22/05/2020	68.9	26.8	15.3	22.9		--
3.	26/05/2020	74.1	28.2	14.8	26.3	21.6	BDL
4.	29/05/2020	81.2	36.3	18.1	23.7		--
Average		75.0	30.5	16.9	24.4		--

**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  $\mu\text{g}/\text{m}^3$

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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 - 2020

**Name of Location** : Village - Wandh

**ID No.** : URA/ID/A-20/06/003

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.	02/06/2020	74.9	25.2	15.2	23.8		--
2.	05/06/2020	66.0	23.7	13.4	18.3		--
3.	08/06/2020	85.1	32.0	20.5	16.5		--
4.	11/06/2020	77.3	33.6	14.3	27.1		--
5.	16/06/2020	62.7	29.3	23.8	19.5	20.4	BDL
6.	19/06/2020	64.6	28.8	18.5	25.2		--
7.	23/06/2020	Rainfall					
8.	26/06/2020	67.5	33.5	22.1	21.6		--
Average		71.2	29.5	18.3	21.7		--

**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  $\mu\text{g}/\text{m}^3$

**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** : June - 2020

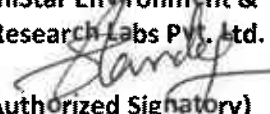
**Name of Location** : Village - Kandagara

**ID No.** : URA/ID/A-20/06/002

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.	02/06/2020	86.5	23.8	20.8	22.5		---
2.	05/06/2020	51.8	18.3	16.1	24.3		---
3.	08/06/2020	63.4	22.5	16.3	20.7		---
4.	11/06/2020	56.1	19.9	18.7	16.7		---
5.	16/06/2020	76.7	24.8	13.1	21.4	17.2	BDL
6.	19/06/2020	54.2	23.8	13.4	17.5		---
7.	23/06/2020	Rainfall					
8.	26/06/2020	72.2	27.1	14.5	22.2		--
Average		65.8	22.9	16.1	20.8		--

**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) 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 - 2020

**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-20/06/001

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.	02/06/2020	61.3	27.2	13.3	24.4		--
2.	05/06/2020	57.3	23.9	15.5	22.3		--
3.	08/06/2020	76.9	26.8	19.4	25.4		--
4.	11/06/2020	45.6	21.5	15.7	20.8		---
5.	16/06/2020	65.0	27.7	18.1	21.3	13.8	BDL
6.	19/06/2020	73.3	32.2	18.5	18.5		---
7.	23/06/2020	Rainfall					
8.	26/06/2020	69.1	31.0	17.3	23.4		--
Average		64.1	27.2	16.8	22.3		---

**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 - 2020

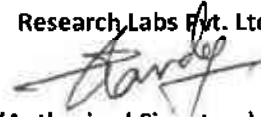
**Name of Location** : Village - Siracha

**ID No.** : **URA/ID/A-20/07/001**

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.	03/07/2020	68.8	24.2	19.3	14.7		--
2.	07/07/2020	Rainfall					
3.	10/07/2020						
4.	14/07/2020						
5.	17/07/2020						
6.	20/07/2020	58.3	17.2	15.8	13.5	14.7	BDL
7.	24/07/2020	77.1	16.8	16.4	19.2		--
8.	28/07/2020	61.3	25.4	17.2	20.5		--
Average		66.4	20.9	17.2	17.0		--

**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 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 :** July - 2020

**Name of Location :** Village - Kandagara

**ID No. :** URA/ID/A-20/07/002

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.	03/07/2020	55.3	28.6	15.5	15.1		--
2.	07/07/2020	Rainfall					
3.	10/07/2020						
4.	14/07/2020						
5.	17/07/2020						
6.	20/07/2020	58.1	22.6	17.3	22.7	16.3	BDL
7.	24/07/2020	61.6	19.5	16.6	13.5		--
8.	28/07/2020	70.5	28.3	21.8	21.7		--
Average		61.4	24.8	17.8	18.3		--

**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) 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 - 2020

**Name of Location :** Village - Wandh

**ID No. :** URA/ID/A-20/07/003

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.	03/07/2020		75.1	30.3	23.3	18.8		--
2.	07/07/2020	Rainfall						
3.	10/07/2020							
4.	14/07/2020							
5.	17/07/2020							
6.	20/07/2020		73.7	35.0	20.9	24.3	18.8	BDL
7.	24/07/2020		65.3	24.6	17.1	14.8		--
8.	28/07/2020		78.7	36.9	16.8	23.9		--
Average			73.2	31.7	19.5	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) 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 - 2020

**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-20/08/001

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.	04/08/2020	63.8	27.8	15.2	16.3	12.8	BDL
2.	07/08/2020	Rainfall					
3.	10/08/2020	52.0	21.7	13.0	19.4		--
4.	14/08/2020	Rainfall					
5.	18/08/2020						
6.	21/08/2020						
7.	25/08/2020						
8.	28/08/2020						
Average		57.9	24.8	14.1	17.9		--

**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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MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (17.01.2020 to 17.03.2023)

QCINABET Accredited EIA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule - I)

ISO 9001:2015 Certified Company

ISO 45001:2018 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** : August - 2020

**Name of Location** : Village - Kandagara

**ID No.** : URA/ID/A-20/08/002

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.	04/08/2020	64.0	28.6	14.8	14.7	14.5	BDL
2.	07/08/2020	Rainfall					
3.	10/08/2020	58.1	22.6	13.3	18.9		--
4.	14/08/2020	Rainfall					
5.	18/08/2020						
6.	21/08/2020						
7.	25/08/2020						
8.	28/08/2020						
Average		61.0	25.6	14.1	16.8		--

**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  $\mu\text{g}/\text{m}^3$

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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 - 2020

**Name of Location :** Village - Wandh

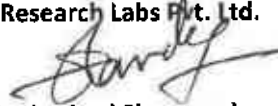
**ID No. :** URA/ID/A-20/08/003

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.	04/08/2020	76.4	34.9	16.2	20.1	15.8	BDL
2.	07/08/2020	Rainfall					
3.	10/08/2020	60.2	26.3	14.3	15.6		--
4.	14/08/2020	Rainfall					
5.	18/08/2020						
6.	21/08/2020						
7.	25/08/2020						
8.	28/08/2020						
Average		68.3	30.6	15.3	17.9		--

**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  $\mu\text{g}/\text{m}^3$

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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** : September - 2020

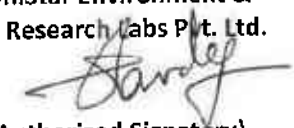
**Name of Location** : Village - Siracha

**ID No.** : URA/ID/A-20/09/001

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.	04/09/2020	45.5	16.1	11.7	14.3		--
2.	08/09/2020	65.7	21.0	17.6	23.5		--
3.	11/09/2020	77.6	35.2	16.5	17.8		--
4.	15/09/2020	35.3	13.8	10.3	12.5		--
5.	18/09/2020	64.1	28.2	16.5	21.7		--
6.	22/09/2020	45.9	20.5	14.2	17.5		--
7.	25/09/2020	64.2	24.4	19.4	20.5	16.4	BDL
8.	29/09/2020	68.7	26.3	18.9	15.4		--
Average		58.4	23.2	15.6	17.9		--

**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 :** September - 2020

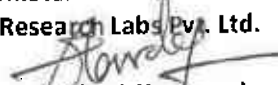
**Name of Location :** Village - Kandagara

**ID No. :** URA/ID/A-20/09/002

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.	04/09/2020	46.1	18.8	11.4	13.7		--
2.	08/09/2020	39.3	12.1	12.3	17.8		--
3.	11/09/2020	67.0	29.1	18.9	22.2		--
4.	15/09/2020	58.5	20.7	14.1	14.2		--
5.	18/09/2020	75.9	36.3	15.3	18.9		--
6.	22/09/2020	66.1	23.1	13.7	18.3		--
7.	25/09/2020	72.9	36.2	19.6	23.1	15.9	BDL
8.	29/09/2020	68.5	23.1	17.1	21.5		--
Average		61.8	24.9	15.3	18.7		--

**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  $\mu\text{g}/\text{m}^3$

**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 - 2020

**Name of Location** : Village - Wandh

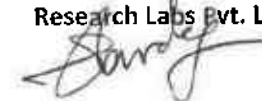
**ID No.** : URA/ID/A-20/09/003

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.	04/09/2020	71.7	29.6	18.1	24.2		--
2.	08/09/2020	64.2	24.4	15.4	16.5		--
3.	11/09/2020	78.1	31.5	18.6	22.5		--
4.	15/09/2020	56.6	20.1	14.5	13.8		--
5.	18/09/2020	72.3	36.2	12.9	15.1		--
6.	22/09/2020	65.5	23.1	17.1	18.5		--
7.	25/09/2020	74.8	33.2	19.5	17.8	18.4	BDL
8.	29/09/2020	67.0	29.1	21.7	22.2		--
Average		68.8	28.4	17.2	18.8		--

**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) 2009 Ozone BDL limit: 5  $\mu\text{g}/\text{m}^3$

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### TEST REPORT (STACK MONITORING)

ULR - TC7532000008733F			
Test Report No.	URA/20/09/S-096	Report Issue Date:	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/096	Field Data Sheet No.	URA/FDS/S-20/09/096
Name & Add. Of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	D. G. Set 500 KVA (S - 3)		
Air Pollution Control Device	-		
Fuel Used	Diesel		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, V551	Serial Number	339, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	10
2.	Stack Dia	mm	200
3.	Stack Area	m <sup>2</sup>	0.0314
4.	Ambient Temperature	°C	30
5.	Flue Gas Temperature	°C	282
6.	Exit Gas Velocity	m/s	18.65
7.	Exit Gas Flow	m <sup>3</sup> /h	2108


#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	47	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	29	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	23	50	IS 11255 (PART 7)

Remarks:
Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Authorized By:

  
Jaivik S. Tandel  
(Manager - Operations)

Page No.: 1 of 1

UERL/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/08/S-DKCI005	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/005	Service Request Date	20/08/2020
Sample ID No.	URA/ID/S-20/08/005	Field Data Sheet No.	URA/FDS/S-20/08/005
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		
Date of Sampling	20/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	D. G. Set 500 KVA (S-3)		
Air Pollution Control Device	-		
Fuel Used	Diesel		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE-14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	10
2.	Stack Dia	mm	200
3.	Stack Area	m <sup>2</sup>	0.0314
4.	Ambient Temperature	°C	29
5.	Flue Gas Temperature	°C	290
6.	Exit Gas Velocity	m/s	19.31
7.	Exit Gas Flow	m <sup>3</sup> /h	2182

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	40	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	21	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	13	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)  
(C-2-S-1)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)  
(C-2-S-1)

Authorized By:

  
(Manager - Operations)  
(C-2-S-1)  
UERL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

ULR - TC775320000006968F			
Test Report No.	URA/20/07/S-101	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/101	Field Data Sheet No.	URA/FDS/S-20/07/101
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		
Date of Sampling	23/07/2020	Date of Testing	24/07/2020
Stack Sampling Attached to	D. G. Set 500 KVA (S - 3)		
Air Pollution Control Device			
Fuel Used	Diesel		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	10
2.	Stack Dia	mm	200
3.	Stack Area	m <sup>2</sup>	0.0314
4.	Ambient Temperature	°C	32
5.	Flue Gas Temperature	°C	284
6.	Exit Gas Velocity	m/s	18.21
7.	Exit Gas Flow	m <sup>3</sup> /h	2058

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	43	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	28	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	19	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)

(20-07-20)

Page No. 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(20-07-20)

Authorized By:

  
(Manager - Operations)

(20-07-20)

UERI/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

ULR - TC775320000005973F			
Test Report No.	URA/20/06/S-101	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/101	Field Data Sheet No.	URA/FDS/S-20/06/101
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		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	D. G. Set 500 KVA (5 - 3)		
Air Pollution Control Device	-		
Fuel Used	Diesel		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	10
2.	Stack Dia	mm	200
3.	Stack Area	m <sup>2</sup>	0.0314
4.	Ambient Temperature	°C	31
5.	Flue Gas Temperature	°C	291
6.	Exit Gas Velocity	m/s	18.76
7.	Exit Gas Flow	m <sup>3</sup> /h	2120

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	47	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	32	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	25	50	IS 11255 (PART 7)

Sampling Done By:

*Amit*  
(Chemist) / (Supervisor)  
(A.S.)

Page No.: 1 of 1

Tested By:

*[Signature]*  
(Chemist) / (Sr. Chemist)  
(A.S.)

Authorized By:

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

UERL/AIR/F-04/03



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/05/S-DKCI005	Report Issue Date	05/06/2020
Service Request form No.	URA/SRI/05/005	Service Request Date	28/05/2020
Sample ID No.	URA/ID/S-20/05/005	Field Data Sheet No.	URA/FDS/S-20/05/005
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		
Date of Sampling	29/05/2020	Date of Testing	01/06/2020
Stack Sampling Attached to	D. G. Set 500 KVA (S - 3)		
Air Pollution Control Device	-		
Fuel Used	Diesel		

**Details of Instrument Used for Monitoring**

Instrument Id No.	UURL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

**General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	10
2.	Stack Dia	mm	200
3.	Stack Area	m <sup>2</sup>	0.0314
4.	Ambient Temperature	°C	34
5.	Flue Gas Temperature	°C	295
6.	Exit Gas Velocity	m/s	19.12
7.	Exit Gas Flow	m <sup>3</sup> /h	2161

**Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	50	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	35	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	28	50	IS 11255 (PART 7)

Sampling Done By:

*Amit*  
(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

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

Authorized By:

*[Signature]*  
(Manager - Operations)

UURL/AIR/F-04/02

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/04/S-DKCI005	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/005	Service Request Date	30/04/2020
Sample ID No.	URA/ID/S-20/04/005	Field Data Sheet No.	URA/FDS/S-20/04/005
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		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	D. G. Set 500 KVA (S-3)		
Air Pollution Control Device	-		
Fuel Used	Diesel		

#### Details of Instrument Used for Monitoring:

Instrument Id No.	UURL/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	10
2.	Stack Dia	mm	200
3.	Stack Area	m <sup>2</sup>	0.0314
4.	Ambient Temperature	°C	33
5.	Flue Gas Temperature	°C	288
6.	Exit Gas Velocity	m/s	18.79
7.	Exit Gas Flow	m <sup>3</sup> /h	2024

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/nm <sup>3</sup>	47	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	32	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	25	50	IS 11255 (PART 7)

Sampling Done By:

*Scail*  
(Chemist) / (Supervisor)  
(A-11)

Page No.: 1 of 1

Tested By:

*Scail*  
(Chemist) / (Sr. Chemist)  
(A-11)

Authorized By:

*Scail*  
(Manager - Operations)  
(A-11)

UURL/AIR/F-04/02



### TEST REPORT (STACK MONITORING)

<b>URL - TC775320000008730F</b>			
Test Report No.	URA/20/09/5-093	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/093	Field Data Sheet No.	URA/FDS/S-20/09/093
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector - 12N, Adani Port and Sec. Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to:	Thermic Fluid Heater- 4 Lac Kcal/Hr. (S-2)		
Air Pollution Control Device	-		
Fuel Used:	Furnace Oil		

#### Details of Instrument Used for Monitoring:

Instrument Id No.	UURL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia.	mm	100
3.	Stack Area	m <sup>2</sup>	0.5024
4.	Ambient Temperature	°C	30
5.	Flue Gas Temperature	°C	130
6.	Exit Gas Velocity	m/s	6.08
7.	Exit Gas Flow	m <sup>3</sup> /h	10996

#### Test Parameter Results


DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	41	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	30	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	22	50	IS 11255 (PART 7)

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Authorized By:

  
Jafrik S. Tandel  
(Manager - Operations)

Page No.: 1 of 1

UURL/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.

**TEST REPORT  
(STACK MONITORING)**

Test Report No.	URA/20/08/S-DKI002	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/002	Service Request Date	20/08/2020
Sample ID No.	URA/ID/S-20/08/002	Field Data Sheet No.	URA/FDS/S-20/08/002
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		
Date of Sampling	20/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Thermic Fluid Heater- 4 Lac Kcal/Hr. (S - 2)		
Air Pollution Control Device	-		
Fuel Used	Furnace Oil		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	800
3.	Stack Area	m <sup>2</sup>	0.5024
4.	Ambient Temperature	°C	29
5.	Flue Gas Temperature	°C	122
6.	Exit Gas Velocity	m/s	5.94
7.	Exit Gas Flow	m <sup>3</sup> /h	10743

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	35	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	24	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	17	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)  


Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)  


Authorized By:

  
(Manager - Operations)  


UURL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

ULR - TC775320000005965F			
Test Report No.	URA/20/07/S-098	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/098	Field Data Sheet No.	URA/FDS/S-20/07/098
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		
Date of Sampling	23/07/2020	Date of Testing	24/07/2020
Stack Sampling Attached to	Thermic Fluid Heater- 4 Lac Kcal/Hr. (5-2)		
Air Pollution Control Device			
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	800
3.	Stack Area	m <sup>2</sup>	0.5024
4.	Ambient Temperature	°C	32
5.	Flue Gas Temperature	°C	124
6.	Exit Gas Velocity	m/s	5.52
7.	Exit Gas Flow	m <sup>3</sup> /h	9983

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	35	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	25	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	15	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(P.S.G.)

Authorized By:

  
(Manager - Operations)

(P.S.G.)  
UERI/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

ULR - TC775320000005970F			
Test Report No.	URA/20/06/S-098	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/098	Field Data Sheet No.	URA/FDS/S-20/06/098
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		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Thermic Fluid Heater- 4 Lac Kcal/Hr. (S - 2)		
Air Pollution Control Device	-		
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, V551	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	800
3.	Stack Area	m <sup>2</sup>	0.5024
4.	Ambient Temperature	°C	31
5.	Flue Gas Temperature	°C	132
6.	Exit Gas Velocity	m/s	5.68
7.	Exit Gas Flow	m <sup>3</sup> /h	10273

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	39	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	32	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	27	50	IS 11255 (PART 7)

Sampling Done By:

*A. Patel*  
(Chemist) / (Supervisor)  
(20.7.1)

Page No.: 1 of 1

Tested By:

*A. Patel*  
(Chemist) / (Sr. Chemist)  
(20.7.1)

Authorized By:

*Stardef*  
(Manager - Operations)  
(20.7.1)

UURL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/05/S-DKC1002	Report Issue Date	05/06/2020
Service Request form No.	URA/SRF/05/002	Service Request Date	28/05/2020
Sample ID No.	URA/ID/S-20/05/002	Field Data Sheet No.	URA/FDS/S-20/05/002
Name & Add. Of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sea, Dist: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	29/05/2020	Date of Testing	01/06/2020
Stack Sampling Attached to Air Pollution Control Device	Thermic Fluid Heater- 4 Lac Kcal/Hr. (S - 2)		
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, V551	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	800
3.	Stack Area	m <sup>2</sup>	0.5024
4.	Ambient Temperature	°C	34
5.	Flue Gas Temperature	°C	122
6.	Exit Gas Velocity	m/s	5.18
7.	Exit Gas Flow	m <sup>3</sup> /h	9368

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	34	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	27	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	23	50	IS 11255 (PART 7)

Sampling Done By:

*A. K. Patel*  
(Chemist) / (Supervisor)

*(Signature)*  
Page No.: 1 of 1

Tested By:

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

*(Signature)*

Authorized By:

*(Signature)*  
(Manager - Operations)

*(Signature)*  
UERI/AIR/F-04/02

**TEST REPORT  
(STACK MONITORING)**

Test Report No.	URA/20/04/S-DKC1002	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/002	Service Request Date	30/04/2020
Sample ID No.	URA/ID/S-20/04/002	Field Data Sheet No.	URA/EDS/S-20/04/002
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		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	Thermic Fluid Heater- 4 Lac Kcal/Hr. (S - 2)		
Air Pollution Control Device	-		
Fuel Used	Furnace Oil		

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

Instrument Id No.	UERL/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	800
3.	Stack Area	m <sup>2</sup>	0.5024
4.	Ambient Temperature	°C	33
5.	Flue Gas Temperature	°C	128
6.	Exit Gas Velocity	m/s	5.40
7.	Exit Gas Flow	m <sup>3</sup> /h	9766

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	40	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	33	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	26	50	IS 11255 (PART 7)

Sampling Done By:

*Acael*  
(Chemist) / (Supervisor)  
(Acael)

Page No.: 1 of 1

Tested By:

*Acael*  
(Chemist) / (Sr. Chemist)  
(Acael)

Authorized By:

*Hardeep*  
(Manager - Operations)  
(Hardeep)

UERL/AIR/F-04/02



### TEST REPORT (STACK MONITORING)

ULR - TC77532000008729F			
Test Report No.	URA/20/09/5-092	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/5-20/09/092	Field Data Sheet No.	URA/FDS/5-20/09/092
Name & Add. Of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Boiler (5 - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Coal		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1500
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	30
5.	Flue Gas Temperature	°C	137
6.	Exit Gas Velocity	m/s	5.73
7.	Exit Gas Flow	m <sup>3</sup> /h	27365

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	39	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	28	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	19	50	IS 11255 (PART 7)

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Authorized By:

  
Janki S. Tandel  
(Manager - Operations)

Page No.: 1 of 1

UERL/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/08/S-DKCI004	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/004	Service Request Date	20/08/2020
Sample ID No.	URA/ID/S-20/08/004	Field Data Sheet No.	URA/FDS/S-20/08/004
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No: 2, Block - F, Sector 12N, Adani Port and Sex, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	20/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Furnace Oil		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL/AIR/SMX/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	29
5.	Flue Gas Temperature	°C	125
6.	Exit Gas Velocity	m/s	6.22
7.	Exit Gas Flow	m <sup>3</sup> /h	29705

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	37	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	24	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	16	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)  
C-10/R1

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)  
C-10/R1

Authorized By:

  
(Manager - Operations)  
C-10/R1  
UERL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

ULR - TC775320000006967F			
Test Report No.	URA/20/07/S-100	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/100	Field Data Sheet No.	URA/FDS/S-20/07/100
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 - 370423, INDIA		
Date of Sampling	23/07/2020	Date of Testing	24/07/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	32
5.	Flue Gas Temperature	°C	129
6.	Exit Gas Velocity	m/s	6.81
7.	Exit Gas Flow	m <sup>3</sup> /h	32522

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	41	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	33	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	22	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)

Page No. 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

Authorized By:

  
(Manager - Operations)

UURL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

ULR - TC775320000005972F			
Test Report No.	URA/20/06/5-100	Report Issue Date:	04/07/2020
Service Request form No.	URA/SRP/06/041	Service Request Date:	29/06/2020
Sample ID No.	URA/ID/5-20/06/100	Field Data Sheet No.	URA/FDS/5-20/06/100
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		
Date of Sampling	30/06/2020	Date of Testing:	01/07/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMX/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	31
5.	Flue Gas Temperature	°C	125
6.	Exit Gas Velocity	m/s	6.14
7.	Exit Gas Flow	m <sup>3</sup> /h	28923

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	37	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	30	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	22	50	IS 11255 (PART 7)

Sampling Done By:

*Arvind*  
(Chemist) / (Supervisor)  
(A-71)

Page No.: 1 of 1

Tested By:

*Arvind*  
(Chemist) / (Sr. Chemist)  
(A-71)

Authorized By:

*Arvind*  
(Manager - Operations)  
(A-71)  
UERL/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/05/S-DKCI004	Report Issue Date	05/06/2020
Service Request form No.	URA/SRF/05/004	Service Request Date	28/05/2020
Sample ID No.	URA/ID/S-20/05/004	Field Data Sheet No.	URA/FDS/S-20/05/004
Name & Add. Of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	29/05/2020	Date of Testing	01/06/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	919, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	34
5.	Flue Gas Temperature	°C	138
6.	Exit Gas Velocity	m/s	6.77
7.	Exit Gas Flow	m <sup>3</sup> /h	32331

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	44	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	37	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	31	50	IS 11255 (PART 7)

Sampling Done By:

*Ashish*  
(Chemist) / (Supervisor)  
(02-1)

Page No.: 1 of 1

Tested By:

*Ashish*  
(Chemist) / (Sr. Chemist)  
(02-12.F)

Authorized By:

*Sandeep*  
(Manager - Operations)  
(02-1)

UERL/AIR/F-04/02



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/04/S-0KCI004	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/004	Service Request Date	30/04/2020
Sample ID No.	URA/ID/S-20/04/004	Field Data Sheet No.	URA/FDS/S-20/04/004
Name & Add. Of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Ser. Dist - Kutch, Gujarat - 370421, INDIA		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	Boiler (S-1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Furnace Oil		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERI/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	13266
4.	Ambient Temperature	°C	33
5.	Flue Gas Temperature	°C	135
6.	Exit Gas Velocity	m/s	6.38
7.	Exit Gas Flow	m <sup>3</sup> /h	30469

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	42	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	35	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	28	50	IS 11255 (PART 7)

Sampling Done By:

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

Page No.: 1 of 1

Tested By:

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

Authorized By:

*(Signature)*  
(Manager - Operations)  
(Signature)

UERI/AIR/F-04/02

**TEST REPORT**  
**(STACK MONITORING)**

<b>ULR - TC77532000008731F</b>			
Test Report No.	URA/20/09/S-094	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/094	Field Data Sheet No.	URA/FDS/S-20/09/094
Name & Add. Of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Thermic Fluid Heater- 15 Lac Kcal/Hr. (S-8)		
Air Pollution Control Device	---		
Fuel Used	Furnace Oil		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERE/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	119, OTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	36
2.	Stack Dia	mm	856
3.	Stack Area	m <sup>2</sup>	0.5751
4.	Ambient Temperature	°C	30
5.	Flue Gas Temperature	°C	133
6.	Exit Gas Velocity	m/s	5.85
7.	Exit Gas Flow	m <sup>3</sup> /h	12111


➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	30	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	26	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	17	50	IS 11255 (PART 7)

Remarks:  
Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
**Nikunj D. Patel**  
(Chemist)

Authorized By:

  
**Jaivik S. Tandel**  
(Manager - Operations)

Page No.: 1 of 1

UERE/AIR/F-04/04

**Note:** This report is subject to Terms and Conditions mentioned overleaf.



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/08/S-DKCI003	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/003	Service Request Date	20/08/2020
Sample ID No.	URA/ID/S-20/08/003	Field Data Sheet No.	URA/FDS/S-20/08/003
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Azadi Port and Sea, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	20/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to Air Pollution Control Device	Thermic Fluid Heater- 15 Lac Kcal/Hr. (S - 8)		
Fuel Used	Furnace Oil		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VS51	Next Calibration Due On	30/06/2021
Calibration Date	03/07/2020		

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	36
2.	Stack Dia	mm	856
3.	Stack Area	m <sup>2</sup>	0.5751
4.	Ambient Temperature	°C	29
5.	Flue Gas Temperature	°C	135
6.	Exit Gas Velocity	m/s	5.47
7.	Exit Gas Flow	m <sup>3</sup> /h	11324

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	42	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	27	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	18	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)

(~ ~ ~ ~ ~)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(P.S.G.)

Authorized By:

  
(Manager - Operations)

(S.S.)

UURL/AIR/F-04/03

**TEST REPORT  
(STACK MONITORING)**

URL - TC775320000006966F			
Test Report No.	URA/20/07/S-099	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/099	Field Data Sheet No.	URA/FDS/S-20/07/099
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		
Date of Sampling	23/07/2020	Date of Testing	24/07/2020
Stack Sampling Attached to	Thermic Fluid Heater- 15 Lac Kcal/Hr. (5 - 8)		
Air Pollution Control Device	-		
Fuel Used	Furnace Oil		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL/AIR/SMX/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	36
2.	Stack Dia	mm	856
3.	Stack Area	m <sup>2</sup>	0.5751
4.	Ambient Temperature	°C	32
5.	Flue Gas Temperature	°C	132
6.	Exit Gas Velocity	m/s	4.90
7.	Exit Gas Flow	m <sup>3</sup> /h	10144

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	40	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	32	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	20	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)

(~ 12.8.2)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

CP.S.G

Authorized By:

  
(Manager - Operations)

(2.8.2)

UURL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

UET - TC775320000005971F			
Test Report No.	URA/20/06/S-099	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/099	Field Data Sheet No.	URA/FDS/S-20/06/099
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Thermic Fluid Heater- 15 Lac Kcal/Hr. (S - 8)		
Air Pollution Control Device	-		
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UETL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	36
2.	Stack Dia	mm	856
3.	Stack Area	m <sup>2</sup>	0.5751
4.	Ambient Temperature	°C	31
5.	Flue Gas Temperature	°C	136
6.	Exit Gas Velocity	m/s	5.23
7.	Exit Gas Flow	m <sup>3</sup> /h	10827

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	43	150	IS 11253 (Part 1)
2.	Sulphur Dioxide	ppm	36	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	25	50	IS 11255 (PART 7)

Sampling Done By:

*Acid*  
(Chemist) / (Supervisor)  
(0 x 1)

Page No.: 1 of 1

Tested By:

*[Signature]*  
(Chemist) / (Sr. Chemist)  
(0 x 2)

Authorized By:

*[Signature]*  
(Manager - Operations)  
(0 x 1)

UETL/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/05/S-DKC1003	Report Issue Date:	05/06/2020
Service Request form No.	URA/SRF/05/003	Service Request Date:	28/05/2020
Sample ID No.	URA/ID/S-20/05/003	Field Data Sheet No.	URA/FDS/S-20/05/003
Name & Add. Of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd., Plot No. 2, Block - F, Sector 12N, Adani Port and Sea, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	29/05/2020	Date of Testing:	01/06/2020
Stack Sampling Attached to	Thermic Fluid Heater- 15 Lac Kcal/Hr. (5 - 8)		
Air Pollution Control Device	-		
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319; DTE = 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020


#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	36
2.	Stack Dia	mm	856
3.	Stack Area	m <sup>2</sup>	0.5751
4.	Ambient Temperature	°C	34
5.	Flue Gas Temperature	°C	130
6.	Exit Gas Velocity	m/s	4.87
7.	Exit Gas Flow	m <sup>3</sup> /h	10082

#### Test Parameter Results


Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	34	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	28	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	19	50	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

Authorized By:

  
(Manager - Operations)

UERL/AIR/F-04/02



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/04/5-DKC1003	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/003	Service Request Date	30/04/2020
Sample ID No.	URA/ID/5-20/04/003	Field Data Sheet No.	URA/FDS/5-20/04/003
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sea, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	Thermic Fluid Heater- 15 Lac Kcal/Hr. (5 - 6)		
Air Pollution Control Device	-		
Fuel Used	Furnace Oil		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL/AIR/5MK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	36
2.	Stack Dia	mm	856
3.	Stack Area	m <sup>2</sup>	0.5751
4.	Ambient Temperature	°C	33
5.	Flue Gas Temperature	°C	133
6.	Exit Gas Velocity	m/s	5.21
7.	Exit Gas Flow	m <sup>3</sup> /h	10786

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	36	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	30	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	21	50	IS 11255 (PART 7)

Sampling Done By:

*Asad*  
(Chemist) / (Supervisor)  
(20.7)

Page No.: 1 of 1

Tested By:

*[Signature]*  
(Chemist) / (Sr. Chemist)  
(20.7.20)

Authorized By:

*[Signature]*  
(Manager - Operations)  
(20.7.20)

UURL/AIR/F-04/02

### TEST REPORT (STACK MONITORING)

<b>ULR - TC775320000008732F</b>			
Test Report No.	URA/20/09/S-095	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/095	Field Data Sheet No.	URA/FDS/S-20/09/095
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		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Furnace Oil		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	13266
4.	Ambient Temperature	°C	30
5.	Flue Gas Temperature	°C	123
6.	Exit Gas Velocity	m/s	6.17
7.	Exit Gas Flow	m <sup>3</sup> /h	29466

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	35	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	23	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	15	50	IS 11255 (PART 7)

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
 Nikunj D. Patel  
 (Chemist)

Authorized By:

  
 Jaiwik S. Tandel  
 (Manager - Operations)

Page No.: 1 of 1

UURL/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/08/5-DKCH001	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/001	Service Request Date	20/08/2020
Sample ID No.	URA/10/5-20/08/001	Field Data Sheet No.	URA/FDS/S-20/08/001
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		
Date of Sampling	20/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Coal		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	29
5.	Flue Gas Temperature	°C	130
6.	Exit Gas Velocity	m/s	5.20
7.	Exit Gas Flow	m <sup>3</sup> /h	24835

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	36	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	21	40	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	15	25	IS 11255 (PART 7)

Sampling Done By:

  
(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(P.C.B.)

Authorized By:

  
(Manager - Operations)

(J.S.Y.)

UERL/AIR/F-04/03

**TEST REPORT**  
**(STACK MONITORING)**

ULR - TC275320G000016964F

Test Report No.	URA/20/07/S-097	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/097	Field Data Sheet No.	URA/FDS/S-20/07/097
Name & Add. Of Customer	<b>M/s. Dorf Ketal Chemicals India Pvt. Ltd.</b> Plot No. 2, Block – F, Sector 12N, Adani Port and Sez, Dist. Kutch, Gujarat – 370421, INDIA		
Date of Sampling	23/07/2020	Date of Testing	24/07/2020
Stack Sampling Attached to	<b>Boiler (S – 1)</b>		
Air Pollution Control Device	Bag Filter		
Fuel Used	Coal		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319; DTE – 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

## General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	13266
4.	Ambient Temperature	°C	32
5.	Flue Gas Temperature	°C	134
6.	Exit Gas Velocity	m/s	5.37
7.	Exit Gas Flow	m <sup>3</sup> /h	25645

### Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	38	150	IS 11255( Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	28	40	IS 11255(Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	18	25	IS 11255 (PART 7)

**Sampling Done By:**

(Chemist) / (Supervisor)

Page No.: 1 of 1

**Tested By:**

(Chemist) / (Sr. Chemist)

Authorized By \_\_\_\_\_

(Manager - Operations)

URL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

ULR - TC77532000005969F			
Test Report No.	URA/20/06/S-097	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/097	Field Data Sheet No.	URA/FDS/S-20/06/097
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		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Coal		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	31
5.	Flue Gas Temperature	°C	128
6.	Exit Gas Velocity	m/s	4.96
7.	Exit Gas Flow	m <sup>3</sup> /h	23687

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	35	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	28	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	21	50	IS 11255 (PART 7)

Sampling Done By:

*Arul*  
(Chemist) / (Supervisor)  
(Arul)

Page No.: 1 of 1

Tested By:

*Arul*  
(Chemist) / (Sr. Chemist)  
(Arul)

Authorized By:

*Arul*  
(Manager - Operations)  
(Arul)

UERL/AIR/F-04/03

## TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/05/S-DKC001	Report Issue Date	05/06/2020
Service Request form No.	URA/SRF/05/001	Service Request Date	28/05/2020
Sample ID No.	URA/ID/S-20/05/001	Field Data Sheet No.	URA/FDS/S-20/05/001
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist. - Kutch, Gujarat - 370421, INDIA		
Date of Sampling	29/05/2020	Date of Testing	01/06/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Coal		

### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, V551	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	34
5.	Flue Gas Temperature	°C	131
6.	Exit Gas Velocity	m/s	5.07
7.	Exit Gas Flow	m <sup>3</sup> /h	24213

### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	41	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	34	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	27	50	IS 11255 (PART 7)

Sampling Done By:

*Arvind*  
(Chemist) / (Supervisor)  
(20/05)

Page No.: 1 of 1

Tested By:

*[Signature]*  
(Chemist) / (Sr. Chemist)  
(20/05/20)

Authorized By:

*[Signature]*  
(Manager - Operations)  
(20/05/20)

UERL/AIR/F-04/02



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/04/S-DKC1001	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/001	Service Request Date	30/04/2020
Sample ID No.	URA/ID/S-20/04/001	Field Data Sheet No.	URA/FDS/S-20/04/001
Name & Add. Of Customer	M/s. Durl Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Ser, Dist - Kutch, Gujarat - 370421, INDIA		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	Boiler (S - 1)		
Air Pollution Control Device	Bag Filter		
Fuel Used	Coal		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51	Serial Number	339, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	38
2.	Stack Dia	mm	1300
3.	Stack Area	m <sup>2</sup>	1.3266
4.	Ambient Temperature	°C	33
5.	Flue Gas Temperature	°C	125
6.	Exit Gas Velocity	m/s	4.69
7.	Exit Gas Flow	m <sup>3</sup> /h	22398

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	37	150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	28	100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	23	50	IS 11255 (PART 7)

Sampling Done By:

*Arvind*  
(Chemist) / (Supervisor)  
(A.R.V.)

Page No.: 1 of 1

Tested By:

*Arvind*  
(Chemist) / (Sr. Chemist)  
(A.R.V.)

Authorized By:

*Arvind*  
(Manager Operations)  
(A.R.V.)

UERL/AIR/F-04/02

### TEST REPORT (STACK MONITORING)

<b>URL - TC773320000087357</b>			
Test Report No.	URA/20/09/S-098	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/098	Field Data Sheet No.	URA/FDS/S-20/09/098
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Ser, Dist. - Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Water Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (S-7)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1	Stack Height	m	15
2	Stack Dia	mm	150
3	Stack Area	m <sup>2</sup>	0.0176
4	Exit Gas Velocity	m/s	8.89
5	Exit Gas Flow	m <sup>3</sup> /h	563
6	Flow Rate for Gas	L/min	1
7	Volume of Air Sample for Gas	L	30

#### Test Parameter Results


DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	11	175

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Page No. 1 of 1

Authorized By:

  
Jaivik S. Tandel  
(Manager - Operations)

UURL/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/08/S-DKIC007	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/007	Service Request Date	20/08/2020
Sample ID No.	URA/IO/S-20/08/007	Field Data Sheet No.	URA/FDS/S-20/08/007
Name & Add. Of Customer	M/s. Dorl Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	21/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Water Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (S-7)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51
Instrument Name	Stack Monitoring Kit, V551
Serial Number	319, DTE-14
Calibration Date	01/07/2020
Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	8.58
5.	Exit Gas Flow	m <sup>3</sup> /h	543
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	13	175

Sampling Done By:

  
(Chemist) / (Supervisor)

(C-10-12)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(C-10-12)

Authorized By:

  
(Manager - Operations)

(C-10-12)

UERL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

ULR - TC775320000006970F			
Test Report No.	URA/20/07/S-103	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/103	Field Data Sheet No.	URA/FDS/S-20/07/103
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		
Date of Sampling	24/07/2020	Date of Testing	25/07/2020
Stack Sampling Attached to	Water Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (5-7)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	8.86
5.	Exit Gas Flow	m <sup>3</sup> /h	561
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	17	175

Sampling Done By:

  
(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

Authorized By:

  
(Manager - Operations)

UERI/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

ULR - TC77532000005975F			
Test Report No.	URA/20/06/S-103	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/103	Field Data Sheet No.	URA/FDS/S-20/06/103
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		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Water Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (5-7)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	8.51
5.	Exit Gas Flow	m <sup>3</sup> /h	539
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	13	175

Sampling Done By:

*Aravind*  
(Chemist) / (Supervisor)  
(221)

Page No. 1 of 1

Tested By:

*[Signature]*  
(Chemist) / (Sr. Chemist)  
(221)

Authorized By:

*[Signature]*  
(Manager - Operations)  
(5-57)  
UERL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/05/S-DKCI007	Report Issue Date:	05/06/2020
Service Request form No.	URA/SRF/05/007	Service Request Date	28/05/2020
Sample ID No.	URA/10/S-20/05/007	Field Data Sheet No.	URA/FDS/S-20/05/007
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		
Date of Sampling	29/05/2020	Date of Testing	01/06/2020
Stack Sampling Attached to	Water Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (S-7)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020


#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	8.79
5.	Exit Gas Flow	m <sup>3</sup> /h	556
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	14	175

Sampling Done By:

  
 (Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

  
 (Chemist) / (Sr. Chemist)

Authorized By:

  
 (Manager - Operations)

UURL/AIR/F-04/02

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/04/S-OKC1007	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/007	Service Request Date	30/04/2020
Sample ID No.	URA/ID/5-20/04/007	Field Data Sheet No.	URA/FDS/5-20/04/007
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist. Kutchi, Gujarat - 370421, INDIA		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	Water Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (5-7)		

**Details of Instrument Used for Monitoring**

Instrument Id No.	UERL/AIR/5MK/51
Instrument Name	Stack Monitoring Kit, V551
Calibration Date	01/07/2019
Serial Number	319, DTE - 14
Next Calibration Due On	30/06/2020

**General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mro	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.06
5.	Exit Gas Flow	m <sup>3</sup> /h	574
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

**Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	15	175

Sampling Done By:

*Acaul*  
(Chemist) / (Supervisor)  
(A. A.)

Page No. : 1 of 1

Tested By:

*Acaul*  
(Chemist) / (Sr. Chemist)  
(A. A.)

Authorized By:

*Handwritten Signature*  
(Manager - Operations)  
(A. A.)

UERL/AIR/F-04/02



**TEST REPORT**  
**(STACK MONITORING)**

<b>ULR - TC77532000008734F</b>			
Test Report No.	URA/20/09/S-097	Report Issue Date	30/09/2020
Service Request form No.	URA/SRE/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/097	Field Data Sheet No.	URA/FDS/S-20/09/097
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Water Scrubber of NH <sub>3</sub> Storage Tank (S - 5)		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERI/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.20
5.	Exit Gas Flow	m <sup>3</sup> /h	382
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	13	175

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Authorized By:

  
Jaivik S. Tandel  
(Manager - Operations)

Page No. 1 of 1

UERI/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.



**TEST REPORT  
(STACK MONITORING)**

Test Report No.	URA/20/08/S-DKCI006	Report Issue Date	20/08/2020
Service Request form No.	URA/SRF/08/006	Service Request Date	20/08/2020
Sample ID No.	URA/ID/S-20/08/006	Field Data Sheet No.	URA/FDS/S-20/08/006
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec. Dist. : Kutch, Gujarat - 370421, INDIA		
Date of Sampling	21/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Water Scrubber of NH <sub>3</sub> Storage Tank (S - 5)		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2021
Calibration Date	01/07/2020		

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.74
5.	Exit Gas Flow	m <sup>3</sup> /h	617
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	16	175

Sampling Done By:

  
(Chemist) / (Supervisor)  
(P 56)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)  
(P 56)

Authorized By:

  
(Manager - Operations)  
(P 56)

UURL/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

ULR - TC77532000006969F			
Test Report No.	URA/20/07/S-102	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/102	Field Data Sheet No.	URA/FDS/S-20/07/102
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 3, Block - F, Sector 12N, Adani Port and Sez, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/07/2020	Date of Testing	25/07/2020
Stack Sampling Attached to:	Water Scrubber of NH <sub>3</sub> Storage Tank (S-5)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AJR/SMK/51		
Instrument Name	Stack Monitoring Kit, V551	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.04
5.	Exit Gas Flow	m <sup>3</sup> /h	572
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	12	175

Sampling Done By:

  
(Chemist) / (Supervisor)

(Signature)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(Signature)

Authorized By:

  
(Manager - Operations)

(Signature)

UERL/AIR/F-04/03



**TEST REPORT**  
**(STACK MONITORING)**

ULR - TC775320000005974F			
Test Report No.	URA/20/06/S-102	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/102	Field Data Sheet No.	URA/FDS/S-20/06/102
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		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Water Scrubber of NH <sub>3</sub> Storage Tank (S - 5)		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, V551	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.47
5.	Exit Gas Flow	m <sup>3</sup> /h	600
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	16	175

Sampling Done By:

*Asail*  
(Chemist) / (Supervisor)  
(A.S.I.)

Page No.: 1 of 1

Tested By:

*Asail*  
(Chemist) / (Sr. Chemist)  
(A.S.I.)

Authorized By:

*Asail*  
(Manager - Operations)  
(A.S.I.)

UURL/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/05/S-DKCI006	Report Issue Date:	05/06/2020
Service Request form No.	URA/SRF/05/006	Service Request Date:	28/05/2020
Sample ID No.	URA/ID/S-20/05/006	Field Data Sheet No.	URA/FDS/S-20/05/006
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		
Date of Sampling:	29/05/2020	Date of Testing:	01/06/2020
Stack Sampling Attached to	Water Scrubber of NH <sub>3</sub> Storage Tank (S - 5)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.08
5.	Exit Gas Flow	m <sup>3</sup> /h	575
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	11	175

Sampling Done By:

*Acail*  
(Chemist) / (Supervisor)  
(AAIL)

Page No.: 1 of 1

Tested By:

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

Authorized By:

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

UERL/AIR/F-04/02



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/04/S-DKCI006	Report Issue Date:	08/05/2020
Service Request form No.	URA/SRF/04/006	Service Request Date	30/04/2020
Sample ID No.	URA/ID/S-20/04/006	Field Data Sheet No.	URA/FDS/S-20/04/006
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	30/04/2020	Date of Testing:	04/05/2020
Stack Sampling Attached to	Water Scrubber of NH <sub>3</sub> Storage Tank (S - 5)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/51	Serial Number	319, DTE = 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.37
5.	Exit Gas Flow	m <sup>3</sup> /h	593
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	1.8	175

Sampling Done By:

*A. Patel*  
(Chemist) / (Supervisor)  
(24.11)

Page No.: 1 of 1

Tested By:

*A. Patel*  
(Chemist) / (Sr. Chemist)  
(24.11)

Authorized By:

*Shardul*  
(Manager - Operations)  
(24.11)

UURL/AIR/F-04/02



### TEST REPORT (STACK MONITORING)

ULR - TC775320000008736F			
Test Report No.	URA/20/09/S-099	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/099	Field Data Sheet No.	URA/FDS/S-20/09/099
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adah Port and Sea, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Vent attached with reaction vessels of process chemicals (Antifoulants) (S-9)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia.	mm	100
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.67
5.	Exit Gas Flow	m <sup>3</sup> /h	612
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrogen Sulfide	mg/Nm <sup>3</sup>	N/D	45

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Page No.: 1 of 1

Authorized By:

  
Jaivik S. Tandel  
(Manager - Operations)

UERL/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/08/5-DKCI008	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/008	Service Request Date	20/08/2020
Sample ID No.	URA/ID/5-20/08/008	Field Data Sheet No.	URA/FDS/5-20/08/008
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sea, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	21/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Vent attached with reaction vessels of process chemicals (Antifoulants) (S-9)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/S1	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSSI	Next Calibration Due On	30/06/2021
Calibration Date	01/07/2020		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	100
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.15
5.	Exit Gas Flow	m <sup>3</sup> /h	579
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrogen Sulfide	mg/Nm <sup>3</sup>	N.D.	45

Note: N.D. = Not Detected.

Sampling Done By:

  
(Chemist) / (Supervisor)

(~ 10.10)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(P.S. 6)

Authorized By:

  
(Manager - Operations)

(P.S. 1)

UERL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

ULR - TC775320000006971F			
Test Report No.	URA/20/07/S-104	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/104	Field Data Sheet No.	URA/FDS/S-20/07/104
Name & Add. Of Customer	M/s. Dorl Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/07/2020	Date of Testing	25/07/2020
Stack Sampling Attached to	Vent attached with reaction vessels of process chemicals (Antifoulants) (5-9)		

#### Details of Instrument Used for Monitoring

Instrument ID No.	UERI/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	100
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.37
5.	Exit Gas Flow	m <sup>3</sup> /h	593
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrogen Sulfide	mg/Nm <sup>3</sup>	N.D.	45

Note: N.D. = Not Detected.

Sampling Done By:

(Chemist) / (Supervisor)

Page No. 1 of 1

Tested By:

(Chemist) / (Sr. Chemist)

Authorized By:

(Manager - Operations)

UERI/AIR/E-04/03

### TEST REPORT (STACK MONITORING)

ULR- TC775320000005976F			
Test Report No.	URA/20/06/S-104	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/104	Field Data Sheet No.	URA/FDS/S-20/06/104
Name & Add. Of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist. : Kutch, Gujarat - 370421, INDIA		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Vent attached with reaction vessels of process chemicals (Antifoulants) (S-9)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	100
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.63
5.	Exit Gas Flow	m <sup>3</sup> /h	610
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrogen Sulfide	mg/Nm <sup>3</sup>	N.D.	45

Note: N.D. = Not Detected.

Sampling Done By:

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

Page No.: 1 of 1

Tested By:

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

Authorized By:

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

UURL/AIR/F-04/03



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/05/S-DKCR010	Report Issue Date	05/06/2020
Service Request form No.	URA/SRF/05/010	Service Request Date	28/05/2020
Sample ID No.	URA/ID/S-20/05/010	Field Data Sheet No.	URA/FDS/S-20/05/010
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		
Date of Sampling	29/05/2020	Date of Testing	03/06/2020
Stack Sampling Attached to	Vent attached with reaction vessels of process chemicals (Antifoulants) (S-9)		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	100
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.10
5.	Exit Gas Flow	m <sup>3</sup> /h	576
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrogen Sulfide	mg/Nm <sup>3</sup>	N.D.	45

Note: N.D. = Not Detected

Sampling Done By:

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

Page No.: 1 of 1

Tested By:

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

Authorized By:

*(Signature)*  
(Manager - Operations)  
(Signature)

UERL/AIR/F-04/02



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/04/S-DKCI010	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/010	Service Request Date	30/04/2020
Sample ID No.	URA/ID/5-20/04/010	Field Data Sheet No.	URA/FDS/5-20/04/010
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		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	Vent attached with reaction vessels of process chemicals (Antifoulants) (5-9)		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	100
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.88
5.	Exit Gas Flow	m <sup>3</sup> /h	625
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrogen Sulfide	mg/Nm <sup>3</sup>	N.D.	45

Note: N.D. = Not Detected.

Sampling Done By:

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

Page No.: 1 of 1

Tested By:

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

Authorized By:

*A. A. A.*  
(Manager - Operations)

*C. S. S.*  
UERL/AIR/F-04/02

**TEST REPORT  
(STACK MONITORING)**

Test Report No.	URA/20/09/S-DKCI100	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/100	Field Data Sheet No.	URA/FDS/S-20/09/100
Name & Add. Of Customer	M/s. Dorl Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec. Dist: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (S-6)		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL/AIR/SMX/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia.	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.34
5.	Exit Gas Flow	m <sup>3</sup> /h	591
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	N.D.	20

Remarks:
Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:  
  
Nikunj D. Patel  
(Chemist)

Page No.: 1 of 1

Authorized By:  
  
Javik S. Fandel  
(Manager - Operations)

UERL/AIR/F-04/04

**Note:** This report is subject to Terms and Conditions mentioned overleaf.



### TEST REPORT (STACK MONITORING)

<b>ULR - TC775320006008737F</b>			
Test Report No.	URA/20/09/S-100	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/100	Field Data Sheet No.	URA/FDS/S-20/09/100
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 17N, Adani Port and Sec, Dist : Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (S-6)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/51
Instrument Name	Stack Monitoring Kit, VSS1
Calibration Date	01/07/2020
Serial Number	319, DTE - 14
Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.34
5.	Exit Gas Flow	m <sup>3</sup> /h	591
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results


DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	17	175

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Authorized By:

  
Javik S. Tandel  
(Manager - Operations)

Page No.: 1 of 1

UERI/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/08/S-DKCD009	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/009	Service Request Date	20/08/2020
Sample ID No.	URA/ID/S-20/08/009	Field Data Sheet No.	URA/FDS/S-20/08/009
Name & Add. Of Customer	M/s. Dorl Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	21/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (S-6)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2021
Calibration Date	01/07/2020		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.79
5.	Exit Gas Flow	m <sup>3</sup> /h	620
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	N.D.	20

Note: N.D. = Not Detected.

Sampling Done By:

  
(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

CP S. (S)

Authorized By:

  
(Manager - Operations)

(J. P. T)

UURL/AIR/F-04/03



**TEST REPORT  
(STACK MONITORING)**

Test Report No.	URA/20/08/S-DKC009	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/009	Service Request Date	20/08/2020
Sample ID No.	URA/ID/S-20/08/009	Field Data Sheet No.	URA/FDS/S-20/08/009
Name & Add. Of Customer	M/s. Dorl Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist - Kutch, Gujarat - 370421, INDIA		
Date of Sampling	21/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (5-6)		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, PTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.79
5.	Exit Gas Flow	m <sup>3</sup> /h	620
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	11	175

Sampling Done By:

  
(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

CP.S.A

Authorized By:

  
(Manager - Operations)

Page No.: 1 of 1  
UERL/AIR/F-04/03



**TEST REPORT**  
**(STACK MONITORING)**

ULR - TC77532000006972F			
Test Report No.	URA/20/07/S-105	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/105	Field Data Sheet No.	URA/FDS/S-20/07/105
Name & Add. Of Customer	<b>M/s. Dorf Ketal Chemicals India Pvt. Ltd.</b> Plot No.: 2, Block - F, Sector 12N, Adani Port and Sex, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/07/2020	Date of Testing	25/07/2020
Stack Sampling Attached to	<b>Alkali Scrubber of Vent attached with Reaction Vessels of TPT &amp; TPT Based Titinates (S-6)</b>		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/S1		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

## General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.41
5.	Exit Gas Flow	m <sup>3</sup> /h	596
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

### Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	14	175

Sampling Done By:

(Chemist) / (Supervisor)

Page No.: 1 of 1

**Tested By:**

(Chemist) / (Sr. Chemist)

Authorized By:

(Manager - Operations)

URL: AIR/F-04/03

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/07/S-DKCI105	Report Issue Date	28/07/2020
Service Request form No.	URA/SRF/07/G44	Service Request Date	23/07/2020
Sample ID No.	URA/ID/S-20/07/105	Field Data Sheet No.	URA/FDS/S-20/07/105
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	24/07/2020	Date of Testing	25/07/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (S-6)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/51
Instrument Name	Stack Monitoring Kit, VSS1
Serial Number	319, DTE - 14
Calibration Date	01/07/2020
Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.41
5.	Exit Gas Flow	m <sup>3</sup> /h	596
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	N.D.	20

Note: N.D. = Not Detected.

Sampling Done By:

(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

(Chemist) / (Sr. Chemist)

Authorized By:

(Manager - Operations)

UURL/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

<b>ULR - TC77532000005977F</b>			
Test Report No.	URA/20/06/S-105	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/105	Field Data Sheet No.	URA/FDS/S-20/06/105
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		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titrates (S-6)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	10.33
5.	Exit Gas Flow	m <sup>3</sup> /h	654
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	19	175

Sampling Done By:

*Arvind*  
(Chemist) / (Supervisor)

*CA 171*

Page No.: 1 of 1

Tested By:

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

*CA 171*

Authorized By:

*[Signature]*  
(Manager - Operations)

*(J-S-7)*

URI/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/06/S-DKCI105	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/ID/S-20/06/105	Field Data Sheet No.	URA/FDS/S-20/06/105
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		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (5-6)		

#### ➤ Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	319, DTE - 14
Calibration Date	01/07/2019	Next Calibration Due On	30/06/2020

#### ➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	10.33
5.	Exit Gas Flow	m <sup>3</sup> /h	654
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### ➤ Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	N.D.	20

Note: N.D. = Not Detected.

Sampling Done By:

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

Page No.: 1 of 1

Tested By:

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

Authorized By:

*Aradh*  
(Manager - Operations)  
(Signature)  
UURL/AIR/F-04/03



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/29/04/S-DXCI008	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/008	Service Request Date	30/04/2020
Sample ID No.	URA/ID/S-20/04/008	Field Data Sheet No.	URA/FDS/S-20/04/008
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist.: Kutch, Gujarat - 370421, INDIA		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titinates (S-6)		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERI/AIR/SMK/51
Instrument Name	Stack Monitoring Kit, VSS1
Calibration Date	01/07/2019
Serial Number	319, DTE - 14
Next Calibration Due On	30/06/2020

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	8.67
5.	Exit Gas Flow	m <sup>3</sup> /h	549
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	N.D.	20
2.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	20	175

Note: N.D. = Not Detected.


Sampling Done By:

  
(Chemist) / (Supervisor)

(A-2-1)

Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(A-2-1)

Authorized By:

  
(Manager - Operations)

(A-2-1)

UERI/AIR/F-04/02



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/05/S-DKC1008	Report Issue Date	05/06/2020
Service Request form No.	URA/SRF/05/008	Service Request Date	28/05/2020
Sample ID No.	URA/ID/S-20/05/008	Field Data Sheet No.	URA/FDS/S-20/05/008
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.		
Date of Sampling	29/05/2020	Date of Testing	01/06/2020
Stack Sampling Attached to	Alkali Scrubber of Vent attached with Reaction Vessels of TPT & TPT Based Titanates (S-6)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/S1	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, YSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	15
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	9.42
5.	Exit Gas Flow	m <sup>3</sup> /h	596
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	N.D.	20
2.	Ammonia (as NH <sub>3</sub> )	mg/Nm <sup>3</sup>	15	175

Note: N.D. = Not Detected.

Sampling Done By:

*Arun*  
 (Chemist) / (Supervisor)  
 (Arun)

Page No.: 1 of 1

Tested By:

*Arun*  
 (Chemist) / (Sr. Chemist)  
 (Arun)

Authorized By:

*Harish*  
 (Manager - Operations)  
 (Harish)

UERL/AIR/F-04/02

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/09/S-DKCH101	Report Issue Date	30/09/2020
Service Request form No.	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.	URA/ID/S-20/09/101	Field Data Sheet No.	URA/FDS/S-20/09/101
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		
Date of Sampling	24/09/2020	Date of Testing	25/09/2020
Stack Sampling Attached to	Alkali Scrubber of $TiCl_4$ Storage Tank (S - 4)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERRL/AIR/SMK/51		
Instrument Name	Stack Monitoring Kit, VS51	Serial Number	319, DTE - 14
Calibration Date	01/07/2020	Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	$m^2$	0.0176
4.	Exit Gas Velocity	m/s	8.62
5.	Exit Gas Flow	$m^3/h$	546
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	1.8	20

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Authorized By:

  
Jaivik S. Tandel  
(Manager - Operations)

Page No.: 1 of 1

UERRL/AIR/F-04/04

Note: This report is subject to Terms and Conditions mentioned overleaf.



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/08/S-DKCI010	Report Issue Date	26/08/2020
Service Request form No.	URA/SRF/08/010	Service Request Date	20/08/2020
Sample ID No.	URA/ID/S-20/08/010	Field Data Sheet No.	URA/FDS/S-20/08/010
Name & Add. Of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist. Kutch, Gujarat - 370421, INDIA		
Date of Sampling	21/08/2020	Date of Testing	22/08/2020
Stack Sampling Attached to	Alkali Scrubber of $TiCl_4$ Storage Tank (5 - 4)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERL/AIR/SMK/S1
Instrument Name	Stack Monitoring Kit, VSS1
Serial Number	319, DTE - 14
Calibration Date	01/07/2020
Next Calibration Due On	30/06/2021

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	$m^2$	0.0176
4.	Exit Gas Velocity	m/s	8.95
5.	Exit Gas Flow	$m^3/h$	567
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	1.2	20

Sampling Done By:

  
(Chemist) / (Supervisor)

(P. S. G.)  
Page No.: 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(P. S. G.)

Authorized By:

  
(Manager - Operations)

(P. S. G.)  
UERL/AIR/F-04/03

### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/06/S-DKC1106	Report Issue Date	04/07/2020
Service Request form No.	URA/SRF/06/041	Service Request Date	29/06/2020
Sample ID No.	URA/SD/S-20/06/106	Field Data Sheet No.	URA/FDS/S-20/06/106
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		
Date of Sampling	30/06/2020	Date of Testing	01/07/2020
Stack Sampling Attached to	Alkali Scrubber of $TiCl_4$ Storage Tank. (S-4)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UERI/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	$m^2$	0.0176
4.	Exit Gas Velocity	m/s	8.90
5.	Exit Gas Flow	$m^3/h$	563
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	1.9	20

Sampling Done By:

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

Page No.: 1 of 1

Tested By:

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

Authorized By:

*Stanley*  
(Manager - Operations)  
(Signature)

UERI/AIR/F-04/03



### TEST REPORT (STACK MONITORING)

Test Report No.	URA/20/05/S-DKCI009	Report Issue Date	05/06/2020
Service Request form No.	URA/SRF/05/009	Service Request Date	28/05/2020
Sample ID No.	URA/ID/S-20/05/009	Field Data Sheet No.	URA/FDS/S-20/05/009
Name & Add. Of Customer	M/s. Dori Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist. Kutch, Gujarat - 370421, INDIA.		
Date of Sampling	29/05/2020	Date of Testing	01/06/2020
Stack Sampling Attached to	Alkali Scrubber of $\text{TiCl}_4$ Storage Tank (S - 4)		

#### Details of Instrument Used for Monitoring

Instrument Id No.	UURL/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

#### General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	$\text{m}^2$	0.0176
4.	Exit Gas Velocity	m/s	8.28
5.	Exit Gas Flow	$\text{m}^3/\text{h}$	524
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

#### Test Parameter Results

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	$\text{mg}/\text{Nm}^3$	2.8	20

Sampling Done By:

*A. Patel*  
(Chemist) / (Supervisor)

(Signature)  
Page No.: 1 of 1

Tested By:

*A. Patel*  
(Chemist) / (Sr. Chemist)

(Signature)

Authorized By:

*A. Patel*  
(Manager - Operations)

(Signature)  
UURL/AIR/F-04/02

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/20/04/S-DKCI009	Report Issue Date	08/05/2020
Service Request form No.	URA/SRF/04/009	Service Request Date	30/04/2020
Sample ID No.	URA/ID/S-20/04/009	Field Data Sheet No.	URA/FDS/S-20/04/009
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		
Date of Sampling	30/04/2020	Date of Testing	04/05/2020
Stack Sampling Attached to	Alkali Scrubber of TICI, Storage Tank (S-4)		

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

Instrument Id No.	UERI/AIR/SMK/51	Serial Number	319, DTE - 14
Instrument Name	Stack Monitoring Kit, VSS1	Next Calibration Due On	30/06/2020
Calibration Date	01/07/2019		

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	8
2.	Stack Dia	mm	150
3.	Stack Area	m <sup>2</sup>	0.0176
4.	Exit Gas Velocity	m/s	8.59
5.	Exit Gas Flow	m <sup>3</sup> /h	544
6.	Flow Rate for Gas	L/min	1
7.	Volume of Air Sample for Gas	L	30

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Permissible Limit
1.	Hydrochloric Acid (as HCl)	mg/Nm <sup>3</sup>	3.5	20

Sampling Done By:

  
(Chemist) / (Supervisor)

(A. V. V.)  
Page No. 1 of 1

Tested By:

  
(Chemist) / (Sr. Chemist)

(A. V. V.)

Authorized By:

  
(Manager - Operations)

(A. V. V.)

UERI/AIR/F-04/02

### TEST REPORT

ULR No.	TC77532000008821F	Report No.	URC/20/09/0753
Name & Address of Customer	M/L Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Wajar Treatment Plant, SEZ, Mundra, Kutch, Gujarat.	Date Of Report	02/10/2020
		Customer's Ref.	—
Sample Details	STP Outlet Water Sample	Location	—
Sample Qty.	2 Lit.	Appearance	Colourless
Sampling Date	24/09/2020	Sample Received Date	26/09/2020
Test Started Date	26/09/2020	Test Completion Date	03/10/2020
Sampled By	Party.	Sampling Method	—
UERI Lab ID No.	20/09/0753		

### TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr. No.	Parameters	Test Method	GRCB Limit	Unit of Measurement	Results
<b>PHYSIO-CHEMICAL PARAMETERS</b>					
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	—	—	7.26
2.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-C)	—	mg/L	1024
3.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	<30	mg/L	12
<b>GENERAL CHEMICAL PARAMETERS</b>					
4.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	—	mg/L	32.1
5.	Biochemical Oxygen Demand (BOD)	IS 3025 (Part 4) 1993, Amd. 1	<20	mg/L	10
6.	Residual Free Chlorine	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl-B)	0.5 (min.)	mg/L	0.69
Remarks:					
Opinion & Interpretation (If required):					

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By

Nitesh C. Patel  
(Sr. Chemist)

Authorized By

(Nitin B. Tandel)  
(Technical Manager)

Page 1 of 1

UERI/CHM/F-2/05

Note: This report is subject to terms and conditions mentioned overleaf.



### TEST REPORT

Report No.	URC /20/08/DKCPL-0462	Date Of Report	31/08/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	STP Outlet Water Sample	Sample Qty.	2 Ltr.
Sampling Date	20/08/2020	Sample Received Date	24/08/2020
Sampled By	Party.	Appearance Of Sample	Colourless.
Test Started Date	24/08/2020	Test Completion Date	29/08/2020
UERL Lab Sample ID No. 20/08/DKCPL-0462			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	—	7.31
2.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-C)	—	1142
3.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	<30	18
CHEMICAL QUALITY (In mg/L)				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	—	24.6
2.	Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44) 1993, Amd. 1	<20	8

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By  
*Jesai*  
(C.J.P.D.)  
(Chemist)

Checked By  
*[Signature]*  
(N. C. S.)  
(Sr. Chemist)

Authorized By  
*[Signature]*  
(Nitin B. Tandel)  
(Technical Manager)



### TEST REPORT

Report No.	URC /20/08/DKCP-0462	Date Of Report	31/08/2020
Name & Address of Customer	M/s. Dorl Ketel Chemicals India Pvt. Ltd. Survey No. 151, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	STP Outlet Water Sample	Sample Qty.	2 Ltr.
Sampling Date	20/08/2020	Sample Received Date	24/08/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	24/08/2020	Test Completion Date	29/08/2020
URL Lab Sample ID No. 20/08/DKCP-0462			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
1	Residual Free Chlorine	(APHA 23rd Ed., 2017, 4500-Cl-B)	0.5 (min.)	0.71

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

*Jesdi*  
(J.P.D.)  
(Chemist)

Checked By

*P. Patel*  
(P. Patel)  
(Sr. Chemist)

Authorized By

*N. B. Tandell*  
(N. B. Tandell)  
(Technical Manager)

### TEST REPORT

UR - TC775320000007132F			
Report No.	URC/20/07/0807	Date Of Report	31/07/2020
Name & Address of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 163, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	STP Outlet Water Sample	Sample Qty.	2 Lit.
Sampling Date	23/07/2020	Sample Received Date	25/07/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	25/07/2020	Test Completion Date	30/07/2020
UR/Lab Sample ID. No. 20/07/0807			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	=	7.22
2.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-C)	=	1254
3.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	<30	24
CHEMICAL QUALITY (in mg/L)				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	=	36.5
2.	Biochemical Oxygen Demand (BOD)	IS 3025(Part 44) 1993, Acid 1	<20	10

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By



(Chemist)

Checked By



(Sr. Chemist)

Authorized By



(Technical Manager)

### TEST REPORT

Report No.	URC /20/07/0807	Date Of Report	31/07/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd., Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	STP Outlet Water Sample	Sample Qty.	2 Lit.
Sampling Date	25/07/2020	Sample Received Date	25/07/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	25/07/2020	Test Completion Date	30/07/2020
UEBL Lab Sample ID No. 20/07/0807			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
1.	Residual Free Chlorine	(APHA 2319 E6:2017,4500-Cl-B)	0.5 (min.)	0.65

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By



(Chemist)

Checked By



(Sr. Chemist)

Authorized By



(Technical Manager)



### TEST REPORT

ULR - TC775320000006013F			
Report No.	URC /20/06/0883	Date Of Report	06/07/2020
Name & Address of Customer	M/s. Dref Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	STR Outlet Water Sample	Sample Qty.	2 Lit.
Sampling Date	29/06/2020	Sample Received Date	30/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	30/06/2020	Test Completion Date	06/07/2020
UERL Lab Sample ID No. 20/06/0883			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	—	7.16
2.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-CL)	—	1408
3.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	<30	20
CHEMICAL QUALITY (In mg/L)				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	—	542
2.	Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44) 1993, Amd. 1	<20	16

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

*[Signature]*  
(M.Sc.)

(Chemist)

Checked By

*[Signature]*  
(Sr. Chemist)

Authorized By

*[Signature]*

(Technical Manager)



### TEST REPORT

Report No.	URC /20/06/0883	Date Of Report	06/07/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	STP Outlet Water Sample	Sample Qty.	2 Lit.
Sampling Date	29/06/2020	Sample Received Date	30/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	30/06/2020	Test Completion Date	06/07/2020
UERI Lab Sample ID No. 20/06/0883			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
1.	Residual Free Chlorine	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl-B)	0.5 (min.)	0.80

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By



(Chemist)

Checked By



(Sr. Chemist)

Authorized By



(Technical Manager)

### TEST REPORT

Report No.	URC/20/06/DKCL-0022	Date Of Report	05/06/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details:	STP Outlet Water Sample	Sample Qty.	2 LR.
Sampling Date	28/05/2020	Sample Received Date	01/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date:	01/06/2020	Test Completion Date	06/06/2020
UERL Lab Sample ID No. 20/06/DKCL-0022			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 °C	(APHA 231 <sup>st</sup> Ed., 2017, 4500-H <sup>+</sup> 8)	=	7.32
2.	Total Dissolved Solids (mg/l)	(APHA 231 <sup>st</sup> Ed., 2017, 2540- C)	=	1254
3.	Total Suspended Solids (mg/l)	(APHA 231 <sup>st</sup> Ed., 2017, 2540- D)	<30	18
CHEMICAL QUALITY (in mg/L)				
1.	Chemical Oxygen Demand (COD)	(APHA 231 <sup>st</sup> Ed., 2017, 5220- B)	=	32.6
2.	Biochemical Oxygen Demand (BOD)	IS 3035(Part 44)1993, Amd. 1	<20	10

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By  
*Joshi*  
(S.P. 22)  
(Chemist)

Checked By  
*Barner*  
(N-17)  
(Sr. Chemist)

Authorized By  
*H. H. 17-2*  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/06/DKCL-0022	Date Of Report	08/06/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	STP Outlet Water Sample	Sample Qty.	2 Lit.
Sampling Date	28/05/2020	Sample Received Date	01/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	01/06/2020	Test Completion Date	06/06/2020
UERL Lab Sample ID No. 20/06/DKCL-0022			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (in mg/l)				
1.	*Residual Free Chlorine	IS 3025(Part 26)1986, (APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 (min.)	0.71

Note: \*The parameter marked with an \* is not accredited by NABL.

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By  
*J.P.D.*  
(Chemist)

Checked By  
*J.P.D.*  
(Sr. Chemist)

Authorized By  
*J.P.D.*  
(Technical Manager)



### TEST REPORT

Report No.	URC /20/05/DKCIPL-0085	Date Of Report	11/05/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra; Kutch, Gujarat.		
Sample Details	STP Outlet Water Sample	Sample Qty.	2 Lit.
Sampling Date	30/04/2020	Sample Received Date	04/05/2020
Sampled By	Party	Appearance Of Sample	Colourless
Test Started Date	04/05/2020	Test Completion Date	09/05/2020
I/ERL Lab Sample ID No. 20/05/DKCIPL-0085			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 °C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	=	7.24
2.	Total Dissolved Solids (mg/L)	IS 3025(Part 16)1984 (APHA 23 <sup>rd</sup> Ed., 2017, 2540- C)	=	1354
3.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed., 2017, 2540- D)	<30	25
CHEMICAL QUALITY (In mg/L)				
1.	Chemical Oxygen Demand (COD)	IS 3025(Part 58)2006, (APHA 23 <sup>rd</sup> Ed., 2017, 5220- B)	=	61.9
2.	Biochemical Oxygen Demand (BOD)	IS 3025(Part 44)1993, Amd. 1	<20	18

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By  
  
(Chemist)

Checked By  
  
(Sr. Chemist)

Authorized By  
  
(Technical Manager)



### TEST REPORT

Report No.	URE /20/05/DKCIPL-0065	Date Of Report	11/05/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	STP Outlet Water Sample	Sample Qty.	2 Lit.
Sampling Date	30/04/2020	Sample Received Date	04/05/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	04/05/2020	Test Completion Date	09/05/2020
UERL Lab Sample ID No. 20/05/DKCIPL-0065			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (in mg/L)				
1.	*Residual Free Chlorine	IS 3025 (Part 26) 1986; (APHA 231" Ed., 2017, 4500-Cl-B)	0.5 (min.)	0.71

Note: \*The parameters marked with an\* are not accredited by NABL.

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By  
  
(Chemist)

Checked By  
  
(Sr. Chemist)

Authorized By  
  
(Technical Manager)

Analysis Report (CETP Inlet)

M/s Dorf Ketal Speciality Catalyst Pvt. Ltd.

Sep-20

Sr. No.	DATE	Start rdg.	Diff (KL)	PH	TDS	SS	COD	BOD	Chloride
1	01-Sep-20	194235	85	8.32	958	20	81	27	486
2	02-Sep-20	194320	85	7.41	1107	57	115	38	575
3	03-Sep-20	194405	85	7.16	932	48	105	35	584
4	04-Sep-20	194490	85	8.26	982	56	121	40	565
5	05-Sep-20	194575	85	8.12	1452	74	135	45	547
6	06-Sep-20	194660	85	7.66	1355	66	141	47	577
7	07-Sep-20	194745	85	7.48	1245	45	128	43	604
8	08-Sep-20	194830	85	7.70	1360	35	151	50	648
9	09-Sep-20	194915	85	7.49	1219	48	135	45	648
10	10-Sep-20	195000	85	7.80	1332	40	128	43	604
11	11-Sep-20	195085	85	7.89	1451	70	156	52	607
12	12-Sep-20	195170	85	7.77	1486	75	174	58	557
13	13-Sep-20	195255	85	7.91	1345	38	92	31	583
14	14-Sep-20	195340	85	7.86	1377	71	120	40	617
15	15-Sep-20	195425	85	7.52	1405	62	114	38	626
16	16-Sep-20	195510	85	7.90	1422	68	152	51	686
17	17-Sep-20	195595	85	8.05	1521	81	163	54	718
18	18-Sep-20	195680	85	7.94	1486	75	152	51	657
19	19-Sep-20	195765	85	8.12	1435	58	136	45	685
20	20-Sep-20	195850	85	8.24	1521	69	145	48	696
21	21-Sep-20	195935	85	8.20	1404	55	118	39	655
22	22-Sep-20	196020	85	8.38	1605	72	134	45	670
23	23-Sep-20	196105	85	8.21	1451	61	128	43	607
24	24-Sep-20	196190	85	8.00	1205	60	124	41	604
25	25-Sep-20	196275	85	8.29	1339	52	129	43	628
26	26-Sep-20	196360	85	8.13	1480	67	124	41	686
27	27-Sep-20	196445	85	8.24	1642	82	152		628
28	28-Sep-20	196530	85	8.31	1933	71	164		617
29	29-Sep-20	196615	85	8.39	1334	60	126		606
30	30-Sep-20	196700	85	8.41	1336	58	137		585
31	01-Oct-20	196785							
			2550						

For

N. P. Rathod

MPSEZ Utilities Pvt Ltd

## Analysis Report (CETP Inlet)

M/s DORF KETAL CHEMICALS INDIA PRIVATE LIMITED

Aug-20

Sl. No.	DATE	Start rdg.	Diff (KL)	PH	TDS	SS	COD	BOD	Chloride
1	01-Aug-20	191600	85	8.33	1686	148	677	226	859
2	02-Aug-20	191685	85	8.41	1652	189	715	238	886
3	03-Aug-20	191770	85	8.35	1744	175	679	226	875
4	04-Aug-20	191855	85	8.39	1914	246	1091	364	942
5	05-Aug-20	191940	85	8.44	1741	120	477	159	825
6	06-Aug-20	192025	85	8.48	1419	141	671	224	839
7	07-Aug-20	192110	85	8.44	1561	108	630	210	864
8	08-Aug-20	192195	85	8.32	1698	88	586	195	882
9	09-Aug-20	192280	85	8.38	1722	152	529	176	844
10	10-Aug-20	192365	85	8.48	1698	167	696	232	907
11	11-Aug-20	192450	85	8.40	1792	142	576	192	868
12	12-Aug-20	192535	85	8.42	1696	85	458	153	822
13	13-Aug-20	192620	85	8.11	1522	91	319	106	849
14	14-Aug-20	192705	85	8.47	1605	80	341	114	833
15	15-Aug-20	192790	85	8.32	1774	129	650	217	895
16	16-Aug-20	192875	85	8.44	1685	127	597	199	845
17	17-Aug-20	192960	85	8.42	1796	132	647	216	874
18	18-Aug-20	193045	85	8.35	1652	174	732	244	832
19	19-Aug-20	193130	85	8.47	1585	165	689	228	849
20	20-Aug-20	193215	85	8.38	1671	158	648	216	789
21	21-Aug-20	193300	85	8.26	1886	142	640	213	812
22	22-Aug-20	193385	85	8.35	1014	18	105	35	641
23	23-Aug-20	193470	85	8.42	942	22	82	27	586
24	24-Aug-20	193555	85	8.38	849	24	62	21	605
25	25-Aug-20	193640	85	8.42	610	15	68	23	514
26	26-Aug-20	193725	85	8.33	1022	17	75	25	478
27	27-Aug-20	193810	85	7.90	842	20	64	21	482
28	28-Aug-20	193895	85	8.06	967	23	52	17	524
29	29-Aug-20	193980	85	8.12	956	24	82		523
30	30-Aug-20	194065	85	7.95	892	22	67		577
31	31-Aug-20	194150	85	7.89	881	18	57		568
32	01-Sep-20	194235							
			2635						

For

D. F. Rastogi

FOR MPSEZ UTILITIES LIMITED

Analysis Report (CETP Inlet)

M/s DORF KETAL CHEMICALS INDIA PRIVATE LIMITED

Jul-20

Sl. No.	DATE	Start rdg.	Diff (KL)	PH	TDS	SS	COD	BOD	Chloride
1	01-Jul-20	188965	85	8.16	1690	63	362	154	870
2	02-Jul-20	189050	85	8.52	1693	86	451	157	802
3	03-Jul-20	189135	85	8.45	1574	55	376	142	879
4	04-Jul-20	189220	85	8.33	1673	68	403	134	816
5	05-Jul-20	189305	85	8.28	1781	77	478	159	850
6	06-Jul-20	189390	85	8.18	1642	82	491	164	794
7	07-Jul-20	189475	85	8.21	1522	71	456	152	790
8	08-Jul-20	189560	85	8.40	1476	94	511	170	826
9	09-Jul-20	189645	85	8.28	1586	120	524	192	830
10	10-Jul-20	189730	85	8.22	1723	181	596	214	847
11	11-Jul-20	189815	85	8.31	1756	156	552	184	793
12	12-Jul-20	189900	85	8.42	1805	182	570	190	805
13	13-Jul-20	189985	85	8.15	1785	127	481	160	785
14	14-Jul-20	190070	85	8.26	1822	141	512	171	831
15	15-Jul-20	190155	85	8.14	1826	123	452	151	789
16	16-Jul-20	190240	85	8.19	1750	140	482	161	790
17	17-Jul-20	190325	85	8.24	1869	118	420	140	821
18	18-Jul-20	190410	85	8.31	1759	139	436	145	848
19	19-Jul-20	190495	85	8.08	1802	142	444	148	805
20	20-Jul-20	190580	85	8.17	1825	170	486	162	791
21	21-Jul-20	190665	85	8.24	1784	164	456	152	756
22	22-Jul-20	190750	85	8.32	1751	185	524	175	762
23	23-Jul-20	190835	85	8.14	1770	138	480	160	785
24	24-Jul-20	190920	85	8.19	1894	140	491	164	777
25	25-Jul-20	191005	85	8.24	1925	175	526	175	742
26	26-Jul-20	191090	85	8.28	1824	164	502	167	816
27	27-Jul-20	191175	85	8.49	1881	288	561	187	818
28	28-Jul-20	191260	85	8.38	1941	268	624	208	825
29	29-Jul-20	191345	85	8.23	1826	369	692		842
30	30-Jul-20	191430	85	8.28	1877	348	668		819
31	31-Jul-20	191515	85	8.27	1824	204	552		827
32	01-Aug-20	191600							
			2635						

For  
N.P. Rathod

FOR, MPSEZ UTILITIES LIMITED



Analysis Report (CETP Inlet)

M/s DORF KETAL CHEMICALS INDIA PRIVATE LIMITED

Jun-20

Sl. No.	DATE	Start rdg.	Diff (KL)	PH	TDS	SS	COD	BOD	Chloride
1	01-Jun-20	186415	85	8.30	1826	46	287	96	846
2	02-Jun-20	186500	85	8.22	1788	58	314	105	815
3	03-Jun-20	186585	85	8.16	1869	59	347	116	827
4	04-Jun-20	186670	85	8.28	1912	42	320	107	796
5	05-Jun-20	186755	85	8.18	1785	55	275	92	745
6	06-Jun-20	186840	85	8.24	1811	61	313	104	836
7	07-Jun-20	186925	85	8.25	1876	66	356	119	811
8	08-Jun-20	187010	85	8.33	1920	60	286	95	754
9	09-Jun-20	187095	85	8.08	1975	57	244	81	732
10	10-Jun-20	187180	85	8.12	1805	48	232	77	820
11	11-Jun-20	187265	85	8.47	1636	35	205	68	861
12	12-Jun-20	187350	85	7.70	1997	57	252	84	878
13	13-Jun-20	187435	85	7.66	1821	41	320	107	833
14	14-Jun-20	187520	85	7.84	1835	56	282	94	790
15	15-Jun-20	187605	85	7.58	1895	69	369	123	762
16	16-Jun-20	187690	85	7.83	1951	71	380	127	802
17	17-Jun-20	187775	85	7.87	1825	62	315	105	842
18	18-Jun-20	187860	85	7.48	1828	77	415	138	868
19	19-Jun-20	187945	85	7.91	1824	58	255	85	796
20	20-Jun-20	188030	85	7.88	1758	64	344	115	754
21	21-Jun-20	188115	85	8.14	1794	42	324	108	780
22	22-Jun-20	188200	85	8.33	1645	47	290	97	827
23	23-Jun-20	188285	85	8.54	1377	38	222	74	836
24	24-Jun-20	188370	85	8.47	1528	47	256	85	816
25	25-Jun-20	188455	85	8.26	1721	50	271	90	750
26	26-Jun-20	188540	85	8.09	1946	56	305	102	746
27	27-Jun-20	188625	85	8.51	1954	61	285	95	717
28	28-Jun-20	188710	85	8.47	1844	44	330		825
29	29-Jun-20	188795	85	8.61	1994	50	296		834
30	30-Jun-20	188880	85	8.13	1835	53	230		849
31	01-Jul-20	188965							
			2550						

For

N.P. Rathod

FOR, MPSEZ UTILITIES LIMITED

Analysis Report (CETP Inlet)

M/s DORF KETAL CHEMICALS INDIA PRIVATE LIMITED

May-20

Sl. No.	DATE	Start rdg.	Diff (KL)	PH	TDS	SS	COD	BOD	Chloride
1	01-May-20	183780	85	8.12	1848	72	267	89	789
2	02-May-20	183865	85	8.15	1852	81	286	95	758
3	03-May-20	183950	85	8.22	1879	68	271	90	824
4	04-May-20	184035	85	8.28	1795	55	329	110	868
5	05-May-20	184120	85	8.18	1861	72	324	108	806
6	06-May-20	184205	85	8.19	1896	95	330	110	829
7	07-May-20	184290	85	8.32	1841	86	339	113	754
8	08-May-20	184375	85	8.25	1786	75	313	104	840
9	09-May-20	184460	85	8.27	1736	61	306	102	841
10	10-May-20	184545	85	8.16	1938	58	282	94	927
11	11-May-20	184630	85	8.08	1921	105	382	127	755
12	12-May-20	184715	85	8.16	1868	87	352	117	786
13	13-May-20	184800	85	8.25	1862	72	315	105	719
14	14-May-20	184885	85	8.04	1879	56	295	98	838
15	15-May-20	184970	85	7.96	1942	75	247	82	859
16	16-May-20	185055	85	7.83	1934	95	252	84	855
17	17-May-20	185140	85	8.12	1880	62	241	80	993
18	18-May-20	185225	85	8.14	1837	49	269	90	871
19	19-May-20	185310	85	8.25	1942	59	215	72	825
20	20-May-20	185395	85	8.16	1868	66	253	84	870
21	21-May-20	185480	85	8.31	1940	59	287	96	841
22	22-May-20	185565	85	8.27	1987	76	323	108	877
23	23-May-20	185650	85	8.24	1850	56	348	116	824
24	24-May-20	185735	85	8.14	1777	68	312	104	755
25	25-May-20	185820	85	8.08	1910	62	358	119	813
26	26-May-20	185905	85	8.15	1821	65	314	105	898
27	27-May-20	185990	85	8.27	1887	72	369	123	723
28	28-May-20	186075	85	8.22	1917	74	391	130	886
29	29-May-20	186160	85	8.16	1849	68	308		793
30	30-May-20	186245	85	8.31	1868	74	286		759
31	31-May-20	186330	85	8.17	1927	82	293		746
32	01-Jun-20	186415							
			2635						

For  
N.P. Rathod

MPSEZ Utilities Pvt Ltd

Analysis Report (CETP Inlet)

M/s DORF KETAL CHEMICALS INDIA PRIVATE LIMITED

Apr-20

Sl. No.	DATE	Start rdg.	Diff (KL)	PH	TDS	SS	COD	BOD	Chloride
1	01-Apr-20	181478	0	8.42	1784	56	354	118	871
2	02-Apr-20	181478	42	8.54	1825	74	368	123	885
3	03-Apr-20	181520	66	8.32	1835	60	285	95	822
4	04-Apr-20	181586	85	8.44	1853	62	317	106	886
5	05-Apr-20	181671	85	8.35	1859	79	330	110	860
6	06-Apr-20	181756	74	8.47	1796	75	342	114	892
7	07-Apr-20	181830	79	8.42	1855	70	303	101	845
8	08-Apr-20	181909	71	8.38	1828	82	393	131	904
9	09-Apr-20	181980	70	8.24	1784	73	331	110	901
10	10-Apr-20	182050	66	8.35	1763	80	360	120	872
11	11-Apr-20	182116	70	8.34	1839	87	382	127	843
12	12-Apr-20	182186	68	8.25	1812	75	355	118	898
13	13-Apr-20	182254	85	8.27	1768	70	328	109	891
14	14-Apr-20	182339	81	8.32	1826	78	325	108	883
15	15-Apr-20	182420	85	8.30	1799	82	317	106	905
16	16-Apr-20	182505	85	8.43	1824	92	325	108	900
17	17-Apr-20	182590	85	8.35	1843	82	385	128	839
18	18-Apr-20	182675	85	8.28	1808	85	393	131	917
19	19-Apr-20	182760	85	8.33	1773	92	396	132	852
20	20-Apr-20	182845	85	8.36	1724	70	351	117	907
21	21-Apr-20	182930	85	8.44	1786	67	335	112	852
22	22-Apr-20	183015	85	8.18	1844	75	378	126	912
23	23-Apr-20	183100	85	8.27	1778	78	345	115	897
24	24-Apr-20	183185	85	8.33	1805	72	384	128	842
25	25-Apr-20	183270	85	8.35	1877	75	343	114	855
26	26-Apr-20	183355	85	8.26	1801	78	352	117	831
27	27-Apr-20	183440	85	8.34	1812	75	341	114	889
28	28-Apr-20	183525	85	8.25	1778	73	379	126	832
29	29-Apr-20	183610	85	8.22	1771	80	319		868
30	30-Apr-20	183695	85	8.32	1794	86	380		866
31	01-May-20	183780							
			2302						

For

N. P. Rathod

MPSEZ Utilities Pvt Ltd

**TEST REPORT**  
**AMBIENT NOISE LEVEL MONITORING REPORT**

URL - TC775320000008738F			
Test Report No.:	URA/20/09/AN-050	Date Of Report:	30/09/2020
Name & Add. Of Industries	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/09A	Sound Level Meter	24 DTE 2008	13/07/2020	13/07/2021

Date and Time of Monitoring : 24-09-2020 (Day Time: 6:00 am to 10:00 pm)

**Result**

DISCIPLINE - CHEMICAL TESTING		NAME OF GROUP - ATMOSPHERIC POLLUTION			
Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1.	Near Main Gate	55.9	61.5	58.7	<75 dB(A)
	Near Ware House	53.7	60.2	56.9	<75 dB(A)
	Near Raw Water Tank	62.5	68.9	65.7	<75 dB(A)

**Note:** Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

**Remarks:**

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
**Nikunj D. Patel**  
(Chemist)

Authorized By:

  
**Jaivik S. Tandel**  
(Manager - Operations)

Page No.: 1 of 1

UERL/AIR/F-18/03

**Note:** This report is subject to Terms and Conditions mentioned overleaf.



**TEST REPORT**  
**AMBIENT NOISE LEVEL MONITORING REPORT**

ULR - TC775320000008739F			
Test Report No.:	URA/20/09/AN-051	Date Of Report:	30/09/2020
Name & Add. Of Industries	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist. Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

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

Instrument Id No.	Instrument Name	Serial Number	Call. Date	Next Call. Date
UERL/AIR/SLM/09A	Sound Level Meter	24-DTE 2008	13/07/2020	13/07/2021

Date and Time of Monitoring : 24-09-2020 (Night Time: 10:00 pm to 6:00 am)

**Result**

DISCIPLINE - CHEMICAL TESTING		NAME OF GROUP - ATMOSPHERIC POLLUTION			
Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1.	Near Main Gate	35.0	58.6	46.8	<70 dB(A)
	Near Ware House	35.0	58.1	45.5	<70 dB(A)
	Near Raw Water Tank	35.0	65.5	50.2	<70 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Authorized By:

  
Javik S. Tandel  
(Manager - Operations)

Page No.: 1 of 1

UERL/AIR/F-18/03

Note: This report is subject to Terms and Conditions mentioned overleaf.

### AMBIENT NOISE LEVEL MONITORING REPORT

Test Report No.:	URA/20/08/AN-DKCI001	Date Of Report:	24/08/2020
Name & Add. Of Industries:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - E, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring.

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERI/AIR/SIM/09A	Sound Level Meter	24.DTE.2008	13/07/2020	13/07/2021

Date and Time of Monitoring: 20-08-2020 (Day Time: 6:00 am to 10:00 pm)

#### Result

DISCIPLINE – CHEMICAL TESTING		NAME OF GROUP – ATMOSPHERIC POLLUTION			
Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1:	Near Main Gate	57.4	64.1	60.7	<75 dB(A)
	Near Ware House	52.1	62.7	57.4	<75 dB(A)
	Near Raw Water Tank	63.6	69.5	66.5	<75 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By



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Authorized By



UERI/AIR/F-18/02

### AMBIENT NOISE LEVEL MONITORING REPORT

Test Report No.:	URA/20/08/AN-DXC1002	Date Of Report:	24/08/2020
Name & Add. Of Industries:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12K, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring:

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERR/AIR/SLM/09A	Sound Level Meter	24 DTE 2008	13/07/2020	13/07/2021

Date and Time of Monitoring : 20-08-2020 (Night Times: 10:00 pm to 6:00 am)

#### Result

DISCIPLINE - CHEMICAL TESTING		NAME OF GROUP - ATMOSPHERIC POLLUTION			
Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
I.	Near Main Gate	35.0	61.5	48.2	<70 dB(A)
	Near Ware House	35.0	58.3	46.6	<70 dB(A)
	Near Raw Water Tank	35.0	64.7	49.8	<70 dB(A)

Note: Ambient Air Quality Standards in respect of Noise as per CPCB:

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By



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UERR/AIR/F-18/02



### AMBIENT NOISE LEVEL MONITORING REPORT

ULR - TC775320000006973F			
Test Report No.	URA/20/07/AN-050	Date Of Report:	26/07/2020
Name & Add. Of Industries	M/s. Dori Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring.

Instrument Id No.	Instrument Name	Model Number	Call. Date	Next Call. Date
UERI/AIR/SLM/09A	Sound Level Meter	24 DFE 2008	01/08/2019	31/07/2020

Date and Time of Monitoring : 23-07-2020 (Day Time: 5:00 am to 10:00 pm)

#### Result

DISCIPLINE - CHEMICAL TESTING		NAME OF GROUP - ATMOSPHERIC POLLUTION			
Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1.	Near Main Gate	55.7	61.2	58.4	<75 dB(A)
	Near Ware House	53.5	60.3	56.9	<75 dB(A)
	Near Raw Water Tank	62.1	67.3	64.7	<75 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By



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UERI/AIR/F-18/02



### AMBIENT NOISE LEVEL MONITORING REPORT

ULR - TC775320000006974F			
Test Report No.:	URA/20/07/AN-051	Date Of Report:	28/07/2020
Name & Add. Of Industries	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist. Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring.

Instrument Id No.	Instrument Name	Model Number	Call. Date	Next Call. Date
UERL/AIR/SLM/09A	Sound Level Meter	24 DTE 2008	01/08/2019	31/07/2020

Date and Time of Monitoring : 23-07-2020 (Night Time: 10:00 pm to 6:00 am)

#### Result

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION		
Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1.	Near Main Gate	35.0	57.5	46.2	<70 dB(A)
	Near Ware House	35.0	55.9	45.4	<70 dB(A)
	Near Raw Water Tank	35.0	65.2	50.1	<70 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By



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Authorized By



UERL/AIR/F-18/02

### AMBIENT NOISE LEVEL MONITORING REPORT

ULR - TC775320000005978F			
Test Report No.:	URA/20/06/AN-049	Date Of Report:	04/07/2020
Name & Add. Of Industries:	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No: 2, Block - F, Sector: 12N, Adani Port and Sec, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method:	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring:

Instrument Id No.	Instrument Name	Model Number	Cal. Date	Next Cal. Date
UEHL/AIR/SLM/09A	Sound Level Meter	24 DTE 2008	01/08/2019	31/07/2020

Date and Time of Monitoring : 29-06-2020 (Day Time: 6:00 am to 10:00 pm)

#### Result

DISCIPLINE - CHEMICAL TESTING		NAME OF GROUP - ATMOSPHERIC POLLUTION			
Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1.	Near Main Gate	57.3	64.8	61.05	<75 dB(A)
	Near Ware House	52.1	62.5	57.3	<75 dB(A)
	Near Raw Water Tank	64.5	70.4	67.45	<75 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB:

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By

*Asad*

Page 1 of 1

Authorized By

*Flawley*

UERL/AIR/F-18/02

### AMBIENT NOISE LEVEL MONITORING REPORT

ULR - TC775320000005979F			
Test Report No.:	URA/20/06/AN-050	Date Of Report:	04/07/2020
Name & Add. Of Industries:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method:	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring:

Instrument Id No.	Instrument Name	Model Number	Cal. Date	Next Cal. Date
UERI/AIR/SLM/09A	Sound Level Meter	24 DTE 2008	01/08/2019	31/07/2020

Date and Time of Monitoring: : 29-06-2020 (Night Time: 10:00 pm to 6:00 am)

#### Result

DISCIPLINE - CHEMICAL TESTING		NAME OF GROUP - ATMOSPHERIC POLLUTION			
Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1.	Near Main Gate	35.0	58.3	46.65	<70 dB(A)
	Near Ware House	35.0	56.9	49.95	<70 dB(A)
	Near Raw Water Tank	35.0	64.4	49.7	<70 dB(A)

Note: Ambient Air Quality Standards in respect of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By

*Acid*

Page 1 of 1

Authorized By

*Swamy*

UERI/AIR/F-18/02



### AMBIENT NOISE LEVEL MONITORING REPORT

Test Report No.:	URA/20/05/AN-DKCI001	Date Of Report:	05/06/2020
Name & Add. Of Industries	M/s. Gorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Model Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/09A	Sound Level Meter	24 DTE 2008	01/08/2019	31/07/2020

Date and Time of Monitoring : 28-05-2020 (Day Time: 6:00 am to 10:00 pm)

#### Result

Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1.	Near Main Gate :	53.9	61.2	57.55	<75 dB(A)
	Near Ware House :	55.7	63.5	59.6	<75 dB(A)
	Near Raw Water Tank	62.5	68.6	65.55	<75 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By

*Aravind*

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Authorized By

*Aravind*

UERL/AIR/F-18/01



### AMBIENT NOISE LEVEL MONITORING REPORT

Test Report No.:	URA/20/05/AN-DKCI002	Date Of Report:	05/06/2020
Name & Add. Of Industries	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Model Number	Cal. Date	Next Cal. Date
UERL/AIR/SLM/09A	Sound Level Meter	24 DTE 2008	01/08/2019	31/07/2020

Date and Time of Monitoring : 28-05-2020 (Night Time: 10:00 pm to 6:00 am)

#### Result

Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1	Near Main Gate	35.0	57.3	46.15	<70 dB(A)
	Near Ware House	35.0	58.7	46.85	<70 dB(A)
	Near Raw Water Tank	35.0	62.5	48.75	<70 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By

*Amal*

Page 1 of 1

Authorized By

*Harsh*

UERL/AIR/F-18/01

### AMBIENT NOISE LEVEL MONITORING REPORT

Test Report No.:	URA/20/04/AN-DKCI001	Date Of Report:	08/05/2020
Name & Add. Of Industries	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9889 : 1981		

#### Details of Instrument Used for Monitoring.

Instrument Id No.	Instrument Name	Model Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/09A	Sound Level Meter	24 DTE 2008	01/08/2019	31/07/2020

Date and Time of Monitoring : 30-04-2020 (Day Time: 6:00 am to 10:00 pm)

#### Result:

Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1.	Near Main Gate	58.5	64.4	61.5	<75 dB(A)
	Near Ware House	52.3	65.1	59.2	<75 dB(A)
	Near Raw Water Tank	61.8	68.3	65.05	<75 dB(A)

Note: Ambient Air Quality Standards in respect of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By

*Arvind*

Page 1 of 1

Authorized By

*Harish*

UERL/AIR/F-18/01

### AMBIENT NOISE LEVEL MONITORING REPORT

Test Report No.:	URA/20/04/AN-DKC1002	Date Of Report:	08/05/2020
Name & Add. Of Industries	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist. Kutch, Gujarat - 370421, INDIA		
Sampling Method	IS : 9989 : 1981		

#### Details of Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Model Number	Cal. Date	Next Cal. Date
UERI/ARR/SLM/09A	Sound Level Meter	24 DTE 2008	01/08/2019	31/07/2020

Date and Time of Monitoring : 30-04-2020 (Night Time: 10:00 pm to 6:00 am)

#### Result

Sr. No.	Location	Noise Level dB(A)			Permissible Limit CPCB
		Min.	Max.	Avg.	
1	Near Main Gate	35.0	59.6	47.3	<70 dB(A)
	Near Ware House	35.0	61.4	48.2	<70 dB(A)
	Near Raw Water Tank	35.0	64.7	49.85	<70 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB:

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Prepared By

*Amit*

Page 1 of 1

Authorized By

*Sanjay*

UERI/AIR/F-18/01



### TEST REPORT

ULR No.	TC77532000008822E	Report No.	URC/20/09/0754
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 151, Near Water Treatment Plant, SE2, Mundra, Kutch, Gujarat.	Date Of Report	02/10/2020
		Customer's Ref.	--
Sample Details	Treated Effluent Water Sample	Location	--
Sample Qty.	3 Lt.	Appearance	Colourless
Sampling Date	24/09/2020	Sample Received Date	26/09/2020
Test Started Date	26/09/2020	Test Completion Date	01/10/2020
Sampled By	Party.	Sampling Method	--
URC Lab ID: No.	20/09/0754		

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr. No.	Parameters	Test Method	G.P.C.B. Desirable Limit	Unit of Measurement	Results
PHYSIO-CHEMICAL PARAMETERS					
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	6.5-8.5	--	7.53
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	800 Max.	mg/L	6
3.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-C)	2100 Max.	mg/L	1262
GENERAL CHEMICAL PARAMETERS					
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	2000 Max.	mg/L	191.6
2.	Biochemical Oxygen Demand (BOD) (3 days at 27 °C)	IS 3025(Part 44)1993, Amd.1	1000 Max.	mg/L	56
3.	Oil & Grease	IS 3025(Part 39)1991, Amd.2	20 Max.	mg/L	BOL(MDL:2.0)
4.	Sulphate as S <sup>2-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-S <sup>2-</sup> F)	2.0 Max.	mg/L	BOL(MDL:0.05)
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	1.0 Max.	mg/L	BOL(MDL:0.1)
6.	Fluoride as F <sup>-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-F <sup>-</sup> I)	2.0 Max.	mg/L	0.17
7.	Chloride as Cl <sup>-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl)	600 Max.	mg/L	472.0
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025(Part 24)1986	1000 Max.	mg/L	65.8
9.	Cyanide as CN <sup>-</sup>	IS 3025(Part 27)1986	0.2 Max.	mg/L	BOL(MDL:0.05)
10.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	mg/L	BOL(MDL:0.05)
11.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	mg/L	0.028
12.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-NH <sub>3</sub> -B&C)	50 Max.	mg/L	17.5
Remarks: BOL = Below Detection Limit, MDL = Minimum Detection Limit.					
Opinion & Interpretation (If required):					

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By



Nilesh C. Patel  
(Sr. Chemist)

Authorized By



(Nitin B. Jandeli)  
(Technical Manager)



## TEST REPORT

Report No.	URC /20/08/DKCPL-0463	Date Of Report	31/08/2020
Name & Address of Customer:	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	Treated Effluent Water: Sample	Sample Qty.	3 Lit.
Sampling Date	20/08/2020	Sample Received Date	24/08/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	24/08/2020	Test Completion Date	29/08/2020
UERL Lab Sample ID No. 20/08/DKCPL-0463			

## TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	G.P.C.B. Desirable Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	6.5 – 8.5	7.48
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540 – D)	800 Max.	8
3.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540 – C)	2100 Max.	1398
<b>CHEMICAL QUALITY (in mg/L)</b>				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	2000 Max.	164.5
2.	Biochemical Oxygen Demand (BOD) (5 days at 27 °C)	IS 3025(Part 44)1993, Amd. 1	1000 Max.	48
3.	Oil & Grease	IS 3025(Part 39)1993, Amd. 2	20 Max.	BDL(MDL: 2.0)
4.	Sulphide as S <sup>2-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 S <sup>2-</sup> F)	2.0 Max.	BDL(MDL: 0.05)
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd. 2	1.0 Max.	BDL(MDL: 0.1)
6.	Fluoride as F	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 F, D)	2.0 Max.	0.21
7.	Chloride as Cl	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl)	600 Max.	512.2
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025(Part 24)1986	1000 Max.	91.6
9.	Cyanide as CN	IS 3025(Part 27)1986	0.2 Max.	BDL(MDL: 0.05)
10.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	BDL(MDL: 0.05)
11.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	0.032
12.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 NH <sub>3</sub> -B&C)	50 Max.	18.6

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

*Fesal*  
(J.P.D.)

(Chemist)

Page 1 of 1

Checked By

*Amal*  
(P.D.)

(Sr. Chemist)

Authorized By

*Nitin B. Tandel*

(Nitin B. Tandel)  
(Technical Manager)

UERL/CHM/T-2/04

### TEST REPORT

ULR – TC7753200000061987			
Report No.	URC /20/07/0096	Date Of Report	10/07/2020
Name & Address of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 362, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	Treated Effluent Water Sample (Dorf Ketal)	Sample Qty.	2 LR.
Sampling Date	03/07/2020	Sample Received Date	04/07/2020
Sampled By	Party.	Appearance Of Sample	Dusty Colour
Test Started Date	04/07/2020	Test Completion Date	08/07/2020
UERI Lab Sample ID No. 20/07/0096			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	G.P.C.B. Desirable Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	6.5 – 8.5	7.33
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540 –D)	800 Max.	28
3.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540 –C)	2100 Max.	1560
<b>CHEMICAL QUALITY (In mg/L)</b>				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	2000 Max.	130.5
2.	Biochemical Oxygen Demand (BOD) (3 days at 27 °C)	IS 3025 (Part 44) 1993, Amd.1	1000 Max.	38
3.	Oil & Grease	IS 3025 (Part 39) 1991, Amd.2	20 Max.	BDL (MDL: 2.0)
4.	Sulphide as S <sup>2-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 S <sup>2-</sup> F)	2.0 Max.	1.5
5.	Phenolic Compound	IS 3025 (Part 43) 1992, Amd.2	1.0 Max.	BDL (MDL: 0.3)
6.	Fluoride as F	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 F.D)	2.0 Max.	0.12
7.	Chloride as Cl	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl)	600 Max.	588.0
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025 (Part 24) 1986	1600 Max.	91.7
9.	Cyanide as CN	IS 3025 (Part 27) 1986	0.2 Max.	BDL (MDL: 0.05)
10.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	BDL (MDL: 0.05)
11.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	0.031
12.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 NH <sub>3</sub> -88C)	50 Max.	24.5

Note: BDL = Below Detection Limit; MDL = Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

*(Signature)*

(N.A.P.)

(Chemist)

Checked By

*(Signature)*

(N.A.P.)

(Sr. Chemist)

Authorized By

*(Signature)*

(Technical Manager)

UERI/CHM/F-2/04



### TEST REPORT

ULR - TC775320000061971			
Report No.	URC /20/07/0095	Date Of Report	10/07/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	CETP Inlet Water Sample	Sample Qty.	2 Lit.
Sampling Date	03/07/2020	Sample Received Date	04/07/2020
Sampled By	Party.	Appearance Of Sample	Dusty Colour
Test Started Date	04/07/2020	Test Completion Date	08/07/2020
UERL Lab Sample ID.No. 20/07/0095			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
<b>PHYSICAL QUALITY</b>			
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	7.10
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	14
3.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-C)	1508
<b>CHEMICAL QUALITY (In mg/L)</b>			
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	174.1
2.	Biochemical Oxygen Demand (BOD) (3 days at 27 °C)	IS 3025 (Part 44) 1993, Amd.1	50
3.	Oil & Grease	IS 3025 (Part 39) 1991, Amd.2	BDL (MDL: 2.0)
4.	Sulphide as S <sup>2-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-S <sup>2-</sup> F)	1.7
5.	Phenolic Compound	IS 3025 (Part 43) 1992, Amd.2	BDL (MDL: 0.1)
6.	Fluoride as F <sup>-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-F, D)	0.31
7.	Chloride as Cl <sup>-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl)	277.1
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025 (Part 24) 1980	52.8
9.	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27) 1986	BDL (MDL: 0.05)
10.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	BDL (MDL: 0.05)
11.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	0.044
12.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-NH <sub>3</sub> -B&C)	23.7

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

*Vatsana*

(V.B.N.)

(Chemist)

Checked By

*P. V. V.*

(P.V.V.)

(Sr. Chemist)

Authorized By

*H. K. J.*

(H.K.J.)

(Technical Manager)

UERL/CHM/T-2/04

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### TEST REPORT

ULR - TC7753200000071137			
Report No.	URC /20/07/0808	Date Of Report	31/07/2020
Name & Address of Customer	M/s. Dori Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	Treated Effluent Water Sample	Sample Qty.	3 Lit.
Sampling Date	23/07/2020	Sample Received Date	25/07/2020
Sampled By	Party,	Appearance Of Sample	Colourless
Test Started Date	25/07/2020	Test Completion Date	28/07/2020
URC Lab Sample ID.No. 20/07/0808			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	G.P.C.B. Desirable Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	6.5 - 8.5	7.61
2.	Total Suspended Solids (mg/l)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	800 Max.	12
3.	Total Dissolved Solids (mg/l)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-C)	2100 Max.	1560
CHEMICAL QUALITY (In mg/l)				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	2000 Max.	205.6
2.	Biochemical Oxygen Demand (BOD) (3 days at 27 °C)	IS 3025(Part 44)1993, Amd.1	1000 Max.	60
3.	Oil & Grease	IS 3025(Part 39)1991, Amd.2	20 Max.	BDL(MDL:2.0)
4.	Sulphide as S <sup>2-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-S <sup>2-</sup> F)	2.0 Max.	BDL(MDL:0.05)
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	1.0 Max.	BDL(MDL:0.1)
6.	Fluoride as F <sup>-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-F <sup>-</sup> D)	2.0 Max.	0.29
7.	Chloride as Cl <sup>-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl)	600 Max.	587.5
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025(Part 24)1986	1000 Max.	105.6
9.	Cyanide as CN <sup>-</sup>	IS 3025(Part 27)1986	0.2 Max.	BDL(MDL:0.05)
10.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	BDL(MDL:0.05)
11.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	0.044
12.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-NH <sub>3</sub> -B&C)	50 Max.	22.5

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

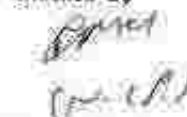
\*\*\*\*\* End of Report \*\*\*\*\*

Tested By



(Chemist)

Checked By



(Sr. Chemist)

Authorized By



(Technical Manager)

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URC/CHM/F-2/04



### TEST REPORT

ULR - TC77532000006001F			
Report No.	URC /20/06/0884	Date Of Report	06/07/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details:	Treated Effluent Water - Sample	Sample Qty.	1 Lt.
Sampling Date	29/06/2020	Sample Received Date	30/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	30/06/2020	Test Completion Date	04/07/2020
UERL Lab Sample ID No. 20/06/0884			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	G.P.C.B. Desirable Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	6.5 - 8.5	7.26
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	800 Max.	18
3.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540-C)	2100 Max.	1236
<b>CHEMICAL QUALITY (In mg/L)</b>				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	2000 Max.	168.5
2.	Biochemical Oxygen Demand (BOD) (3 days at 27 °C)	IS 3025 (Part 14) 1993, Amd. 1	1000 Max.	48
3.	Oil & Grease	IS 3025 (Part 15) 1991, Amd. 2	20 Max.	BDL (MDL 2.0)
4.	Sulphide as S <sup>2-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 S <sup>2-</sup> F)	2.0 Max.	BDL (MDL 0.05)
5.	Phenolic Compound	IS 3025 (Part 43) 1992, Amd. 2	1.0 Max.	BDL (MDL 0.1)
6.	Fluoride as F	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 F, D)	2.0 Max.	0.36
7.	Chloride as Cl	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl)	600 Max.	291.9
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025 (Part 24) 1986	1000 Max.	170.5
9.	Cyanide as CN	IS 3025 (Part 27) 1986	0.2 Max.	BDL (MDL 0.05)
10.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	BDL (MDL 0.05)
11.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	3.0 Max.	0.031
12.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed., 2017, 4500 NH <sub>3</sub> -N & C)	50 Max.	BDL (MDL 2.4)

Note: BDL = Below Detection Limit, MDL = Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By



(Chemist)

Checked By



(Sr. Chemist)

Authorized By



(Technical Manager)

UERL/CHM/F-2/04

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### TEST REPORT

Report No.	URC /20/06/DKCL-0023	Date Of Report	06/06/2020
Name & Address of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	Treated Effluent Water Sample	Sample Qty.	3 Lit.
Sampling Date	28/05/2020	Sample Received Date	01/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	01/06/2020	Test Completion Date	04/06/2020
URCL Lab Sample ID No. 20/06/DKCL-0023			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	G.P.C.B. Desirable Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 °C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed., 2017,4500-H <sup>+</sup> B)	6.5 - 8.5	7.39
2.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed., 2017,2540-D)	800 Max.	26
3.	Total Dissolved Solids (mg/L)	IS 3025(Part 16)1984 (APHA 23 <sup>rd</sup> Ed., 2017,2540-C)	2100 Max.	1572
<b>CHEMICAL QUALITY (in mg/L)</b>				
1.	Chemical Oxygen Demand (COD)	IS 3025(Part 58)2006, (APHA 23 <sup>rd</sup> Ed., 2017,5220-B)	2000 Max.	232.6
2.	Biochemical Oxygen Demand (BOD) (3 days at 27 °C)	IS 3025(Part 44)1993, Amd.1	1000 Max.	68
3.	Oil & Grease	IS 3025(Part 39)1991, Amd.2	20 Max.	BDL(MDL:2.0)
4.	Sulphide as S <sup>2-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017,4500 S <sup>2-</sup> F)	2.0 Max.	BDL(MDL:0.05)
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	1.0 Max.	BDL(MDL:0.1)
6.	Fluoride as F <sup>-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017,4500 F <sup>-</sup> D)	2.0 Max.	0.61
7.	Chloride as Cl <sup>-</sup>	IS 3025(Part 32)1988 (APHA 23 <sup>rd</sup> Ed., 2017,4500-Cl)	600 Max.	334.1
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025(Part 24)1986	1000 Max.	281.3
9.	Cyanide as CN <sup>-</sup>	IS 3025(Part 27)1986	0.2 Max.	BDL(MDL:0.05)
10.	Copper as Cu	IS 3025(Part 42)1992, Amd.01, (APHA 23 <sup>rd</sup> Ed., 2017,3111-B)	3.0 Max.	BDL(MDL:0.05)
11.	Nickel as Ni	IS 3025(Part 54)2003, (APHA 23 <sup>rd</sup> Ed., 2017,3111-B)	3.0 Max.	0.047
12.	Ammonical Nitrogen	IS 3025(Part 34)1988, (APHA 23 <sup>rd</sup> Ed., 2017,4500 NH <sub>3</sub> -B&C)	50 Max.	BDL(MDL:2.0)

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

*Jesal*  
(JSPD)  
(Chemist)

Checked By

*[Signature]*  
(Sr. Chemist)

Authorized By

*[Signature]*  
(Technical Manager)

Page 1 of 1

URCL/CHM/T-2/93



### TEST REPORT

Report No.	URC /20/05/DKCIPL-0066	Date Of Report	11/05/2020
Name & Address of Customer	M/s. Dorif Ketel Chemicals India Pvt. Ltd. Survey No. 161, Near Water Treatment Plant, SEZ, Mundra, Kutch, Gujarat.		
Sample Details	Treated Effluent Water Sample	Sample Qty.	3 ltr.
Sampling Date	30/04/2020	Sample Received Date	04/05/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	04/05/2020	Test Completion Date	07/05/2020
IERL Lab Sample ID No. 20/05/DKCIPL-0066			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	G.P.C.B. Desirable Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 °C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	6.5 - 8.5	7.32
2.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984 Amd.1 (APHA 23 <sup>rd</sup> Ed., 2017, 2540-D)	800 Max.	28
3.	Total Dissolved Solids (mg/L)	IS 3025(Part 16)1984 (APHA 23 <sup>rd</sup> Ed., 2017, 2540-C)	2100 Max.	1168
<b>CHEMICAL QUALITY (In mg/L)</b>				
1.	Chemical Oxygen Demand (COD)	IS 3025(Part 58)2006, (APHA 23 <sup>rd</sup> Ed., 2017, 5220-B)	2000 Max.	212.8
2.	Biochemical Oxygen Demand (BOD) (3 days at 27 °C)	IS 3025(Part 44)1993, Amd.1	1000 Max.	64
3.	Oil & Grease	IS 3025(Part 39)1991, Amd.2	20 Max.	BDL(MDL:2.0)
4.	Sulphide as S <sup>2-</sup>	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-S <sup>2-</sup> F)	2.0 Max.	BDL(MDL:0.05)
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	1.0 Max.	BDL(MDL:0.1)
6.	Fluoride as F	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-F,D)	2.0 Max.	0.41
7.	Chloride as Cl	IS 3025(Part 32)1988 (APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl)	600 Max.	285.9
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025(Part 24)1986	1000 Max.	102.5
9.	Cyanide as CN	IS 3025(Part 27)1986	0.2 Max.	BDL(MDL:0.05)
10.	Copper as Cu	IS 3025(Part 42)1992 Amd.01, (APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	2.0 Max.	BDL(MDL:0.05)
11.	Nickel as Ni	IS 3025(Part 54)2003, (APHA 23 <sup>rd</sup> Ed., 2017, 3111-B)	1.0 Max.	0.036
12.	Ammonical Nitrogen	IS 3025(Part 34)1988, (APHA 23 <sup>rd</sup> Ed., 2017, 4500-NH <sub>3</sub> -88C)	50 Max.	BDL(MDL:2.0)

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

*(Signature)*  
(Chemist)

Checked By

*(Signature)*  
(Sr. Chemist)

Authorized By

*(Signature)*  
(Technical Manager)

Page 1 of 1

UERL/CHM/F-3/03

### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775326000008726F			
Test Report No.:	URA/20/09/A-050	Report Issue Date:	30/09/2020
Service Request form No.:	URA/SRF/05/040	Service Request Date:	24/09/2020
Sample ID No.:	URA/ID/A-20/09/050	Field Data Sheet No.:	URA/FDS/A-20/09/050
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist. Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	24/09/2020	Date of Testing:	26/09/2020
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-2012, 1039-DTC-2012	02/08/2020	01/08/2021
UERI/AIR/FPS/30	Fine Particulate Sampler	132-DTL-2012	02/08/2020	01/08/2021

#### 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>	34.04
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>	25	60	UERI/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	13.1	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	17.4	80	IS - 5182, Part - 6
5.	Carbon Monoxide	µg/m <sup>3</sup>	BOL	2.0	IS - 5182, Part - 10
6.	Ozone	µg/m <sup>3</sup>	BOL	100	IS - 5182, Part - 9
7.	Ammonia	µg/m <sup>3</sup>	BOL	400	UERI/AIR/SOP/05
8.	Lead	µg/m <sup>3</sup>	BOL	1.0	IS - 5182, Part - 22
9.	Nickel	ng/m <sup>3</sup>	BOL	20	IS - 5182, Part - 22
10.	Arsenic	ng/m <sup>3</sup>	BOL	6.0	IS - 5182, Part - 22
11.	Benzene	µg/m <sup>3</sup>	BOL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	ng/m <sup>3</sup>	BOL	1.0	IS - 5182, Part - 12

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:



Nikunj D. Patel  
(Chemist)

Page No.: 1 of 1

Authorized By:



Jaivik S. Tandel  
(Manager - Operations)  
UERI/AIR/F-05/05

Note: This report is subject to Terms and Conditions mentioned overleaf.



### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775320000008727F			
Test Report No.:	URA/20/09/A-051	Report Issue Date:	30/09/2020
Service Request form No.:	URA/SRF/09/040	Service Request Date	24/09/2020
Sample ID No.:	URA/ID/A-20/09/051	Field Data Sheet No.:	URA/FDS/A-20/09/051
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector - 12N, Adani Port and Sec, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	24/09/2020	Date of Testing	26/09/2020
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
LIERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013,1127-DTJ-2012	02/08/2020	01/08/2021
LIERL/AIR/FPS/41	Fine Particulate Sampler	137-DTD-2013	03/08/2020	02/08/2021

#### 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 NAAQM5)	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>	23	60	LIERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	13.8	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	19.4	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	490	LIERL/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

Remarks:

Opinion & Interpretation (if required):

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:



Nikunj D. Patel  
(Chemist)

Page No. : 1 of 1

Authorized By:



Jalvik S. Tandel  
(Manager - Operations)  
ULR/AIR/F-05/05

Note: This report is subject to Terms and Conditions mentioned overleaf.

### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775320000008728F			
Test Report No.:	URA/20/09/A-052	Report Issue Date:	30/09/2020
Service Request form No.:	URA/SRF/09/040	Service Request Date:	24/09/2020
Sample ID No.:	URA/ID/A-20/09/052	Field Data Sheet No.:	URA/FDS/A-20/09/052
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	24/09/2020	Date of Testing:	26/09/2020
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
UERI/AIR/RDS/26	Respirable Dust Sampler	1745-DTA-2013, 1139-DTA-2013	02/08/2020	01/08/2021
UERI/AIR/FPS/42	Fine Particulate Sampler	125-DTG-2013	03/08/2020	02/08/2021

#### 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>	58	100	IS - 5182, Part - 23
2.	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	19	60	UERI/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	11.3	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	15.7	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	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.	Benzo. pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Remarks:

Opinion & Interpretation (if required):


\*\*\*\*\* End of Report \*\*\*\*\*

Checked By:

  
Nikunj D. Patel  
(Chemist)

Page No.: 1 of 1

Authorized By:

  
Jaivik S. Tandel  
(Manager - Operations)  
UERI/AIR/F-05/05

Note: This report is subject to Terms and Conditions mentioned overleaf.



### TEST REPORT (AMBIENT AIR MONITORING)

Test Report No.:	URA/20/08/A-DKIC001	Report Issue Date:	26/08/2020
Service Request form No.:	URA/SRF/08/001	Service Request Date:	20/08/2020
Sample ID No.:	URA/ID/A-20/08/001	Field Data Sheet No.:	URA/FDS/A-20/08/001
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:	20/08/2020	Date of Testing:	22/08/2020
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/BD5/24	Respirable Dust Sampler	2345-DTB-2012; 1039-DTC-2012	02/08/2020	01/08/2021
UERL/AIR/FPS/30	Fine Particulate Sampler	132-DTL-2012	02/08/2020	01/08/2021

#### 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>	54	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>	11.3	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	15.7	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/06
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)

Page No. : 1 of 1

Tested By:

(Chemist) / (Sr. Chemist)

(P.S.G)

Authorized By:

(Manager - Operations)

UERL/AIR/F-05/04

### TEST REPORT (AMBIENT AIR MONITORING)

Test Report No.:	URA/20/08/A- DKC1002	Report Issue Date:	26/08/2020
Service Request form No.:	URA/SRF/08/002	Service Request Date:	20/08/2020
Sample ID No.:	URA/ID/A-20/08/002	Field Data Sheet No.:	URA/FDS/A-20/08/002
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 :	20/08/2020	Date of Testing :	22/08/2020
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
UERI/AIR/BDS/25	Respirable Dust Sampler	1744-DTA-2013, 1127-DTJ-2012	02/08/2020	01/08/2021
UERI/AIR/FPS/41	Fine Particulate Sampler	137-DTD-2013	03/08/2020	02/08/2021

#### 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>	51	100	IS - 5182, Part - 23
2.	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	20	60	UERI/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	12.3	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	16.5	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.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

(Chemist) / (Supervisor)

Page No. : 1 of 1

Tested By:

(Chemist) / (Sr. Chemist)

CP 5.01

Authorized By:

(Manager - Operations)

(0-3-1)

UERI/AIR/F-05/04



MASTACT (ISO) Registered Environmental  
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### TEST REPORT (AMBIENT AIR MONITORING)

Test Report No.:	URA/20/08/A- DKC1003	Report Issue Date:	26/08/2020
Service Request form No.:	URA/SRF/08/003	Service Request Date:	20/08/2020
Sample ID No.:	URA/ID/A-20/08/003	Field Data Sheet No.:	URA/FDS/A-20/08/003
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist. Kutch, Gujarat - 370423, INDIA		
Dates of Sampling:	20/08/2020	Date of Testing:	22/08/2020
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	Cal. Date	Next Cal. Date
UERL/AIR/RDS/26	Respirable Dust Sampler	1745-DTA-2013, 1139-DTA-2013	02/08/2020	01/08/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	03/08/2020	02/08/2021

#### 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	1.21
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1742
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>	43	100	IS - 5182, Part - 23
2.	Particulate Matter, (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	16	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	9.7	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	12.5	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:

(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

(Chemist) / (Sr. Chemist)

(P. S. G.)

Authorized By:

(Manager - Operations)

Page No.: 1 of 1  
UERL/AIR/F-05/04

### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775320000006963F			
Test Report No.:	URA/20/07/A-060	Report Issue Date:	28/07/2020
Service Request form No.:	URA/SRF/07/044	Service Request Date:	23/07/2020
Sample ID No.:	URA/ID/A-20/07/060	Field Data Sheet No.:	URA/FDS/A-20/07/060
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:	23/07/2020	Date of Testing:	25/07/2020
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
UERI/AIR/RDS/26	Respirable Dust Sampler	1745-DTA-2013, 1139-DTA-2013	02/08/2019	01/08/2020
UERI/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>	59	100	IS - 5182, Part - 23
2.	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	22	60	UERI/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	10.3	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	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.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

(Chemist) / (Supervisor)  
(Signature)

Page No.: 1 of 1

Tested By:

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

Authorized By:

(Manager - Operations)  
(Signature)

UERI/AIR/F-05/04



### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775320000006962F			
Test Report No.:	URA/20/07/A-059	Report Issue Date:	28/07/2020
Service Request form No.:	URA/SRF/07/044	Service Request Date:	23/07/2020
Sample ID No.:	URA/ID/A-20/07/059	Field Data Sheet No.:	URA/FDS/A-20/07/059
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:	23/07/2020	Date of Testing:	25/07/2020
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	1.29
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>	66	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>	15.2	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	19.5	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:

(Chemist) / (Supervisor)

Tested By:

(Chemist) / (Sr. Chemist)

Authorized By:

(Manager - Operations)

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UERL/AIR/F-05/04

## TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775320000006961F			
Test Report No.:	URA/20/07/A-058	Report Issue Date:	28/07/2020
Service Request form No.:	URA/SRF/07/044	Service Request Date	23/07/2020
Sample ID No.:	URA/ID/A-20/07/058	Field Data Sheet No.:	URA/FDS/A-20/07/058
Name & Add. of Customer	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	23/07/2020	Date of Testing	25/07/2020
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
UURL/AIR/RDS/24	Respirable Dust Sampler	2345-DTB-2012, 1039-DTC-2012	02/08/2019	01/08/2020
UURL/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	1.23
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>	73	100	IS - 5182, Part - 23
2.	Particulate Matter, (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	26	60	UURL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	13.7	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	18.3	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:

(Chemist) / (Supervisor)

Tested By:

(Chemist) / (Sr. Chemist)

Authorized By:

(Manager - Operations)

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UURL/AIR/F-05/04



### TEST REPORT (AMBIENT AIR MONITORING)

ULR - TC775320000005966F			
Test Report No.:	URA/20/06/A-057	Report Issue Date:	04/07/2020
Service Request form No.:	URA/SRF/06/041	Service Request Date:	29/06/2020
Sample ID No.:	URA/ID/A-20/06/057	Field Data Sheet No.:	URA/FDS/A-20/06/057
Name & Add. of Customer	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist. Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	29/06/2020	Date of Testing:	01/07/2020
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	1.31
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1886
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>	32	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	15.7	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	21.3	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:

*A. Patel*  
(Chemist) / (Supervisor)  
(A-11)

Page No.: 1 of 1

Tested By:

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

Authorized By:

*A. Patel*  
(Manager - Operations)  
(A-11)

UERL/AIR/F-05/04

## TEST REPORT (AMBIENT AIR MONITORING)

<b>URL - TC775320000005968F</b>			
<b>Test Report No.:</b>	<b>URA/20/06/A-059</b>	<b>Report Issue Date:</b>	<b>04/07/2020</b>
<b>Service Request form No.:</b>	<b>URA/SRF/06/041</b>	<b>Service Request Date</b>	<b>29/06/2020</b>
<b>Sample ID No.:</b>	<b>URA/ID/A-20/06/059</b>	<b>Field Data Sheet No.:</b>	<b>URA/FDS/A-20/06/059</b>
<b>Name &amp; Add. of Customer</b>	<b>M/s. Dorf Ketal Chemicals India Pvt. Ltd.</b> Plot No. 7, Block - F, Sector 12N, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
<b>Dates of Sampling :</b>	<b>29/06/2020</b>	<b>Date of Testing:</b>	<b>01/07/2020</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	Cal. Date	Next Cal. Date
UERI/AIR/RDS/26	Respirable Dust Sampler	1745-DTA-2013, 1139-DTA-2013	02/08/2019	01/08/2020
UERI/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	1.29
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.:  $25 \pm 5^\circ\text{C}$ , 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>	28	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>	12.4	80	IS – 5182, Part – 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	19.1	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:**

Acid  
(Chemist) / (Supervisor)  
(035)

Page No.: 1 of 1

**Tested By:**

(Chemist) / (Sr. Chemist)

Authorized By:

(Manager - Operations)  
(707)

URL: AIR/F-05/04



### TEST REPORT (AMBIENT AIR MONITORING)

<b>ULR - TC775320000005967F</b>			
Test Report No.:	URA/20/06/A-058	Report Issue Date:	04/07/2020
Service Request form No.:	URA/SRF/06/041	Service Request Date:	29/06/2020
Sample ID No.:	URA/ID/A-20/06/058	Field Data Sheet No.:	URA/FDS/A-20/06/058
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:	29/06/2020	Date of Testing:	01/07/2020
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	Cal. Date	Next Cal. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013.1127-GTJ-2012	02/08/2019	01/08/2020
UERL/AIR/FPS/41	Fine Particulate Sampler	137-OTD-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	1.27
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>	87	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>	17.5	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	24.9	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:

*Aadil*  
(Chemist) / (Supervisor)  
(Aadil)

Page No.: 1 of 1

Tested By:

*Aadil*  
(Chemist) / (Sr. Chemist)  
(Aadil)

Authorized By:

*Sanjay*  
(Manager - Operations)  
(Sanjay)

UERL/AIR/F-05/04

## TEST REPORT (AMBIENT AIR MONITORING)

Test Report No.:	URA/20/05/A-DKCI001	Report Issue Date:	05/06/2020
Service Request form No.:	URA/SRF/05/001	Service Request Date	28/05/2020
Sample ID No.:	URA/10/A-20/05/001	Field Data Sheet No.:	URA/FDS/A-20/05/001
Name & Add. of Customer:	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sex, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling :	28/05/2020	Date of Testing	01/06/2020
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/RO5/24	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>2.5</sub>	m <sup>3</sup> /min	1.23
3.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	1771
4.	Volume of Air Sampled for PM <sub>10</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

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>	87	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>	17.3	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:

*A. Patel*  
(Chemist) / (Supervisor)

Page No.: 1 of 1

Tested By:

*A. Patel*  
(Chemist) / (Sr. Chemist)

(Signature)

Authorized By:

*A. Patel*  
(Manager - Operations)

Page No.: 1 of 1  
UERL/AIR/F-05/03



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

Test Report No.:	URA/28/05/A-DXCK003	Report Issue Date:	05/06/2020
Service Request form No.:	URA/SRF/05/003	Service Request Date	28/05/2020
Sample ID No.:	URA/ID/A-20/05/003	Field Data Sheet No.:	URA/FDS/A-20/05/003
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12M, Adani Port and Sez, Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	28/05/2020	Date of Testing	01/06/2020
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-D7A-2013, 1139-D7A-2013	02/08/2019	01/08/2020
UERL/AIR/PP5/42	Fine Particulate Sampler	125-D7D-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	1.21
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1742
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**

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>	14.3	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	18.6	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:

*A. Patel*  
(Chemist) / (Supervisor)

*(Signature)*

Page No.: 1 of 1

Tested By:

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

*(Signature)*

Authorized By:

*(Signature)*  
(Manager - Operations)

*(Signature)*

UERL/AIR/F-05/03

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

Test Report No.:	URA/20/05/A-DKCI002	Report Issue Date:	05/06/2020
Service Request form No.:	URA/SRF/05/002	Service Request Date:	28/05/2020
Sample ID No.:	URA/ID/A-20/05/002	Field Data Sheet No.:	URA/FDS/A-20/05/002
Name & Add. of Customer:	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec. Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	28/05/2020	Date of Testing:	01/06/2020
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
UERI/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013, 1127-DTJ-2012	02/08/2019	01/08/2020
UERI/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**

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>	27	60	UERI/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	18.6	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	25.2	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	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.	Benzo pyrene	ng/m <sup>3</sup>	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

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

(A-23)

Page No.: 1 of 1

Tested By:

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

(A-12/A)

Authorized By:

*A. A. A.*  
(Manager - Operations)

(A-17)

UERI/AIR/F-05/03



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

Test Report No.:	URA/20/04/A-DKC001	Report Issue Date:	08/05/2020
Service Request form No.:	URA/SRF/03/001	Service Request Date:	30/04/2020
Sample ID No.:	URA/ID/A-20/04/001	Field Data Sheet No.:	URA/FDS/A-20/04/001
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec. Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	30/04/2020	Date of Testing:	04/05/2020
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
UURL/AIR/RD5/24	Respirable Dust Sampler	2345-DTB-2012, 1039-DTC-2012	02/08/2019	01/08/2020
UURL/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	1.37
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>	24.64
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**

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>	71	100	IS - 5182, Part - 23
2.	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	23	60	UURL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	14.5	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	18.3	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:

*A. Patel*  
(Chemist) / (Supervisor)  
(A.C.T.)

Page No.: 1 of 1

Tested By:

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

Authorized By:

*[Signature]*  
(Manager - Operations)  
(O.L.N.)

UURL/AIR/F-05/03

### TEST REPORT (AMBIENT AIR MONITORING)

Test Report No.:	URA/20/04/A-DKCI003	Report Issue Date:	06/05/2020
Service Request form No.:	URA/SRF/03/003	Service Request Date:	30/04/2020
Sample ID No.:	URA/ID/A-20/04/003	Field Data Sheet No.:	URA/FDS/A-20/04/003
Name & Add. of Customer:	M/s. Dorf Ketel Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec. Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	30/04/2020	Date of Testing:	04/05/2020
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	Cal. Date	Next Cal. Date
UERL/AIR/RDS/25	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 $PM_{10}$	$m^3/min$	1.29
3.	Volume of Air Sampled for $PM_{10}$	$m^3$	1857
4.	Volume of Air Sampled for $PM_{2.5}$	$m^3$	28.04
5.	Flow Rate for Gas	L/min	0.2
6.	Volume of Air Sample for Gas	L	288

Environmental Conditions during testing: Temp.:  $25 \pm 5^\circ C$ , Relative Humidity: 40 to 50%

#### Test Parameter Results

Sr. No.	Test Parameter	Unit	Result	Permissible Limit (As per NAAQM5)	Test Method
1.	Particulate Matter ( $PM_{10}$ )	$\mu g/m^3$	52	100	IS - 5182, Part - 23
2.	Particulate Matter ( $PM_{2.5}$ )	$\mu g/m^3$	20	60	UERL/AIR/SOP/11
3.	Sulphur Dioxide	$\mu g/m^3$	12.7	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	$\mu g/m^3$	16.5	80	IS - 5182, Part - 6
5.	Carbon Monoxide	$\mu g/m^3$	BDL	2.0	IS - 5182, Part - 10
6.	Ozone	$\mu g/m^3$	BDL	100	IS - 5182, Part - 9
7.	Ammonia	$\mu g/m^3$	BDL	400	UERL/AIR/SOP/05
8.	Lead	$\mu g/m^3$	BDL	1.0	IS - 5182, Part - 22
9.	Nickel	$ng/m^3$	BDL	20	IS - 5182, Part - 22
10.	Arsenic	$ng/m^3$	BDL	6.0	IS - 5182, Part - 22
11.	Benzene	$\mu g/m^3$	BDL	5.0	IS - 5182, Part - 11
12.	Benzo pyrene	$ng/m^3$	BDL	1.0	IS - 5182, Part - 12

Note: BDL = Below Detection Limit.

Sampling Done By:

*Scail*  
(Chemist) / (Supervisor)  
(A.K.I.)

Page No.: 1 of 1

Tested By:

*an*  
(Chemist) / (Sr. Chemist)  
(~ 2.1)

Authorized By:

*Handwritten Signature*  
(Manager - Operations)  
(C.D.N.)  
UERL/AIR/F-05/03



## TEST REPORT (AMBIENT AIR MONITORING)

Test Report No.:	URA/20/04/A-DKCI002	Report Issue Date:	08/05/2020
Service Request form No.:	URA/SRF/03/002	Service Request Date:	30/04/2020
Sample ID No.:	URA/ID/A-20/04/002	Field Data Sheet No.:	URA/FDS/A-20/04/002
Name & Add. of Customer:	M/s. Dorf Ketal Chemicals India Pvt. Ltd. Plot No. 2, Block - F, Sector 12N, Adani Port and Sec. Dist: Kutch, Gujarat - 370421, INDIA		
Dates of Sampling:	30/04/2020	Date of Testing:	04/05/2020
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	Cal. Date	Next Cal. Date
UEBL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013, 1127-DT1-2012	02/08/2019	01/08/2020
UEBL/AIR/FPS/41	Fine Particulate Sampler	137-DT0-2013	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

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>	76	100	IS - 5182, Part - 23
2.	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	27	60	UEBL/AIR/SOP/11
3.	Sulphur Dioxide	µg/m <sup>3</sup>	16.2	80	IS - 5182, Part - 2
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	21.4	80	IS - 5182, Part - 5
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	UEBL/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 - 22

Note: BDL = Below Detection Limit.

Sampling Done By:

*A. Patel*  
(Chemist) / (Supervisor)

Tested By:

*A. Patel*  
(Chemist) / (Sr. Chemist)

Authorized By:

*Shweta*  
(Manager - Operations)

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UEBL/AIR/F-05/03



# Royal

## Environment Auditing & Consultancy Service

203/304, Shivalik-7, B-3, Badli, Gurgaon Road, RAJASTHAN - 300 012  
Ph. +91 281 2380895 Email: royaleenvironment@live.com royaleenvironment@gmail.com  
Date: 29/07/2020

Ref No. 604/07/2020-21

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of Company: Aniltron Munkaj Fibrecomposites India Pvt. Ltd.

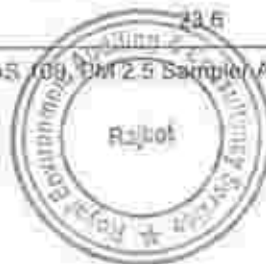
Address: Mundra SEZ Integrated Textile & Apparel Park,  
(MITAP), Plot No. - 07  
Survey No. - 141, Mundra,  
Kutch-370421

Test Method: As per IS Standards - 5182, 24/6

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	—	17/07/2020	17/07/2020
03.	Time of sampling	Hr.	11:10	11:40
04.	Duration of sampling	Hrs.	24.00	24.00
05.	Dominant Wind Direction (From)	—	SE	SE
06.	Average Wind Speed	Km/hr	7.5	7.8
07.	Average flow rate during sampling	m <sup>3</sup> /minute	1.1	1.2
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>	35	40
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>	75	64
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>	12.7	13.1
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>	23.6	25.7

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

Calibration Done on: 06/05/2019



Tagalish



# Royal

## Environment Auditing & Consultancy Service

303/304, Shivdatta 7, B/S Bal Adalat, Gondal Road, RAJKOT - 360 002.

Ph: +91 231-2350005 Email: royalenvironment@live.com info@royalconsultancy.com

Ref No: 304/D4/2020-21

Date: 30/04/2020

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of Company: Ahistrom Munkro Fibercomposites India Pvt. Ltd.

Address: Mundra SEZ Integrated Textile & Apparels Park,

(MITAP), Plot No. - 07

Survey No. -141, Mundra,

Kutch-370421

Test Method: As per IS Standards - 5102, 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	—	25/04/2020	25/04/2020
03.	Time of sampling	Hr	11:00	11:30
04.	Duration of sampling	Hrs	24.00	24.00
05.	Dominant Wind Direction (From)	—	NE	NE
06.	Average Wind Speed	Km/Hr	7.1	7.1
07.	Average flow rate during sampling	m <sup>3</sup> /minute	1.2	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	43
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>	79	87
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>	13.5	14.3
15.	Permissible Limits of NO <sub>x</sub>	µg/m <sup>3</sup>	80	80
16.	Measured Concentration of NO <sub>x</sub>	µg/m <sup>3</sup>	25.4	26.8

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

Calibration Done on: 09/05/2019



# ENVIRONMENTAL MONITORING REPORT

Period: May - 2020

FOR



**M/s.MUNDRA SOLAR PV LIMITED**



**At**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in May -20
1.	Ambient Air Quality Monitoring	PM <sub>10</sub> , PM <sub>2.5</sub> , Oxide of Sulphur, Oxide of Nitrogen	04	Monthly	04
2.	Stack Monitoring - Process Scrubber	PM, Sulphur Dioxide, Oxide of Nitrogen, Chlorine	12	Quarterly	04
3.	Stack Monitoring for D.G. Set	PM, Sulphur Dioxide, Oxide of Nitrogen, CO <sub>2</sub> , NMHC	02	Quarterly	**
4.	Noise Level Monitoring Company Premises.	dB(a)	05	Monthly	05
5.	Noise Level Monitoring for D. G. Set.	dB(a)	02	Monthly	**
6.	Cooling Tower Blow Down Water Sample Analysis.	pH, COD, BOD, TSS, TDS, E- Coli	01	Half Yearly	**
7.	ETP (Inlet and Outlet) Water Sample Analysis.	pH, Temperatures, Color, Suspended solids, Oil & Grease, Phenolic compounds, Cyanides, Fluorides, Sulphides, Ammonical Nitrogen, Total Chromium, Hexavalent Chromium, Mercury, BOD (3 days at 25 oC), COD, Chlorides, Sulphates, Total Dissolved Solids, Insecticides / Pesticides, Sodium absorption ratio, Percent sodium	02	Monthly	02
8.	STP (Inlet and Outlet) Water Sample Analysis.	pH, BOD (5 days at 20C), Suspended Solids, Residual Chlorine,	02	Monthly	04
9.	Drinking water Sample analysis	as per IS 10500:2012	01	Half Yearly	**

**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in May -20
10.	Soil Sample Analysis	pH, Texture, Nitrogen available, Nitrates, Magnesium, Colour, Calcium, Organic carbon, Phosphorous, Potassium, water soluble salt, sulphate, Electrical Conductivity, Cation exchange Capacity, Magnesium. SAR, Permeability, Water holding capacity, Porosity	03	Half Yearly	**
11.	ETP Sludge Sample Analysis	pH, Moisture Contain, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Total Inorganic Solids (TIS), Oil & Grease, Cadmium as Cd, Iron as Fe, Nickel as Ni, Chromium Hexavalent as Cr+6, Chromium Total as Cr, Zinc as Zn, Cobalt as Co, Copper as Cu, Manganese as Mn, Lead as Pb, Volatile Matter, Calorific Value and additional parameters <b>As per TLCP parameters chemical sludge from Chemical effluent treatment plant</b>	01	Yearly	**
12.	Used Oil	PCB, Lead, Arsenic, Cd+ Cr + Ni, PAH.	01	Yearly	**

# 1.0 AMBIENT AIR QUALITY MONITORING REPORT



**Period: May - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh&Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
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OHSAS18001:2007 Certified Company

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

Test Report No.:	URAL/20/05/MSPVL/A-001	Report Issue Date	25/05/2020
Service Request form No.:	UERL/AIR/SRF/05/A-001	Service Request Date	07/05/2020
Sample ID No.:	UERL/AIR/ID/A-20/05/001	Field Data Sheet No.	UERL/AIR/FDS/A-20/05/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	07/05/2020	Date of Testing	15/05/2020
Location of Sampling / Monitoring:	<b>Near Canteen Area.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

➤ **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	19/01/2020	19/01/2021
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	21/04/2019	19/04/2021

➤ **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>	1843.2
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04

➤ **Test Parameter Results**

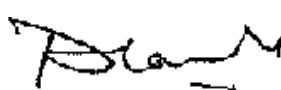
Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	68	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	26	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	12.1	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	14.3	<b>80</b>

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/05/MSPVL/A-002	Report Issue Date	25/05/2020
Service Request form No.:	UERL/AIR/SRF/05/A-002	Service Request Date	07/05/2020
Sample ID No.:	UERL/AIR/ID/A-20/05/002	Field Data Sheet No.	UERL/AIR/FDS/A-20/05/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	07/05/2020	Date of Testing	15/05/2020
Location of Sampling / Monitoring:	<b>Near ETP Guard Basin (MSTPL)</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	08/07/2019	08/07/2020

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	24.10
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>	1821.96
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.14

➤ **Test Parameter Results**

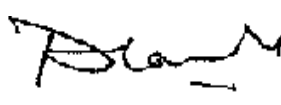
Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	62	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	22	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	10.4	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	14.2	80

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/05/MSPVL/A-003	Report Issue Date	25/05/2020
Service Request form No.:	UERL/AIR/SRF/05/A-003	Service Request Date	07/05/2020
Sample ID No.:	UERL/AIR/ID/A-20/05/003	Field Data Sheet No.	UERL/AIR/FDS/A-20/05/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	07/05/2020	Date of Testing	15/05/2020
Location of Sampling / Monitoring:	<b>Near Occupational Health Center.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

➤ **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	1745-DTB-2013, 1151-DTB-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/51	Fine Particulate Sampler	129-DTB-2013	08/07/2019	08/07/2020

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	23.45
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>	1716.54
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	23.49

➤ **Test Parameter Results**

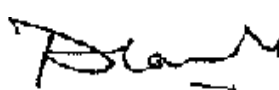
Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	58	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	18	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	8.9	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	12.4	<b>80</b>

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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**TEST REPORT  
(AMBIENT AIR MONITORING)**

Test Report No.:	URAL/20/05/MSPVL/A-004	Report Issue Date	25/05/2020
Service Request form No.:	UERL/AIR/SRF/05/A-004	Service Request Date	08/05/2020
Sample ID No.:	UERL/AIR/ID/A-20/05/004	Field Data Sheet No.	UERL/AIR/FDS/A-20/05/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	08/05/2020	Date of Testing	15/05/2020
Location of Sampling / Monitoring:	<b>Near Village Vandh</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	08/07/2019	09/07/2020

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	23.55
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>	1836.9
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	23.59

➤ **Test Parameter Results**

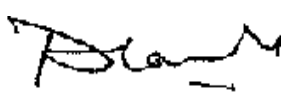
Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	76	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	34	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	16.3	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	14.8	<b>80</b>

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



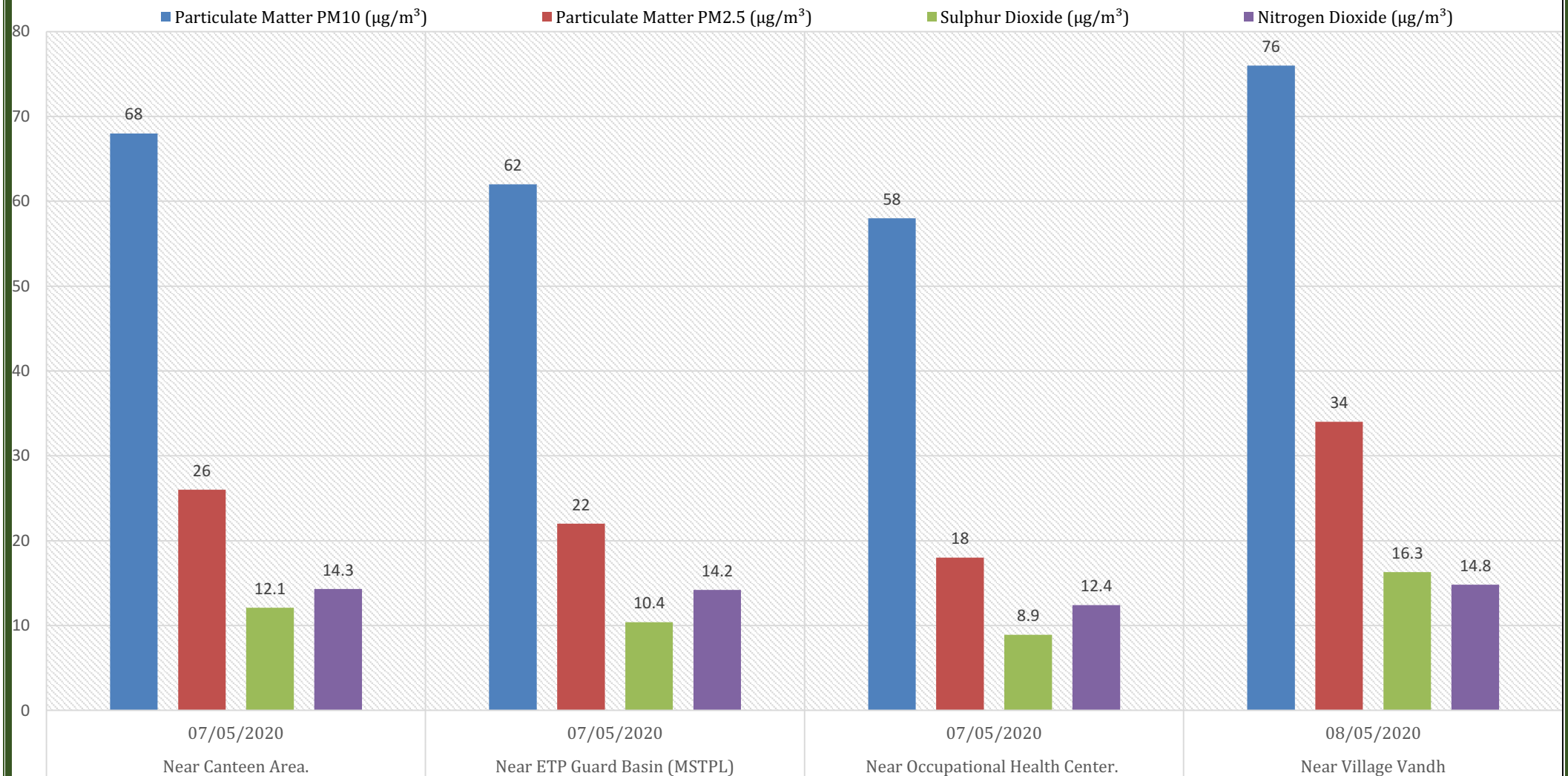
## Graphical Presentation of Ambient Air Quality Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### Ambient Air Quality Monitoring Programme



# 2.0 WATER QUALITY MONITORING REPORT



**Period: May - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
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ISO 9001:2015  
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### TESTREPORT

Report No.	URC/20/05/MSPL-001	Date Of Report	25/05/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	11/05/2020	Sample Received Date	18/05/2020
Sampled By	Party.	Appearance Of Sample	Light turbid
Test Started Date	18/05/2020	Test Completion Date	23/05/2020
UERL Lab Sample ID.No.20/05/MSPL-001			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	pH @ 25 ° C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed.,2017,4500-H*B)	11.93
2.	*Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	100
3.	*Temperature ° C	IS 3025(Part 9)1984	32
4.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	90
CHEMICAL QUALITY (In mg/L)			
1.	Chemical Oxygen Demand (COD)	IS 3025(Part 58)2006, (APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	4.2
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	BDL(MDL:1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	BDL(MDL:2.0)
4.	Total Chromium as Cr	IS 3025(Part 52)2003, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	BDL(MDL :0.05)
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	BDL(MDL:0.1)
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH3 B)	42.0
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	BDL(MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	BDL(MDL :0.05)
9.	Total Kjeldahal Nitrogen(TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> - B&C,&4500 N <sub>ORG</sub> , B,	46.7
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F,D)	5350
11.	*Residual Free Chlorine	IS 3025(Part 26)1986, APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	42.8
12.	Cyanide as CN	IS 3025(Part27)1986	BDL(MDL :0.05)
13.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	BDL(MDL :0.001)
14.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	BDL(MDL :0.1)

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### TEST REPORT

Report No.	URC/20/05/MSPL-001	Date Of Report	25/05/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	11/05/2020	Sample Received Date	18/05/2020
Sampled By	Party.	Appearance Of Sample	Light turbid
Test Started Date	18/05/2020	Test Completion Date	23/05/2020
UERL Lab Sample ID.No. 20/05/MSPL-001			

### TEST RESULTS

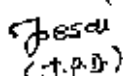
DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
CHEMICAL QUALITY (In mg/L)			
15.	*% Sodium	By Calculation	53.4
16.	*Sodium Absorption Ratio (SAR)	By Calculation	6.3
17.	Lead as Pb	IS 3025(Part 47)1994Amd.02, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.092
18.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	BDL(MDL:0.01)
19.	Copper as Cu	IS 3025(Part 42)1992amd.01, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.112
20.	Nickel as Ni	IS 3025(Part 54)2003, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.063
21.	Zinc as Zn	IS 3025(Part 49)1994, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.132
22.	Cadmium as Cd	IS 3025(Part 41)1992, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.054
23.	*Selenium as Se	IS 3025(Part 56)2003	BDL(MDL:0.1)
24.	Iron as Fe	IS 3025(Part 53)2003, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	1.245
25.	*Vanadium as V	AAS Method	BDL(MDL:0.1)

Note: "The parameters marked \* are not accredited by NABL",

BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to 24.05.2020)

QC-NABET Accredited EIA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

OHSAS18001:2007 Certified Company

ISO 9001:2015 Certified Company

### TEST REPORT

Report No.	URC/20/05/MSPL-002	Date Of Report	25/05/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	11/05/2020	Sample Received Date	18/05/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	18/05/2020	Test Completion Date	23/05/2020
UERL Lab Sample ID.No. 20/05/MSPL-002			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed.,2017,4500-H*B)	6.5 – 8.5	7.29
2.	*Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	100	50
3.	*Temperature ° C	IS 3025(Part 9)1984	40	32
4.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	100	5
CHEMICAL QUALITY (In mg/L)				
1.	Chemical Oxygen Demand (COD)	IS 3025(Part 58)2006, (APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	250	BDL(MDL:2.0)
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	100	BDL(MDL:1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	20	BDL(MDL:2.0)
4.	Chromium as Cr	IS 3025(Part 52)2003, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDL(MDL :0.05)
5.	Phenolic Compounds	IS 3025(Part 43)1992, Amd.2	5.0	BDL(MDL:0.1)
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH3 B)	50	27.2
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	1.0	BDL(MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	5.0	BDL(MDL :0.05)
9.	Total Kjeldahal Nitrogen(TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> - B&C,&4500 N <sub>ORG</sub> , B,	100	31.4
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F,D)	15	5.9
11.	*Total Residual Chlorine	IS 3025(Part 26)1986, APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	1.0	0.78
12.	Cyanide as CN	IS 3025(Part27)1986	0.2	BDL(MDL :0.05)
13.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	0.01	BDL(MDL :0.001)
14.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	2.0	BDL(MDL :0.1)

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QCI-NABET Accredited EIA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

OHSAS18001:2007 Certified Company

ISO 9001:2015 Certified Company

### TEST REPORT

Report No.	URC/20/05/MSPL-002	Date Of Report	25/05/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	11/05/2020	Sample Received Date	18/05/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	18/05/2020	Test Completion Date	23/05/2020
UERL Lab Sample ID.No. 20/05/MSPL-002			

### TEST RESULTS

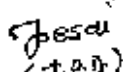
DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
15.	*% Sodium	By Calculation	60%	46.8
16.	*Sodium Absorption Ratio (SAR)	By Calculation	26	1.82
17.	Lead as Pb	IS 3025(Part 47)1994Amd.02, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDLMDL:0.01)
18.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	0.2	BDL(MDL:0.01)
19.	Copper as Cu	IS 3025(Part 42)1992amd.01, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	BDL(MDL :0.05)
20.	Nickel as Ni	IS 3025(Part 54)2003, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	5.0	0.042
21.	Zinc as Zn	IS 3025(Part 49)1994, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	10.0	BDL(MDL :0.05)
22.	Cadmium as Cd	IS 3025(Part 41)1992, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	0.031
23.	*Selenium as Se	IS 3025(Part 56)2003	0.05	BDL(MDL:0.1)
24.	Iron as Fe	IS 3025(Part 53)2003, (APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	1.023
25.	*Vanadium as V	AAS Method	0.2	BDL(MDL:0.1)

Note: "The parameters marked \* are not accredited by NABL",


BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to 24.05.2020)

QCI-NABET Accredited EIA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

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ISO 9001:2015 Certified Company

### TEST REPORT

Report No.	URC/20/05/MSPL-003	Date Of Report	25/05/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet water sample – MSTPL Area	Sample Qty.	2 Lit.
Sampling Date	11/05/2020	Sample Received Date	18/05/2020
Sampled By	Party.	Appearance Of Sample	Grey Colour
Test Started Date	18/05/2020	Test Completion Date	23/05/2020
UERL Lab Sample ID.No. 20/05/MSPL-003			

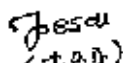
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
<b>PHYSICAL QUALITY</b>			
1.	pH @ 25 °C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed.,2017,4500-H*B)	7.08
2.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	110
<b>CHEMICAL QUALITY (In mg/L)</b>			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	32
2.	*Residual Chlorine	IS 3025(Part 26)1986, (APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.46

Note: "The parameter marked \* is not accredited by NABL",

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/05/MSPL-004	Date Of Report	25/05/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet water sample-MSTPL Area	Sample Qty.	2 Lit.
Sampling Date	11/05/2020	Sample Received Date	18/05/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	18/05/2020	Test Completion Date	23/05/2020
UERL Lab Sample ID.No. 20/05/MSPL-004			

### TEST RESULTS

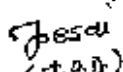
DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 ° C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	--	7.76
2.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<30	25
<b>CHEMICAL QUALITY (In mg/L)</b>				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<20	12
2.	*Residual Chlorine	IS 3025(Part 26)1986, (APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	0.72

Note: "The parameter marked \* is not accredited by NABL",


BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



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QCI-NABET Accredited EIA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

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### TEST REPORT

Report No.	URC/20/05/MSPL-005	Date Of Report	25/05/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet water sample –MSPVL Area	Sample Qty.	2 Lit.
Sampling Date	11/05/2020	Sample Received Date	18/05/2020
Sampled By	Party.	Appearance Of Sample	Grey Colour
Test Started Date	18/05/2020	Test Completion Date	23/05/2020
UERL Lab Sample ID.No.20/05/MSPL-005			

### TEST RESULTS

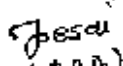
DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	pH @ 25 °C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	6.92
2.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984,Amd.1 (APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	120
CHEMICAL QUALITY (In mg/L)			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	64
2.	*Residual Chlorine	IS 3025(Part 26)1986, (APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.36

Note: "The parameter marked \* is not accredited by NABL",

BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to 24.05.2020)

QCI-NABET Accredited EIA Consultant Organization

GPCB Recognized Environmental Auditor (Schedule-II)

OHSAS18001:2007 Certified Company

ISO 9001:2015 Certified Company

### TEST REPORT

Report No.	URC/20/05/MSPL-006	Date Of Report	25/05/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet water sample-MSPVL Area	Sample Qty.	2 Lit.
Sampling Date	11/05/2020	Sample Received Date	18/05/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	18/05/2020	Test Completion Date	23/05/2020
UERL Lab Sample ID.No.20/05/MSPL-006			

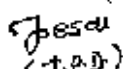
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed.,2017,4500-H+B)	--	7.54
2.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<30	10
CHEMICAL QUALITY (In mg/L)				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<20	15
2.	*Residual Chlorine	IS 3025(Part 26)1986, (APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	1.02


Note: "The parameter marked \* is not accredited by NABL",

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

# 3.0 NOISE LEVEL MONITORING REPORT



**Period: May - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 24.05.2020)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

OHSAS18001:2007  
Certified Company

ISO 9001:2015  
Certified Company

### NOISE LEVEL MONITORING REPORT

<b>Test Report No.:</b>	<b>UERL/20/05/MSPVL/N-001</b>	<b>Date Of Report:</b>	<b>25/05/2020</b>
<b>Name &amp; Add. Of Industries</b>	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		

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

<b>Instrument Id No.</b>	<b>Instrument Name</b>	<b>Model Number</b>	<b>Cali. Date</b>	<b>Next Cali. Date</b>
UERL/AIR/SLM/Q630838	Sound Level Meter	SL 4023 SD	31/01/2020	30/01/2021
<b>Sampling Method.</b>	CPCB Guideline			

Date of Monitoring : **07/05/2020**

### Result

<b>Sr. No.</b>	<b>Location within company premises</b>	<b>Noise Level dB(A)</b>		<b>Permissible Limit CPCB</b>	
		<b>Day Time</b>	<b>Night Time</b>	<b>Day Time</b>	<b>Night Time</b>
1.	North: Near Canteen area	51.1	48.6	<75 dB(A)	<70 dB(A)
2.	South: Near 66 KVA Sub Station	53.4	44.2	<75 dB(A)	<70 dB(A)
3.	East: Near COE Building	55.6	46.3	<75 dB(A)	<70 dB(A)
4.	West: Near ETP Guard basin	54.8	42.8	<75 dB(A)	<70 dB(A)
5.	Near Pump House	52.7	42.6	<75 dB(A)	<70 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB.

<b>Area Code</b>	<b>Category of Area/Zone</b>	<b>Limit in dB (A) Leq</b>	
		<b>Day Time (6:00 am to 10:00 pm)</b>	<b>Night Time (10:00 pm to 6:00 am)</b>
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Checked By



Authorized By





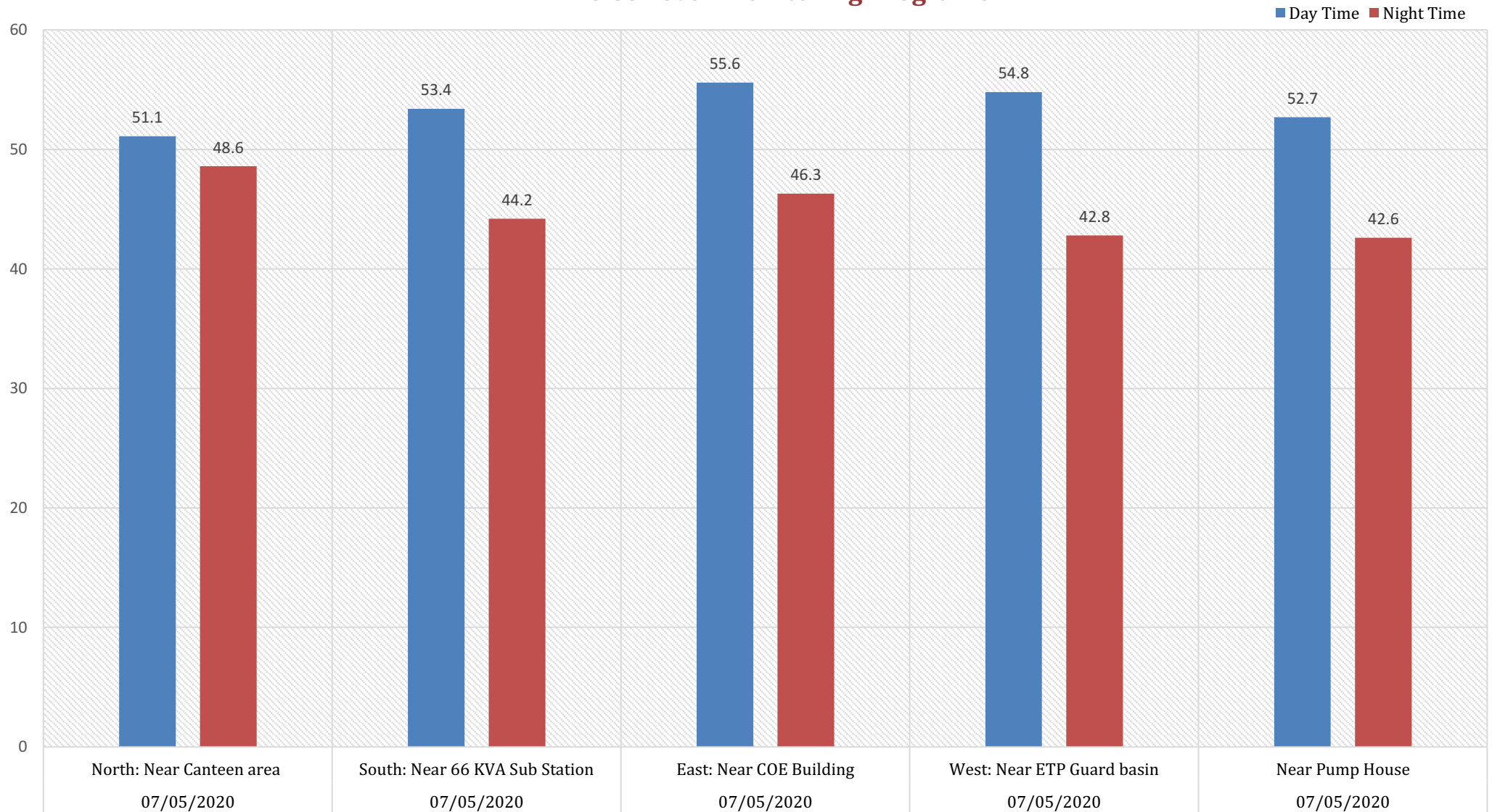
## Graphical Presentation of Noise Level Monitoring Data

**For M/s. Mundra Solar PV Limited.**

**By – UniStar Environment and Research Labs Pvt. Ltd.**



### NM: "Noise Level Monitoring Programme"



# 4.0 STACK MONITORING REPORT



**Period: May - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 24.05.2020)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

OHSAS18001:2007  
Certified Company

ISO 9001:2015  
Certified Company

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/05/MSPVL/S-001	Report Issue Date	25/05/2020
Service Request form No.	UERL/AIR/SRF/05/S-001	Service Request Date	08/05/2020
Sample ID No.	UERL/AIR/ID/S-20/05/001	Field Data Sheet No.	UERL/AIR/FDS/S-20/05/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	08/05/2020	Date of Testing	15/05/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.01</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	28/06/2019	Next Calibration Due On	27/06/2020

➤ **General Stack Monitoring Observation**

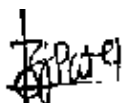
Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	34
5.	Exit Gas Velocity	m/s	9.6
6.	Exit Gas Flow	m <sup>3</sup> /h	8208

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	<b>150</b>	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	6.8	<b>100</b>	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	<b>50</b>	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	<b>20</b>	EPA Method.

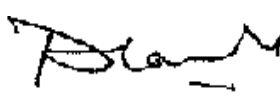
**Note:**1) BDL: Below Detection Limit, 2) N.D: Not Detected

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/05/MSPVL/S-002	Report Issue Date	25/05/2020
Service Request form No.	UURL/AIR/SRF/05/S-002	Service Request Date	08/05/2020
Sample ID No.	UURL/AIR/ID/S-20/05/002	Field Data Sheet No.	UURL/AIR/FDS/S-20/05/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	08/05/2020	Date of Testing	15/05/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.02</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	28/06/2019	Next Calibration Due On	27/06/2020

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	34
5.	Exit Gas Velocity	m/s	10.1
6.	Exit Gas Flow	m <sup>3</sup> /h	8635.5

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	10.2	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	EPA Method.

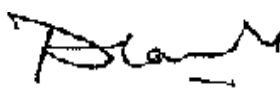
**Note:** 1) BDL: Below Detection Limit, 2) N.D: Not Detected

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/05/MSPVL/S-003	Report Issue Date	25/05/2020
Service Request form No.	UERL/AIR/SRF/05/S-003	Service Request Date	08/05/2020
Sample ID No.	UERL/AIR/ID/S-20/05/003	Field Data Sheet No.	UERL/AIR/FDS/S-20/05/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	08/05/2020	Date of Testing	15/05/2020
Stack Sampling Attached to	<b>Nox Exhaust Line No.03</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	28/06/2019	Next Calibration Due On	27/06/2020

➤ **General Stack Monitoring Observation**

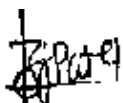
Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	34
5.	Exit Gas Velocity	m/s	9.4
6.	Exit Gas Flow	m <sup>3</sup> /h	8037

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	BDL	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	EPA Method.

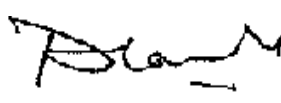
**Note:** 1) BDL: Below Detection Limit, 2) N.D: Not Detected

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/05/MSPVL/S-004	Report Issue Date	25/05/2020
Service Request form No.	UURL/AIR/SRF/05/S-004	Service Request Date	08/05/2020
Sample ID No.	UURL/AIR/ID/S-20/05/004	Field Data Sheet No.	UURL/AIR/FDS/S-20/05/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	08/05/2020	Date of Testing	15/05/2020
Stack Sampling Attached to	<b>Nox Exhaust Line No.04</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	28/06/2019	Next Calibration Due On	27/06/2020

➤ **General Stack Monitoring Observation**

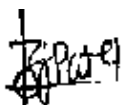
Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	34
5.	Exit Gas Velocity	m/s	9.4
6.	Exit Gas Flow	m <sup>3</sup> /h	8037

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	BDL	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	EPA Method.

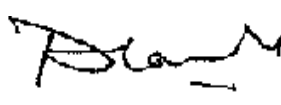
**Note:** 1) BDL: Below Detection Limit, 2) N.D: Not Detected

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

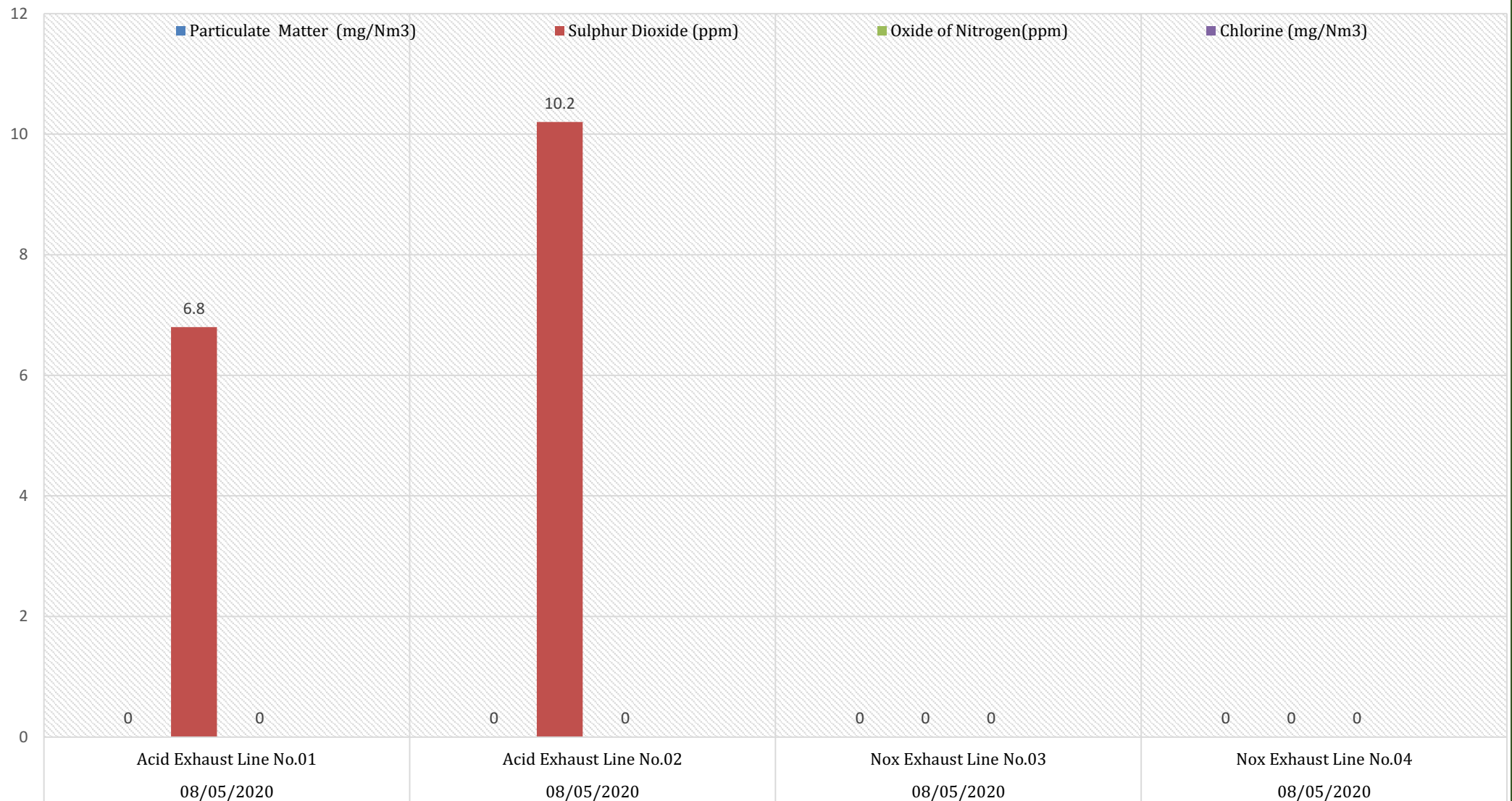
## Graphical Presentation of Stack Monitoring Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### Stack Monitoring Programme



# ENVIRONMENTAL MONITORING REPORT

Period: June - 2020

FOR



**M/s.MUNDRA SOLAR PV LIMITED**



**At**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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GPCB Recognized Environmental  
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ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company



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**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in June -20
1.	Ambient Air Quality Monitoring	PM <sub>10</sub> , PM <sub>2.5</sub> , Oxide of Sulphur, Oxide of Nitrogen	04	Monthly	04
2.	Stack Monitoring - Process Scrubber	PM, Sulphur Dioxide, Oxide of Nitrogen, Chlorine	12	Quarterly	04
3.	Stack Monitoring for D.G. Set	PM, Sulphur Dioxide, Oxide of Nitrogen, CO <sub>2</sub> , NMHC	02	Quarterly	**
4.	Noise Level Monitoring Company Premises.	dB(a)	05	Monthly	05
5.	Noise Level Monitoring for D. G. Set.	dB(a)	02	Monthly	**
6.	Cooling Tower Blow Down Water Sample Analysis.	pH, COD, BOD, TSS, TDS, E- Coli	01	Half Yearly	**
7.	ETP (Inlet and Outlet) Water Sample Analysis.	pH, Temperatures, Color, Suspended solids, Oil & Grease, Phenolic compounds, Cyanides, Fluorides, Sulphides, Ammonical Nitrogen, Total Chromium, Hexavalent Chromium, Mercury, BOD (3 days at 25 oC), COD, Chlorides, Sulphates, Total Dissolved Solids, Insecticides / Pesticides, Sodium absorption ratio, Percent sodium	02	Monthly	02
8.	STP (Inlet and Outlet) Water Sample Analysis.	pH, BOD (5 days at 20C), Suspended Solids, Residual Chlorine,	02	Monthly	04
9.	Drinking water Sample analysis	as per IS 10500:2012	01	Half Yearly	01

**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in June -20
10.	Soil Sample Analysis	pH, Texture, Nitrogen available, Nitrates, Magnesium, Colour, Calcium, Organic carbon, Phosphorous, Potassium, water soluble salt, sulphate, Electrical Conductivity, Cation exchange Capacity, Magnesium. SAR, Permeability, Water holding capacity, Porosity	03	Half Yearly	**
11.	ETP Sludge Sample Analysis	pH, Moisture Contain, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Total Inorganic Solids (TIS), Oil & Grease, Cadmium as Cd, Iron as Fe, Nickel as Ni, Chromium Hexavalent as Cr+6, Chromium Total as Cr, Zinc as Zn, Cobalt as Co, Copper as Cu, Manganese as Mn, Lead as Pb, Volatile Matter, Calorific Value and additional parameters <b>As per TLCP parameters chemical sludge from Chemical effluent treatment plant</b>	01	Yearly	01
12.	Used Oil	PCB, Lead, Arsenic, Cd+ Cr + Ni, PAH.	01	Yearly	01



# 1.0 AMBIENT AIR QUALITY MONITORING REPORT



**Period: June - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh&Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
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ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

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

Test Report No.:	URAL/20/06/MSPVL/A-001	Report Issue Date	30/06/2020
Service Request form No.:	UERL/AIR/SRF/06/A-001	Service Request Date	19/06/2020
Sample ID No.:	UERL/AIR/ID/A-20/06/001	Field Data Sheet No.	UERL/AIR/FDS/A-20/06/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	19/06/2020	Date of Testing	23/06/2020
Location of Sampling / Monitoring:	<b>Near Canteen Area.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

➤ **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	19/01/2020	19/01/2021
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	21/04/2019	19/04/2021

➤ **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	1.32
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1900.8
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04

➤ **Test Parameter Results**

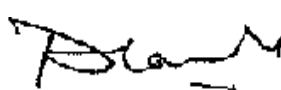
Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	66	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	22	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	10.2	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	12.4	<b>80</b>

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/06/MSPVL/A-002	Report Issue Date	30/06/2020
Service Request form No.:	UERL/AIR/SRF/06/A-002	Service Request Date	19/06/2020
Sample ID No.:	UERL/AIR/ID/A-20/06/002	Field Data Sheet No.	UERL/AIR/FDS/A-20/06/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	19/06/2020	Date of Testing	23/06/2020
Location of Sampling / Monitoring:	<b>Near ETP Guard Basin (MSTPL)</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	08/07/2019	08/07/2020

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	23.50
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>	1748.4
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	23.54

➤ **Test Parameter Results**

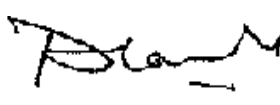
Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	58	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	21	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	12.3	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	15.8	80

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/06/MSPVL/A-003	Report Issue Date	30/06/2020
Service Request form No.:	UERL/AIR/SRF/06/A-003	Service Request Date	19/06/2020
Sample ID No.:	UERL/AIR/ID/A-20/06/003	Field Data Sheet No.	UERL/AIR/FDS/A-20/06/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	19/06/2020	Date of Testing	23/06/2020
Location of Sampling / Monitoring:	<b>Near Occupational Health Center.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

➤ **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	1745-DTB-2013, 1151-DTB-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/51	Fine Particulate Sampler	129-DTB-2013	08/07/2019	08/07/2020

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	24.05
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>	1875.9
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.09

➤ **Test Parameter Results**

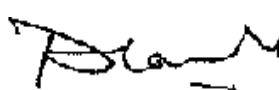
Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	66	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	18	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	11.2	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	16.3	<b>80</b>

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



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

Test Report No.:	URAL/20/06/MSPVL/A-004	Report Issue Date	30/06/2020
Service Request form No.:	UERL/AIR/SRF/06/A-004	Service Request Date	20/06/2020
Sample ID No.:	UERL/AIR/ID/A-20/06/004	Field Data Sheet No.	UERL/AIR/FDS/A-20/06/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	20/06/2020	Date of Testing	23/06/2020
Location of Sampling / Monitoring:	<b>Near Village Vandh</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	08/07/2019	09/07/2020

➤ **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>	1843.2
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04

➤ **Test Parameter Results**

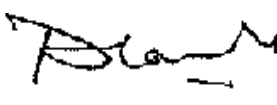
Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	82	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	26	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	15.6	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	18.2	80

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

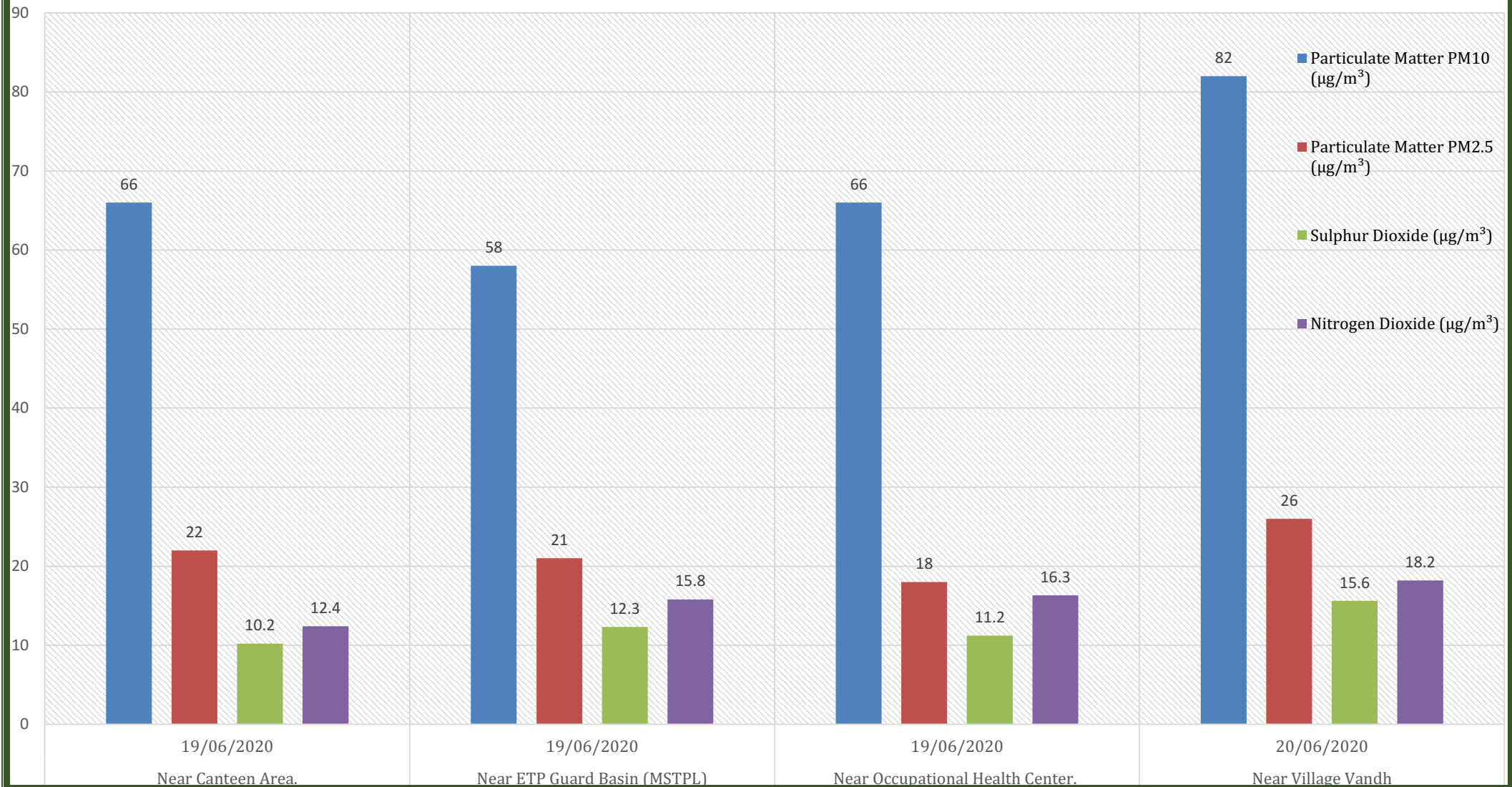
## Graphical Presentation of Ambient Air Quality Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### *Ambient Air Quality Monitoring Programme*



# 2.0 WATER QUALITY MONITORING REPORT



**Period: June - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**



**Monitoring Organization**

White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TESTREPORT

<b>ULR – TC775320000005759F</b>			
Report No.	URC/20/06/0553	Date Of Report	30/06/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Light turbid
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/0553			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
<b>PHYSICAL QUALITY</b>			
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	5.31
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	102
<b>CHEMICAL QUALITY (In mg/L)</b>			
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	5.6
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	BDL(MDL:1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	BDL(MDL:2.0)
4.	Total Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	BDL(MDL :0.05)
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	BDL(MDL:0.1)
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH <sub>3</sub> B)	26.2
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	BDL(MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	BDL(MDL :0.05)
9.	Total Kjeldahal Nitrogen(TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> - B&C,&4500 N <sub>ORG</sub> , B,	33.4
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F,D)	5623
11.	Cyanide as CN	IS 3025(Part27)1986	BDL(MDL :0.05)
12.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	BDL(MDL :0.001)
13.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	BDL(MDL :0.1)
14.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.049



### TEST REPORT

<b>ULR – TC775320000005759F</b>			
Report No.	<b>URC/20/06/0553</b>	Date Of Report	<b>30/06/2020</b>
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	<b>ETP Inlet sample</b>	Sample Qty.	<b>5 Lit.</b>
Sampling Date	<b>20/06/2020</b>	Sample Received Date	<b>22/06/2020</b>
Sampled By	<b>Party.</b>	Appearance Of Sample	<b>Light turbid</b>
Test Started Date	<b>22/06/2020</b>	Test Completion Date	<b>27/06/2020</b>
UERL Lab Sample ID.No. <b>20/06/0553</b>			

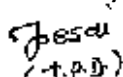
### TEST RESULTS

<b>DISCIPLINE : Chemical Testing</b>		<b>NAME OF GROUP: Pollution &amp; Environment</b>	
<b>Sr. No.</b>	<b>Parameters</b>	<b>Test Method</b>	<b>Results</b>
<b>CHEMICAL QUALITY (In mg/L)</b>			
15.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	BDL(MDL:0.01)
16.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.106
17.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.068
18.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.142
19.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.056
20.	Iron as Fe	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	1.216


**BDL= Below Detection Limit, MDL= Minimum Detection Limit**

**\*\*\*\*\* End of Report \*\*\*\*\***

**Tested By**

  
(Chemist)

**Checked By**

  
(Sr. Chemist)

**Authorized By**

  
(Technical Manager)

### TESTREPORT

Report No.	URC/20/06/0553	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Light turbid
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/0553			

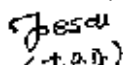
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	*Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	150
2.	*Temperature °C	IS 3025(Part 9)1984	32
CHEMICAL QUALITY (In mg/L)			
1.	*Residual Free Chlorine	APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	BDL(MDL:0.2)
2.	*% Sodium	By Calculation	91.6
3.	*Selenium as Se	IS 3025(Part 56)2003	BDL(MDL:0.1)
4.	*Vanadium as V	AAS Method	BDL(MDL:0.1)
5.	*Sodium Absorption Ratio (SAR)	By Calculation	11.1

Note: "The parameters marked \* are not accredited by NABL", BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

ULR – TC775320000005760F			
Report No.	URC/20/06/0554	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample from MSTPL Guard Basin	Sample Qty.	5 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/0554			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	6.5 – 8.5	7.09
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	100	36
<b>CHEMICAL QUALITY (In mg/L)</b>				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	250	32.6
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	100	BDL(MDL:1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	20	BDL(MDL:2.0)
4.	Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDL(MDL :0.05)
5.	Phenolic Compounds	IS 3025(Part 43)1992, Amd.2	5.0	BDL(MDL:0.1)
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH <sub>3</sub> B)	50	11.3
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	1.0	BDL(MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	5.0	BDL(MDL :0.05)
9.	Total Kjeldahal Nitrogen(TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> -B&C,&4500 N <sub>ORG</sub> , B,	100	18.2
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F,D)	15	5.4
11.	Cyanide as CN	IS 3025(Part27)1986	0.2	BDL(MDL :0.05)
12.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	0.01	BDL(MDL :0.001)
13.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	2.0	BDL(MDL :0.1)
14.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDLMDL:0.01)

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Auditor (Schedule-II)

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Certified Company

ISO 45001:2018  
Certified Company

### TEST REPORT

<b>ULR – TC775320000005760F</b>			
Report No.	URC/20/06/0554	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample from MSTPL Guard Basin	Sample Qty.	5 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/0554			

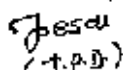
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
15.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	0.2	BDL(MDL:0.01)
16.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	BDL(MDL :0.05)
17.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	5.0	0.028
18.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	10.0	BDL(MDL :0.05)
19.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	0.046
20.	Iron as Fe	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	0.706

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

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Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

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Certified Company

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Certified Company

### TEST REPORT

Report No.	URC/20/06/0554	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample from MSTPL Guard Basin	Sample Qty.	5 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/0554			

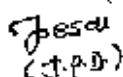
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	*Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	100	60
2.	*Temperature ° C	IS 3025(Part 9)1984	40	32
CHEMICAL QUALITY (In mg/L)				
1.	*Total Residual Chlorine	APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	1.0	BDL(MDL:0.2)
2.	*% Sodium	By Calculation	60%	43.2
3.	*Sodium Absorption Ratio (SAR)	By Calculation	26	1.7
4.	*Selenium as Se	IS 3025(Part 56)2003	0.05	BDL(MDL:0.1)
5.	*Vanadium as V	AAS Method	0.2	BDL(MDL:0.1)

Note: "The parameters marked \* are not accredited by NABL", BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/06/MSTPL-001	Date Of Report	30/06/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet water sample – MSTPL Area	Sample Qty.	2 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Grey Colour
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/MSTPL-001			

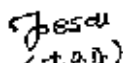
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	pH @ 25 °C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed.,2017,4500-H*B)	7.06
2.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	112
CHEMICAL QUALITY (In mg/L)			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	28
2.	*Residual Chlorine	IS 3025(Part 26)1986, (APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.41

Note: "The parameter marked \* is not accredited by NABL",

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/06/MSTPL-002	Date Of Report	30/06/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet water sample-MSTPL Area	Sample Qty.	2 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/MSTPL-002			

### TEST RESULTS

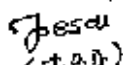
DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	IS 3025(Part 11)1983, (APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	--	7.16
2.	Total Suspended Solids (mg/L)	IS 3025(Part 17)1984, Amd.1 (APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<30	21
CHEMICAL QUALITY (In mg/L)				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<20	18
2.	*Residual Chlorine	IS 3025(Part 26)1986, (APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	0.78

Note: "The parameter marked \* is not accredited by NABL",

BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

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### TEST REPORT

<b>ULR – TC775320000005761F</b>			
Report No.	<b>URC/20/06/0555</b>	Date Of Report	<b>30/06/2020</b>
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	<b>STP Inlet water sample –MSPVL Area</b>	Sample Qty.	<b>2 Lit.</b>
Sampling Date	<b>20/06/2020</b>	Sample Received Date	<b>22/06/2020</b>
Sampled By	<b>Party.</b>	Appearance Of Sample	<b>Grey Colour</b>
Test Started Date	<b>22/06/2020</b>	Test Completion Date	<b>27/06/2020</b>
UERL Lab Sample ID.No. <b>20/06/0555</b>			

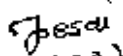
### TEST RESULTS

<b>DISCIPLINE : Chemical Testing</b>		<b>NAME OF GROUP: Pollution &amp; Environment</b>	
<b>Sr. No.</b>	<b>Parameters</b>	<b>Test Method</b>	<b>Results</b>
<b>PHYSICAL QUALITY</b>			
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	6.42
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	96
<b>CHEMICAL QUALITY (In mg/L)</b>			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	48


Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

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Consultant Organization

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Auditor (Schedule-II)

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ISO 45001:2018  
Certified Company

### TEST REPORT

Report No.	URC/20/06/0555	Date Of Report	30/06/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet water sample –MSPVL Area	Sample Qty.	2 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Grey Colour
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/0555			

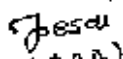
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
CHEMICAL QUALITY (In mg/L)			
1.	*Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	BDL(MDL:0.2)

Note: "The parameter marked \* is not accredited by NABL", **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

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Certified Company

ISO 45001:2018  
Certified Company

### TEST REPORT

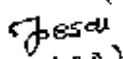
<b>ULR – TC775320000005762F</b>			
Report No.	<b>URC/20/06/0556</b>	Date Of Report	<b>30/06/2020</b>
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	<b>STP Outlet water sample-MSPVL Area</b>	Sample Qty.	<b>2 Lit.</b>
Sampling Date	<b>20/06/2020</b>	Sample Received Date	<b>22/06/2020</b>
Sampled By	<b>Party.</b>	Appearance Of Sample	<b>Colourless</b>
Test Started Date	<b>22/06/2020</b>	Test Completion Date	<b>27/06/2020</b>
UERL Lab Sample ID.No. <b>20/06/0556</b>			

### TEST RESULTS

<b>DISCIPLINE : Chemical Testing</b>		<b>NAME OF GROUP: Pollution &amp; Environment</b>		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	--	7.26
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	<b>&lt;30</b>	18
<b>CHEMICAL QUALITY (In mg/L)</b>				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<b>&lt;20</b>	16

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(J.P.D.)  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/06/0556	Date Of Report	30/06/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet water sample-MSPVL Area	Sample Qty.	2 Lit.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/0556			

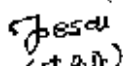
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
1.	*Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	0.75

Note: "The parameter marked \* is not accredited by NABL",

  
\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

<b>ULR – TC775320000005763F</b>			
Report No.	<b>URC/20/06/0557</b>	Date Of Report	<b>30/06/2020</b>
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	<b>Drinking Water Sample</b>	Sample Qty.	<b>5 Lit. + 500 ml.</b>
Sampling Date	<b>20/06/2020</b>	Sample Received Date	<b>22/06/2020</b>
Sampled By	<b>Party.</b>	Appearance Of Sample	<b>Colourless</b>
Test Started Date	<b>22/06/2020</b>	Test Completion Date	<b>27/06/2020</b>
UERL Lab Sample ID.No. <b>20/06/0557</b>			

### TEST RESULTS

DISCIPLINE : Chemical Testing			NAME OF GROUP: Water	
Sr. No.	Parameters	Test Method	As Per IS 10500:2018	Results
			Desirable limits	
PHYSICAL QUALITY				
1.	Colour (Pt. Co. Scale)	IS 3025(Part 4)1983	5 Max	<5
2.	Odour	IS 3025(Part 5)1983	Agreeable	Agreeable
3.	pH @ 25 ° C	IS 3025(Part 11)1983	6.5 – 8.5	6.81
4.	Turbidity(NTU)	IS 3025(Part 10)1984	1 Max	BDL(MDL:0.1)
5.	Total Dissolved Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540- C),	500 Max	86
CHEMICAL QUALITY (In mg/L)				
1.	Calcium as Ca	(APHA 23 <sup>rd</sup> Ed.,2017,3500 Ca .B)	75 Max	6.9
2.	Chloride as Cl <sup>-</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl)	250 Max	9.7
3.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017, 3111-B)	0.05 Max	BDL(MDL:0.05)
4.	Fluoride as F	(APHA 23 <sup>rd</sup> Ed.,2017, 4500 F,D)	1.0 Max	BDL(MDL:0.20)
5.	Free Residual Chlorine	APHA 23 <sup>rd</sup> Ed.,2017, 4500-Cl-B	0.2 Min.	0.22
6.	Iron (as Fe)	(APHA 23 <sup>rd</sup> Ed.,2017, 3111-B)	0.3 Max	BDL(MDL:0.1)
7.	Magnesium as Mg	(APHA 23 <sup>rd</sup> Ed.,2017,3500 Mg. B)	30 Max	3.7
8.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017, 3500 Mn B	0.1 Max	BDL(MDL:0.1)
9.	Nitrate as NO <sub>3</sub>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NO3-B)	45 Max	0.2
10.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	0.001 Max	BDL(MDL:0.001)
11.	Sulphate as SO <sub>4</sub> <sup>-2</sup>	IS 3025(Part 24)1986	200 Max	2.2
12.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	0.05 Max	BDL(MDL:0.05)
13.	Total Alkalinity as CaCO <sub>3</sub>	[IS 3025(Part 23)1986, Amd.2]	200 Max	37.3
14.	Total Hardness as CaCO <sub>3</sub>	[IS 3025(Part 21)2009,Amd.1]	200 Max	32.3
15.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017, 3111-B)	5 Max	BDL(MDL:0.05)
16.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.003 Max	BDL(MDL:0.003)



### TEST REPORT

<b>ULR – TC775320000005763F</b>			
Report No.	<b>URC/20/06/0557</b>	Date Of Report	<b>30/06/2020</b>
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	<b>Drinking Water Sample</b>	Sample Qty.	<b>5 Lit. + 500 ml.</b>
Sampling Date	<b>20/06/2020</b>	Sample Received Date	<b>22/06/2020</b>
Sampled By	<b>Party.</b>	Appearance Of Sample	<b>Colourless</b>
Test Started Date	<b>22/06/2020</b>	Test Completion Date	<b>27/06/2020</b>
UERL Lab Sample ID.No. <b>20/06/0557</b>			

### TEST RESULTS

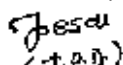
DISCIPLINE : Chemical Testing			NAME OF GROUP: Water	
Sr. No.	Parameters	Test Method	As Per IS 10500:2018	Results
			Desirable limit	
CHEMICAL QUALITY (In mg/L)				
17.	Cyanide as CN	IS 3025(Part 27)1986	0.05 Max	BDL(MDL:0.05)
18.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.01 Max	BDL(MDL:0.01)
19.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017, 3112-B)	0.001 Max	BDL(MDL:0.001)
20.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.02 Max	BDL(MDL:0.02)
21.	Total Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	0.01 Max	BDL(MDL:0.01)
22.	Total Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.05 Max	BDL(MDL:0.05)

**Remarks:** Parameters analyzed are found to be in Desirable limit for potable water.


**Note:** BDL= Below Detection Limit, MDL = Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/06/0557	Date Of Report	30/06/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	Drinking Water Sample	Sample Qty.	5 Lit. + 500 ml.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/0557			

### TEST RESULTS

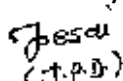
DISCIPLINE : Chemical Testing			NAME OF GROUP: Water	
Sr. No.	Parameters	Test Method	As Per IS 10500:2018	Results
			Desirable limits	
PHYSICAL QUALITY				
1.	*Taste	IS 3025(Part 7)1984	Agreeable	Agreeable
CHEMICAL QUALITY (In mg/L)				
1.	*Aluminum as Al	IS 3025(Part 55)2003	0.03 Max	N.D.
2.	*Ammonia	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> -B&C),	0.5 Max	N.D.
3.	*Anionic Detergent as(MBAS)	IS 13428 Annex-K RA 2009	0.2 Max	N.D.
4.	*Barium as Ba	AAS Method	0.7 Max	N.D.
5.	*Boron as B	IS 13428 Annexure - H	0.5 Max	N.D.
6.	*Chloramines as Cl <sub>2</sub>	IS 3025(Part 26) RA 2009	4.0 Max	N.D.
7.	*Mineral Oil	IS 3025(Part 39)1991	0.5 Max	N.D.
8.	*Selenium as Se	IS 3025(Part 56)2003	0.01 Max	N.D.
9.	*Silver as Ag	AAS Method	0.1 Max	N.D.
10.	*Molybdenum as Mo	AAS Method	0.07 Max	N.D.

**Remarks:** Parameters analyzed are found to be in Desirable limit for potable water.


**Note:** "The parameters marked with an\*are not accredited by NABL", **N.D.** = Not Detectable,

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

# 3.0 NOISE LEVEL MONITORING REPORT



**Period: June - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### NOISE LEVEL MONITORING REPORT

Test Report No.:	UERL/20/06/MSPVL/N-001	Date Of Report:	30/06/2020
Name & Add. Of Industries	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		

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

Instrument Id No.	Instrument Name	Model Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/Q630838	Sound Level Meter	SL 4023 SD	31/01/2020	30/01/2021
Sampling Method.	CPCB Guideline			

Date of Monitoring : 19/06/2020

### Result

Sr. No.	Location within company premises	Noise Level dB(A)		Permissible Limit CPCB	
		Day Time	Night Time	Day Time	Night Time
1.	North: Near Canteen area	52.3	46.8	<75 dB(A)	<70 dB(A)
2.	South: Near 66 KVA Sub Station	55.8	42.1	<75 dB(A)	<70 dB(A)
3.	East: Near COE Building	56.3	45.6	<75 dB(A)	<70 dB(A)
4.	West: Near ETP Guard basin	51.2	44.8	<75 dB(A)	<70 dB(A)
5.	Near Pump House	53.4	46.2	<75 dB(A)	<70 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Checked By



Authorized By





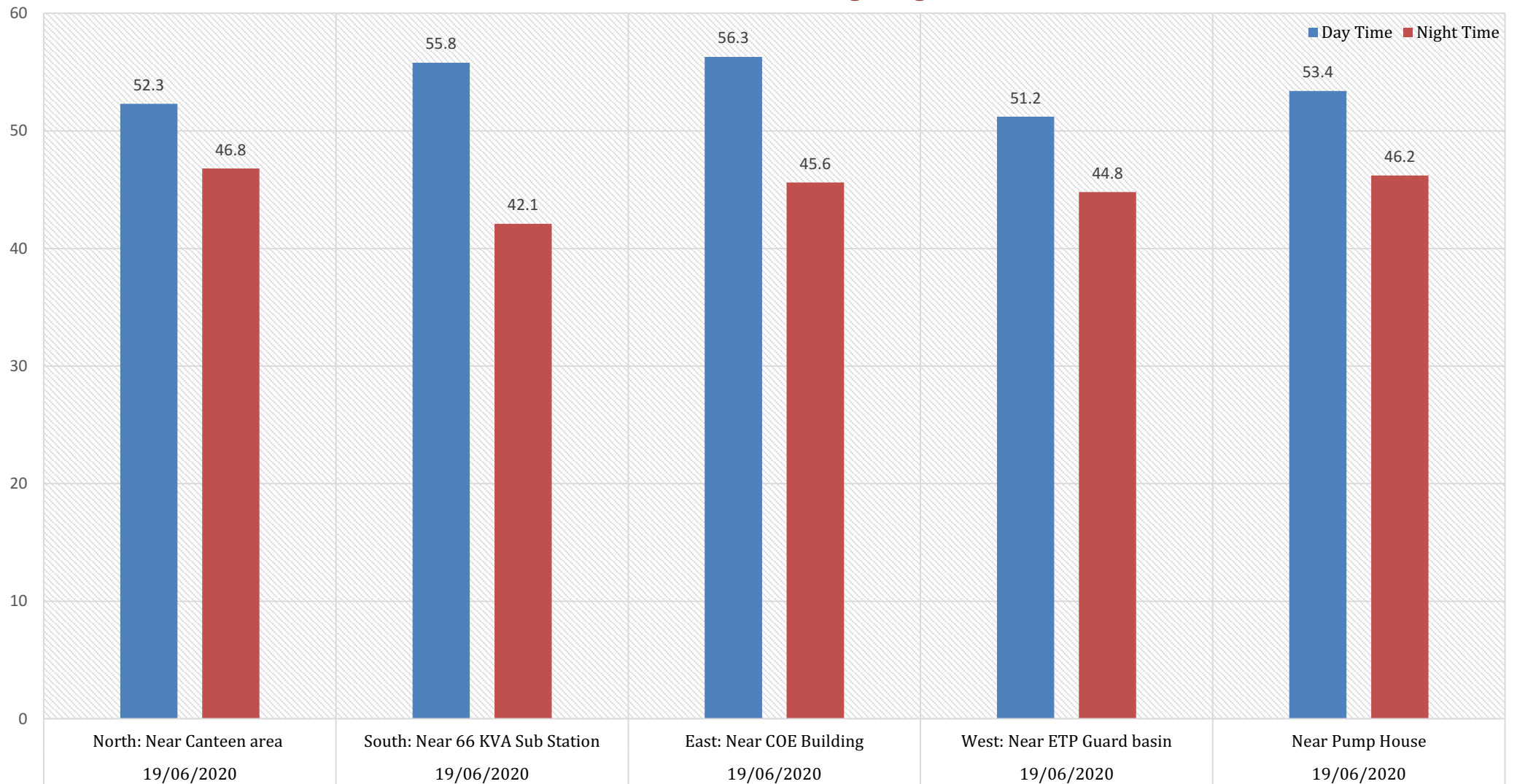
## Graphical Presentation of Noise Level Monitoring Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### NM: "Noise Level Monitoring Programme"



# 4.0 STACK MONITORING REPORT



**Period: June - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House  
Near G.I.D.C. Office, Char Rasta  
Vapi-396 195, Gujarat, India  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCHNABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/06/MSPVL/S-001	Report Issue Date	30/06/2020
Service Request form No.	UERL/AIR/SRF/06/S-001	Service Request Date	20/06/2020
Sample ID No.	UERL/AIR/ID/S-20/06/001	Field Data Sheet No.	UERL/AIR/FDS/S-20/06/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	20/06/2020	Date of Testing	22/06/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.03</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	28/06/2019	Next Calibration Due On	27/06/2020

➤ **General Stack Monitoring Observation**

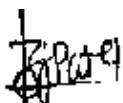
Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	33
5.	Exit Gas Velocity	m/s	8.2
6.	Exit Gas Flow	m <sup>3</sup> /h	7011

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	7.1	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	EPA Method.

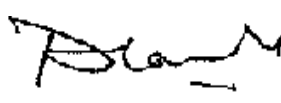
**Note:**1) BDL: Below Detection Limit, 2) N.D: Not Detected

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/06/MSPVL/S-002	Report Issue Date	30/06/2020
Service Request form No.	UERL/AIR/SRF/06/S-002	Service Request Date	20/06/2020
Sample ID No.	UERL/AIR/ID/S-20/06/002	Field Data Sheet No.	UERL/AIR/FDS/S-20/06/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	20/06/2020	Date of Testing	22/06/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.04</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	28/06/2019	Next Calibration Due On	27/06/2020

➤ **General Stack Monitoring Observation**

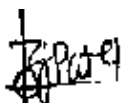
Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	33
5.	Exit Gas Velocity	m/s	9.1
6.	Exit Gas Flow	m <sup>3</sup> /h	7780.5

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	8.9	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	EPA Method.

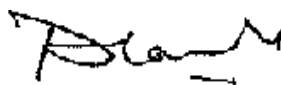
**Note:** 1) BDL: Below Detection Limit, 2) N.D: Not Detected

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/06/MSPVL/S-003	Report Issue Date	30/06/2020
Service Request form No.	UERL/AIR/SRF/06/S-003	Service Request Date	20/06/2020
Sample ID No.	UERL/AIR/ID/S-20/06/003	Field Data Sheet No.	UERL/AIR/FDS/S-20/06/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	20/06/2020	Date of Testing	22/06/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.05</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	28/06/2019	Next Calibration Due On	27/06/2020

➤ **General Stack Monitoring Observation**

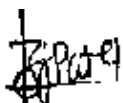
Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	33
5.	Exit Gas Velocity	m/s	8.3
6.	Exit Gas Flow	m <sup>3</sup> /h	7096.5

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	6.2	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	EPA Method.

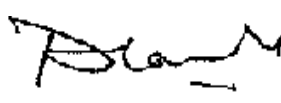
**Note:** 1) BDL: Below Detection Limit, 2) N.D: Not Detected

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/06/MSPVL/S-004	Report Issue Date	30/06/2020
Service Request form No.	UURL/AIR/SRF/06/S-004	Service Request Date	20/06/2020
Sample ID No.	UURL/AIR/ID/S-20/06/004	Field Data Sheet No.	UURL/AIR/FDS/S-20/06/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	20/06/2020	Date of Testing	22/06/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.06</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	28/06/2019	Next Calibration Due On	27/06/2020

➤ **General Stack Monitoring Observation**

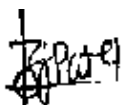
Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	34
5.	Exit Gas Velocity	m/s	8.6
6.	Exit Gas Flow	m <sup>3</sup> /h	7353

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	5.4	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	EPA Method.

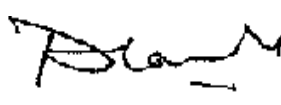
**Note:** 1) BDL: Below Detection Limit, 2) N.D: Not Detected

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

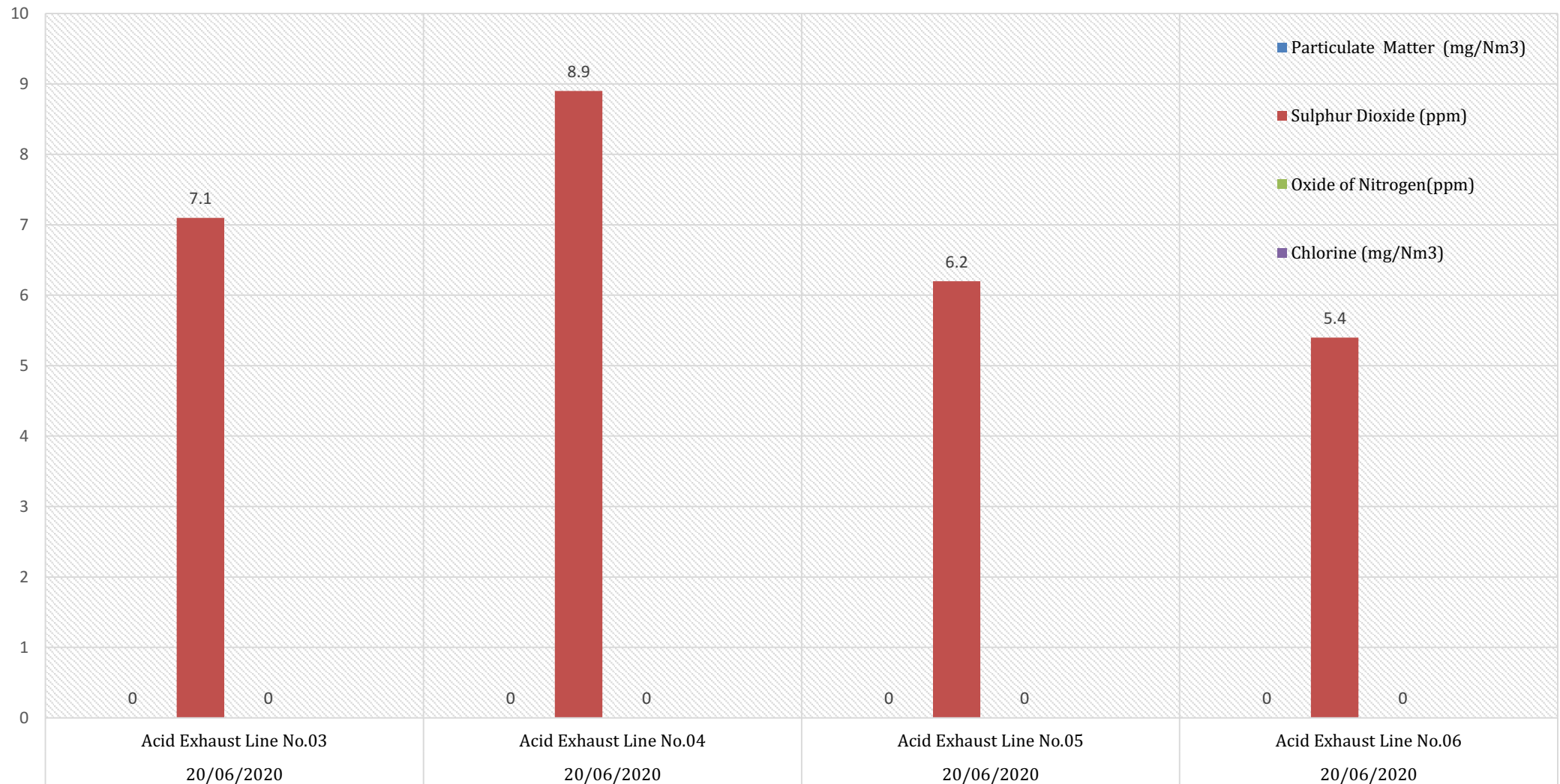
## Graphical Presentation of Stack Monitoring Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### Stack Monitoring Programme



# 5.0 SOLID AND HAZARDOUS WASTE ANALYSIS REPORT



Period: June – 2020

FOR



**M/s.MUNDRA SOLAR PV LIMITED**

**At**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**



**Monitoring Organization**

White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company



### TEST REPORT

<b>ULR – TC775320000005764F</b>			
Report No.	URC/20/06/0558	Date Of Report	30/06/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Sludge Sample	Sample Qty.	1 Kg.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Yellowish Colour
Test Started Date	22/06/2020	Test Completion Date	29/06/2020
UERL Lab Sample ID.No. 20/06/0558			

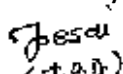
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Sludge		
Sr. No.	Parameters	Unit Of Measurement	Regulatory limit as per Schedule 2 of HWM Rules 2008 (mg/kg)	Results
1.	Cadmium	mg/l	1.0	BDL(MDL 1.0)
2.	Chromium or Chromium (III) Compounds	mg/l	5.0	BDL(MDL 1.0)
3.	Lead	mg/l	5.0	BDL(MDL 1.0)
4.	Manganese	mg/l	10.0	0.152
5.	Mercury	mg/l	0.2	BDL(MDL 0.05)
6.	Ammonia	mg/l	50	BDL(MDL 1.0)
7.	Chromium (VI)	mg/l	5.0	BDL(MDL 1.0)
8.	Copper	mg/l	25.0	BDL(MDL 1.0)
9.	Nickel	mg/l	20.0	BDL(MDL 1.0)
10.	Zinc	mg/l	250	BDL(MDL 1.0)
11.	Fluoride	mg/l	180	3.24


Note: **BDL**=Below Detection Limit, **MDL** = Minimum Detection Limit,

### End of Report

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/06/0558	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Sludge Sample	Sample Qty.	1 Kg.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Yellowish Colour
Test Started Date	22/06/2020	Test Completion Date	29/06/2020
UERL Lab Sample ID.No. 20/06/0558			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Sludge		
Sr. No.	Parameters	Unit Of Measurement	Regulatory limit as per Schedule 2 of HWM Rules 2008 (mg/kg)	Results
1.	Arsenic	mg/l	5.0	BDL(MDL 0.05)
2.	Barium	mg/l	100.0	N.D.
3.	Selenium	mg/l	1.0	N.D.
4.	Silver	mg/l	5.0	N.D.
5.	Cyanide	mg/kg	20	N.D.
6.	Nitrate ( as nitrate-nitrogen)	mg/kg	1000.0	2.4
7.	Sulphide(as H <sub>2</sub> S)	mg/kg	5.0	4.1
8.	1,1-Dichloroethylene	mg/kg	0.7	N.D.
9.	1,2-Dichloroethane	mg/kg	0.5	N.D.
10.	1,4-Dichlorobenzene	mg/kg	7.5	N.D.
11.	2,4,5-Trichlophenol	mg/kg	400.0	N.D.
12.	2,4,6- Trichlophenol	mg/kg	2.0	N.D.
13.	2,4-Dinitrotoluene	mg/kg	0.13	N.D.
14.	Benzene	mg/kg	0.5	N.D.
15.	Benzo (a) Pyrene	mg/kg	0.001	N.D.
16.	Bromodichloromethane	mg/kg	6.0	N.D.
17.	Bromoform	mg/kg	10.0	N.D.
18.	Carbon tetrachloride	mg/kg	0.5	N.D.
19.	Chlorobenzenw	mg/kg	100.0	N.D.
20.	Chloroform	mg/kg	6.0	N.D.
21.	Cresol(ortho+meta+para)	mg/kg	200.0	N.D.
22.	Dibromochloromethane	mg/kg	10.0	N.D.

### TEST REPORT

Report No.	URC/20/06/0558	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Sludge Sample	Sample Qty.	1 Kg.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Yellowish Colour
Test Started Date	22/06/2020	Test Completion Date	29/06/2020
UERL Lab Sample ID.No. 20/06/0558			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Sludge		
Sr. No.	Parameters	Unit Of Measurement	Regulatory limit as per Schedule 2 of HWM Rules 2008 (mg/kg)	Results
23.	Hexachlorobenzene	mg/kg	0.13	N.D.
24.	Hexachlorobutadiene	mg/kg	0.5	N.D.
25.	Hexachloroethane	mg/kg	3.0	N.D.
26.	Methy ethyl ketone	mg/kg	200.0	N.D.
27.	Naphthalene	mg/kg	5.0	N.D.
28.	Nitrobenzene	mg/kg	2.0	N.D.
29.	Pentachlorophenol	mg/kg	100.0	N.D.
30.	Pyridine	mg/kg	5.0	N.D.
31.	Tetrachloroethylene	mg/kg	0.7	N.D.
32.	Trichloroethylene	mg/kg	0.5	N.D.
33.	Vinyl Chloride	mg/kg	0.2	N.D.
34.	2,4,5-TP (Silvex)	mg/kg	1.0	N.D.
35.	2,4 – Dichlorophenoxyacetic acid	mg/kg	10.0	N.D.
36.	Alachlor	mg/kg	2.0	N.D.
37.	Alpha HCH	mg/kg	0.001	N.D.
38.	Atrazine	mg/kg	0.2	N.D.
39.	Beta HCH	mg/kg	0.004	N.D.
40.	Butachlor	mg/kg	12.5	N.D.
41.	Chlordane	mg/kg	0.03	N.D.
42.	chlorpyriphos	mg/kg	9.0	N.D.
43.	Delta HCH	mg/kg	0.004	N.D.
44.	Endosulfan(alpha+beta+sulphate)	mg/kg	0.04	N.D.

### TEST REPORT

Report No.	URC/20/06/0558	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Sludge Sample	Sample Qty.	1 Kg.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Yellowish Colour
Test Started Date	22/06/2020	Test Completion Date	29/06/2020
UERL Lab Sample ID.No. 20/06/0558			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Sludge		
Sr. No.	Parameters	Unit Of Measurement	Regulatory limit as per Schedule 2 of HWM Rules 2008 (mg/kg)	Results
45.	Endrin	mg/kg	0.02	N.D.
46.	Ethion	mg/kg	0.3	N.D.
47.	Heptachlor(& its Epoxide)	mg/kg	0.008	N.D.
48.	Isoproturon	mg/kg	0.9	N.D.
49.	Lindane	mg/kg	0.4	N.D.
50.	Malathion	mg/kg	19	N.D.
51.	Methoxychlor	mg/kg	10	N.D.
52.	Methyl parathion	mg/kg	0.7	N.D.
53.	Monocrotophos	mg/kg	0.1	N.D.
54.	Phorate	mg/kg	0.2	N.D.
55.	Toxaphene	mg/kg	0.5	N.D.
56.	Antimony	mg/kg	15	N.D.
57.	Beryllium	mg/kg	0.75	N.D.
58.	Cobalt	mg/l	80.0	N.D.
59.	Molybdenum	mg/kg	350	N.D.
60.	Thallium	mg/kg	7.0	N.D.
61.	Vanadium	mg/kg	24.0	N.D.
62.	Aldrin	mg/kg	0.14	N.D.
63.	DDT, DDE, DDD	mg/kg	0.1	N.D.
64.	Dieldrin	mg/kg	0.8	N.D.
65.	Kepone	mg/kg	2.1	N.D.
66.	Mirex	mg/kg	2.1	N.D.
67.	Polychlorinated biphenyls	mg/kg	5.0	N.D.



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GPCB Recognized Environmental  
Auditor (Schedule-II)

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Certified Company

ISO 45001:2018  
Certified Company

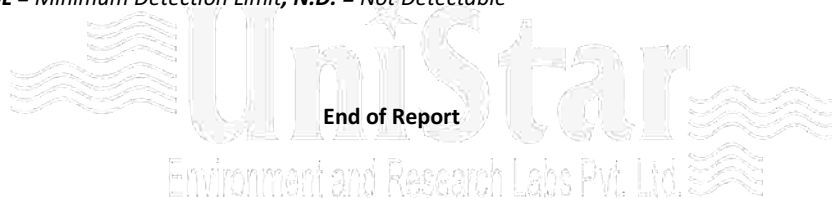
### TEST REPORT

Report No.	URC/20/06/0558	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Sludge Sample	Sample Qty.	1 Kg.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Yellowish Colour
Test Started Date	22/06/2020	Test Completion Date	29/06/2020
UERL Lab Sample ID.No. 20/06/0558			

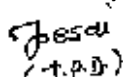
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Sludge		
Sr. No.	Parameters	Unit Of Measurement	Regulatory limit as per Schedule 2 of HWM Rules 2008 (mg/kg)	Results
68.	Dioxin (2,3,7,8 – TCDD)	mg/kg	0.001	N.D.


**BDL**=Below Detection Limit, **MDL** = Minimum Detection Limit, **N.D.** = Not Detectable

  
End of Report  
Environment and Research Labs Pvt. Ltd.

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

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### TEST REPORT

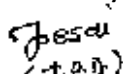
Report No.	URC/20/06/L-0071	Date Of Report	30/06/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	Hazardous Waste Sample (Used Oil)	Sample Qty.	800 ml.
Sampling Date	20/06/2020	Sample Received Date	22/06/2020
Sampled By	Party.	Appearance Of Sample	Black Colour
Test Started Date	22/06/2020	Test Completion Date	27/06/2020
UERL Lab Sample ID.No. 20/06/L-0071			

### TEST RESULTS


Sr.No.	Parameters	Test Method	Unit Of Measurement	Results	Limits as per Schedule V (Part A)
1.	Polychlorinated Biphenyls (PCB)	USEPA/SW/846/8080	ppm	BDL	<2.0
2.	Lead (as Pb)	USEPA/SW/846/6010 B	ppm	0.69	100
3.	Arsenic ( as As)	USEPA/SW/846/6010 B	ppm	BDL	5.0
4.	Cadmium (as Cd) + Chromium (as Cr) + Nickel (as Ni)	USEPA/SW/846/6010 B USEPA/SW/846/7000 A (By Calculation)	ppm	N.D.	500
5.	Poly Aromatic Hydrocarbons(PAH)	USEPA/SW/846/8100	%	0.015	6.0

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

# ENVIRONMENTAL MONITORING REPORT

Period: July - 2020

FOR



**M/s.MUNDRA SOLAR PV LIMITED**



**At**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in July -20
1.	Ambient Air Quality Monitoring	PM <sub>10</sub> , PM <sub>2.5</sub> , Oxide of Sulphur, Oxide of Nitrogen	04	Monthly	04
2.	Stack Monitoring - Process Scrubber	PM, Sulphur Dioxide, Oxide of Nitrogen, Chlorine	12	Monthly	04
3.	Stack Monitoring for D.G. Set	PM, Sulphur Dioxide, Oxide of Nitrogen, CO <sub>2</sub> , NMHC	02	Quarterly	**
4.	Noise Level Monitoring Company Premises.	dB (a)	05	Monthly	05
5.	Equipment Noise Monitoring.	dB (a)	02	Monthly	**
6.	Cooling Tower Blow Down Water Sample Analysis.	pH, COD, BOD, TSS, TDS, E- Coli	01	Half Yearly	**
7.	ETP (Inlet and Outlet) Water Sample Analysis.	pH, Temperatures, Color, Suspended solids, Oil & Grease, Phenolic compounds, Cyanides, Fluorides, Sulphides, Ammonical Nitrogen, Total Chromium, Hexavalent Chromium, Mercury, BOD (3 days at 25 °C), COD, Chlorides, Sulphates, Total Dissolved Solids, Insecticides / Pesticides, Sodium absorption ratio, Percent sodium	02	Monthly	02
8.	STP (Inlet and Outlet) Water Sample Analysis.	pH, BOD (5 days at 20 °C), Suspended Solids, Residual Chlorine,	04	Monthly	04
9.	Drinking water Sample analysis	as per IS 10500:2012	01	Half Yearly	01

**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in July -20
10.	Soil Sample Analysis	pH, Texture, Nitrogen available, Nitrates, Magnesium, Colour, Calcium, Organic carbon, Phosphorous, Potassium, water soluble salt, sulphate, Electrical Conductivity, Cation exchange Capacity, Magnesium. SAR, Permeability, Water holding capacity, Porosity	03	Half Yearly	**
11.	ETP Sludge Sample Analysis	pH, Moisture Content, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Total Inorganic Solids (TIS), Oil & Grease, Cadmium as Cd, Iron as Fe, Nickel as Ni, Chromium Hexavalent as Cr+6, Chromium Total as Cr, Zinc as Zn, Cobalt as Co, Copper as Cu, Manganese as Mn, Lead as Pb, Volatile Matter, Calorific Value and additional parameters <b>As per TLCP parameters chemical sludge from Chemical effluent treatment plant</b>	01	Yearly	**
12.	Used Oil	PCB, Lead, Arsenic, Cd+ Cr + Ni, PAH.	01	Yearly	**

# 1.0 AMBIENT AIR QUALITY MONITORING REPORT



**Period: July - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh&Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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

Test Report No.:	URAL/20/07/MSPVL/A-001	Report Issue Date	30/07/2020
Service Request form No.:	UERL/AIR/SRF/07/A-001	Service Request Date	24/07/2020
Sample ID No.:	UERL/AIR/ID/A-20/07/001	Field Data Sheet No.	UERL/AIR/FDS/A-20/07/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	24/07/2020	Date of Testing	27/07/2020
Location of Sampling / Monitoring:	<b>Near Canteen Area.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

➤ **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	19/01/2020	19/01/2021
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	21/04/2019	19/04/2021

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	23.50
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>	1833
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	23.54

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	68	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	24	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	11.6	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	14.8	<b>80</b>

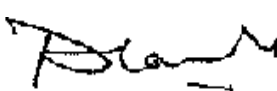
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



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

Test Report No.:	URAL/20/07/MSPVL/A-002	Report Issue Date	30/07/2020
Service Request form No.:	UERL/AIR/SRF/07/A-002	Service Request Date	24/07/2020
Sample ID No.:	UERL/AIR/ID/A-20/07/002	Field Data Sheet No.	UERL/AIR/FDS/A-20/07/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	24/07/2020	Date of Testing	27/07/2020
Location of Sampling / Monitoring:	<b>Near ETP Guard Basin (MSTPL)</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	06/07/2020	07/07/2021

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	24.05
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>	1847.04
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.09

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	66	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	18	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	14.4	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	18.2	80

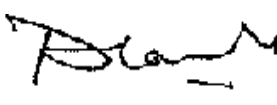
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/07/MSPVL/A-003	Report Issue Date	30/07/2020
Service Request form No.:	UERL/AIR/SRF/07/A-003	Service Request Date	24/07/2020
Sample ID No.:	UERL/AIR/ID/A-20/07/003	Field Data Sheet No.	UERL/AIR/FDS/A-20/07/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	24/07/2020	Date of Testing	27/07/2020
Location of Sampling / Monitoring:	<b>Near Occupational Health Center.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/22	Respirable Dust Sampler	1745-DTB-2013, 1151-DTB-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/22	Fine Particulate Sampler	129-DTB-2013	06/07/2020	07/07/2021

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	24.10
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>	1879.8
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.14

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	64	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	22	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	16.8	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	21.1	<b>80</b>

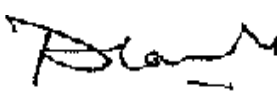
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/07/MSPVL/A-004	Report Issue Date	30/07/2020
Service Request form No.:	UERL/AIR/SRF/07/A-004	Service Request Date	25/07/2020
Sample ID No.:	UERL/AIR/ID/A-20/07/004	Field Data Sheet No.	UERL/AIR/FDS/A-20/07/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	25/07/2020	Date of Testing	27/07/2020
Location of Sampling / Monitoring:	<b>Near Village Vandh</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	06/07/2020	07/07/2021

➤ **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	1.32
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1900.8
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	86	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	32	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	18.4	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	22.3	80

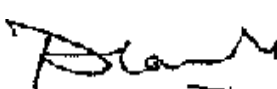
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

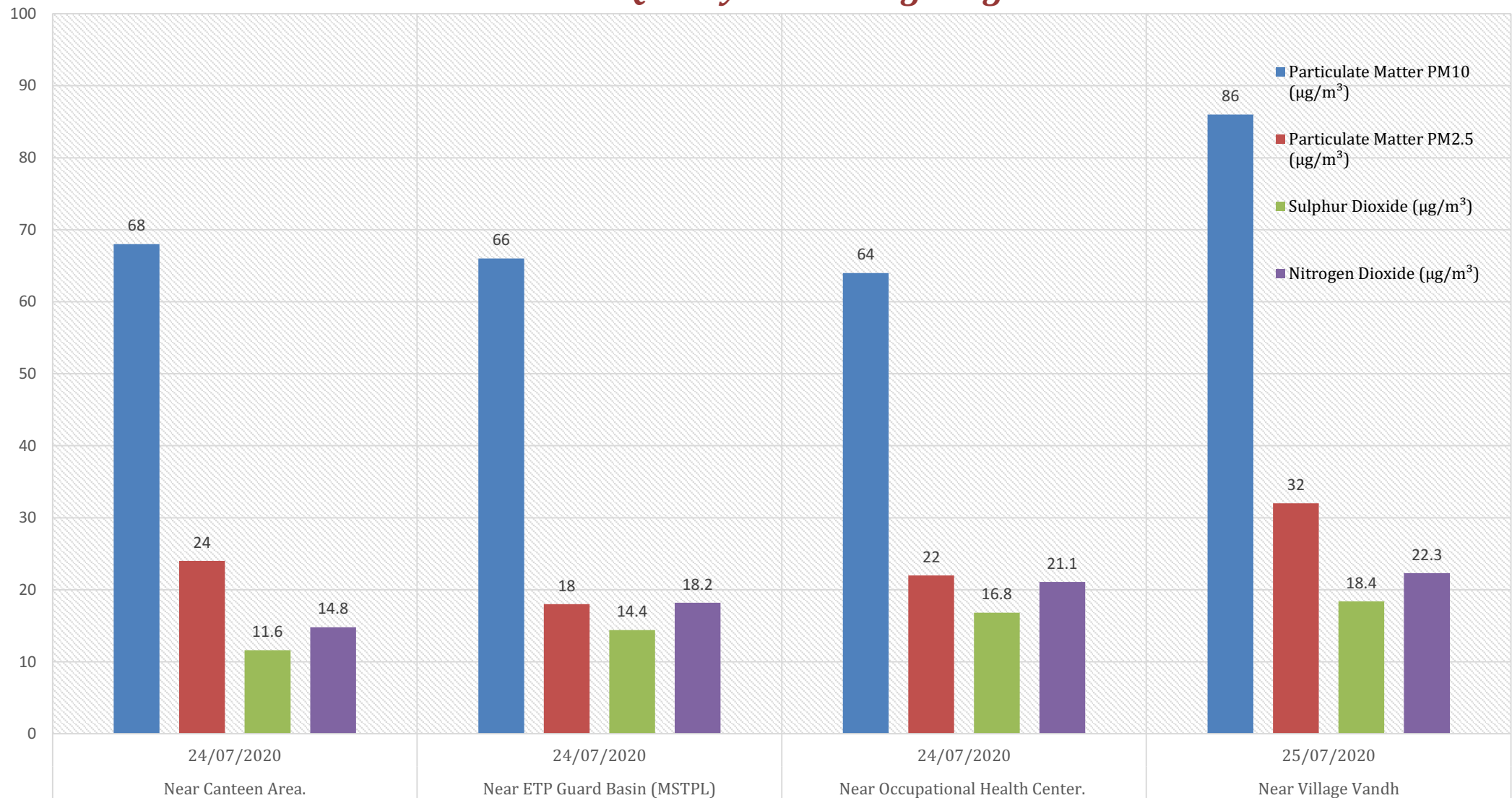
## Graphical Presentation of Ambient Air Quality Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### *Ambient Air Quality Monitoring Programme*





# 2.0 WATER QUALITY MONITORING REPORT



**Period: July - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**



**Monitoring Organization**

White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TESTREPORT

Report No.	URC/20/07/MSPL-0815	Date Of Report	30/07/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Light turbid
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0815			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	10.18
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	110
CHEMICAL QUALITY (In mg/L)			
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	BDL(MDL :2.0)
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	BDL(MDL :1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	BDL(MDL :2.0)
4.	Total Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.065
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	0.32
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH <sub>3</sub> B)	23.3
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	BDL(MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	BDL(MDL :0.05)
9.	Total Kjeldahal Nitrogen(TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> - B&C,&4500 N <sub>ORG</sub> , B,	30.3
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F,D)	0.51
11.	Cyanide as CN	IS 3025(Part27)1986	BDL(MDL :0.05)
12.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	BDL(MDL :0.001)
13.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	BDL(MDL :0.1)
14.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.038

### TEST REPORT

Report No.	URC/20/07/MSPL-0815	Date Of Report	30/07/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet sample	Sample Qty.	5 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Light turbid
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0815			

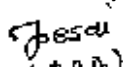
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
CHEMICAL QUALITY (In mg/L)			
15.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	BDL(MDL:0.01)
16.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.086
17.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.051
18.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.126
19.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.034
20.	Iron as Fe	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	1.105


**BDL= Below Detection Limit, MDL= Minimum Detection Limit**

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TESTREPORT

Report No.	URC/20/07/MSPL-0815	Date Of Report	30/07/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Light turbid
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0815			

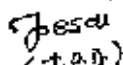
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	150
2.	Temperature ° C	IS 3025(Part 9)1984	30
CHEMICAL QUALITY (In mg/L)			
1.	Residual Free Chlorine	APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	BDL(MDL:0.2)
2.	% Sodium	By Calculation	62.1
3.	Selenium as Se	IS 3025(Part 56)2003	BDL(MDL:0.1)
4.	Vanadium as V	AAS Method	BDL(MDL:0.1)
5.	Sodium Absorption Ratio (SAR)	By Calculation	4.63

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



### TEST REPORT

Report No.	URC/20/07/MSPL-0816	Date Of Report	30/07/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0816			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	6.5 – 8.5	7.48
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	100	80
CHEMICAL QUALITY (In mg/L)				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	250	BDL(MDL :2.0)
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	100	BDL(MDL :1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	20	BDL(MDL:2.0)
4.	Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDL(MDL :0.05)
5.	Phenolic Compounds	IS 3025(Part 43)1992, Amd.2	5.0	BDL(MDL:0.1)
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH <sub>3</sub> B)	50	9.3
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	1.0	BDL(MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	5.0	BDL(MDL :0.05)
9.	Total Kjeldahal Nitrogen(TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> - B&C,&4500 N <sub>ORG</sub> , B,	100	16.3
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F,D)	15	1.12
11.	Cyanide as CN	IS 3025(Part27)1986	0.2	BDL(MDL :0.05)
12.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	0.01	BDL(MDL :0.001)
13.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	2.0	BDL(MDL :0.1)
14.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDLMDL:0.01)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QC-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TEST REPORT

Report No.	URC/20/07/MSPL-0816	Date Of Report	30/07/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0816			

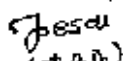
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
15.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	0.2	BDL(MDL:0.01)
16.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	BDL(MDL :0.05)
17.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	5.0	0.024
18.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	10.0	BDL(MDL :0.05)
19.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	0.039
20.	Iron as Fe	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	0.642

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

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Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TEST REPORT

Report No.	URC/20/07/MSPL-0816	Date Of Report	30/07/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0816			

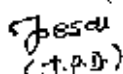
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	100	60
2.	Temperature ° C	IS 3025(Part 9)1984	40	30
CHEMICAL QUALITY (In mg/L)				
1.	Total Residual Chlorine	APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	1.0	BDL(MDL:0.2)
2.	% Sodium	By Calculation	60	56.9
3.	Sodium Absorption Ratio (SAR)	By Calculation	26	3.3
4.	Selenium as Se	IS 3025(Part 56)2003	0.05	BDL(MDL:0.1)
5.	Vanadium as V	AAS Method	0.2	BDL(MDL:0.1)

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

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ISO 45001:2018  
Certified Company

### TEST REPORT

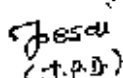
Report No.	URC/20/07/MSPL-0817	Date Of Report	30/07/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet- Water Sample (MSPVL Area)	Sample Qty.	2 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Grey Colour
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0817			

### TEST RESULTS


DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
<b>PHYSICAL QUALITY</b>			
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	7.08
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	80
<b>CHEMICAL QUALITY (In mg/L)</b>			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	42
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	BDL(MDL:0.2)

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



### TEST REPORT

Report No.	URC/20/07/MSPL-0818	Date Of Report	30/07/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet Water Sample (MSPVL Area)	Sample Qty.	2 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Grey Colour
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0818			

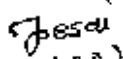
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H+B)	--	7.25
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<100	70
CHEMICAL QUALITY (In mg/L)				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<30	18
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	BDL(MDL:0.2)

BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(J.P.D.)  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/07/MSTPL-0819	Date Of Report	30/07/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno Park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet Water Sample (MSTPL Area)	Sample Qty.	2 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Grey Colour
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0819			

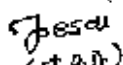
### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	6.77
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	125
CHEMICAL QUALITY (In mg/L)			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	66
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	BDL(MDL:0.2)

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

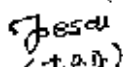
Report No.	URC/20/07/MSTPL-0820	Date Of Report	30/07/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno Park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet Water Sample (MSTPL Area)	Sample Qty.	2 Lit.
Sampling Date	23/07/2020	Sample Received Date	24/07/2020
Sampled By	Party.	Appearance Of Sample	Grey Colour
Test Started Date	24/07/2020	Test Completion Date	29/07/2020
UERL Lab Sample ID.No. 20/07/MSPL-0820			

### TEST RESULTS

DISCIPLINE : Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H+B)	--	6.67
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<30	26
CHEMICAL QUALITY (In mg/L)				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<20	14
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	0.46

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

# 3.0 NOISE LEVEL MONITORING REPORT



**Period: July - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company



### NOISE LEVEL MONITORING REPORT

Test Report No.:	UERL/20/07/MSPVL/N-001	Date Of Report:	30/07/2020
Name & Add. Of Industries	M/s. Mundra Solar PV Limited Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		

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

Instrument Id No.	Instrument Name	Model Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/Q630838	Sound Level Meter	SL 4023 SD	31/01/2020	30/01/2021
Sampling Method.	CPCB Guideline			

Date of Monitoring : 25/07/2020

#### Result

Sr. No.	Location within company premises	Noise Level dB(A)		Permissible Limit CPCB	
		Day Time	Night Time	Day Time	Night Time
1.	North: Near Canteen area	56.8	47.2	<75 dB(A)	<70 dB(A)
2.	South: Near 66 KVA Sub Station	48.6	42.1	<75 dB(A)	<70 dB(A)
3.	East: Near COE Building	55.2	46.6	<75 dB(A)	<70 dB(A)
4.	West: Near ETP Guard basin	52.6	44.8	<75 dB(A)	<70 dB(A)
5.	Near Pump House	64.8	56.3	<75 dB(A)	<70 dB(A)

Note: Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

\*\*\*\*\* End of Report \*\*\*\*\*

Checked By



Authorized By



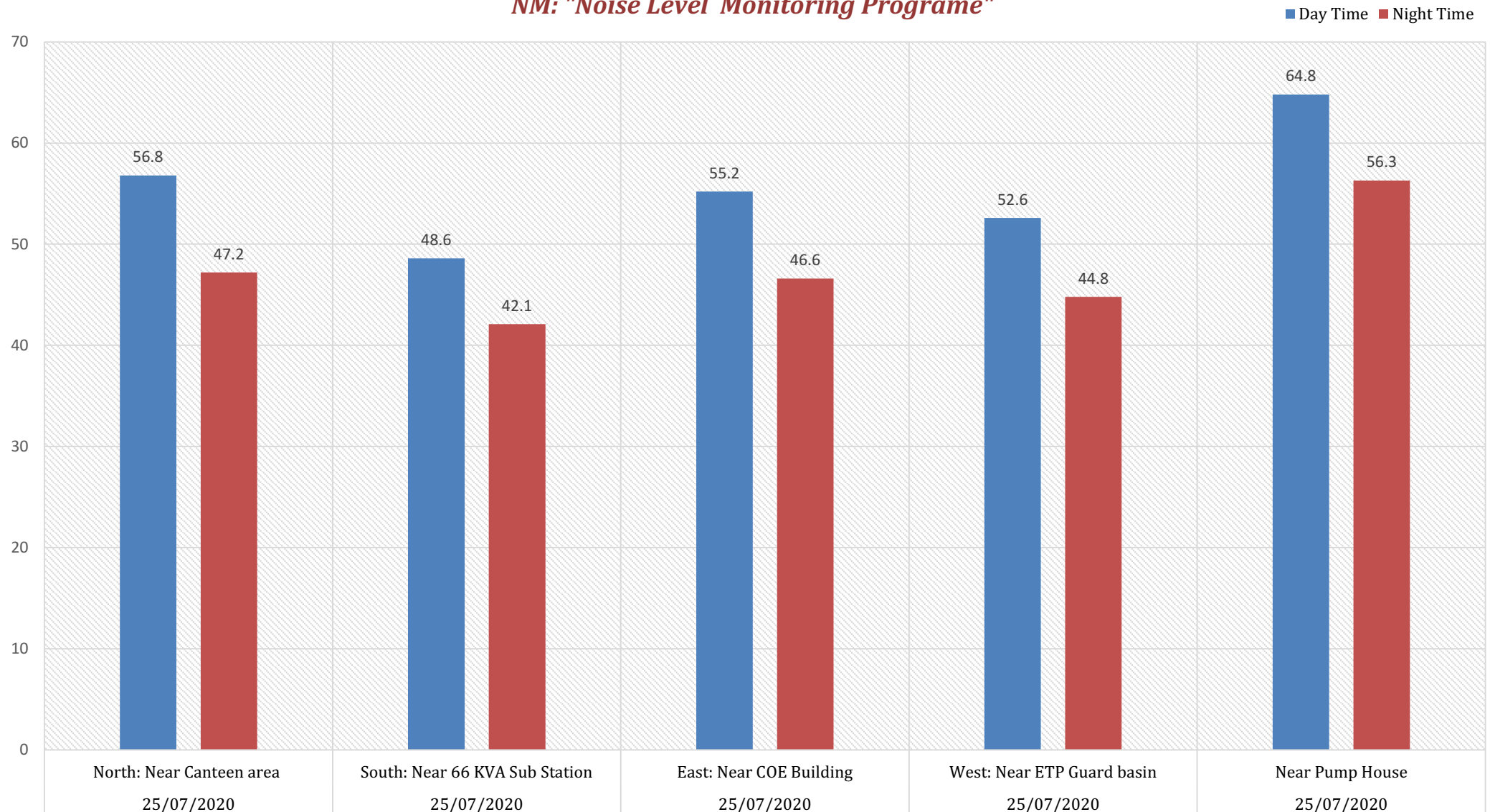
## Graphical Presentation of Noise Level Monitoring Data

**For M/s. Mundra Solar PV Limited.**

**By – UniStar Environment and Research Labs Pvt. Ltd.**



### *NM: "Noise Level Monitoring Programme"*



# 4.0 STACK MONITORING REPORT



**Period: July - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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GPCB Recognized Environmental  
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ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/07/MSPVL/S-001	Report Issue Date	30/07/2020
Service Request form No.	UURL/AIR/SRF/07/S-001	Service Request Date	25/07/2020
Sample ID No.	UURL/AIR/ID/S-20/07/001	Field Data Sheet No.	UURL/AIR/FDS/S-20/07/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	25/07/2020	Date of Testing	27/07/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.05</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	34
5.	Exit Gas Velocity	m/s	7.6
6.	Exit Gas Flow	m <sup>3</sup> /h	6498

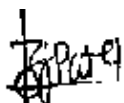
➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	<b>150</b>	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	10.8	<b>100</b>	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	<b>50</b>	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	<b>20</b>	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

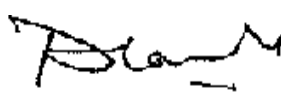
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/07/MSPVL/S-002	Report Issue Date	30/07/2020
Service Request form No.	UURL/AIR/SRF/07/S-002	Service Request Date	25/07/2020
Sample ID No.	UURL/AIR/ID/S-20/07/002	Field Data Sheet No.	UURL/AIR/FDS/S-20/07/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	25/07/2020	Date of Testing	27/07/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.06</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	33
5.	Exit Gas Velocity	m/s	8.4
6.	Exit Gas Flow	m <sup>3</sup> /h	7182

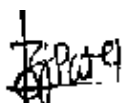
➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	14.6	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

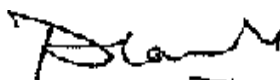
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/07/MSPVL/S-003	Report Issue Date	30/07/2020
Service Request form No.	UURL/AIR/SRF/07/S-003	Service Request Date	25/07/2020
Sample ID No.	UURL/AIR/ID/S-20/07/003	Field Data Sheet No.	UURL/AIR/FDS/S-20/07/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	25/07/2020	Date of Testing	27/07/2020
Stack Sampling Attached to	<b>NOx Exhaust Line No.01</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	33
5.	Exit Gas Velocity	m/s	8.3
6.	Exit Gas Flow	m <sup>3</sup> /h	7096.5

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	<b>150</b>	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	BDL	<b>100</b>	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	<b>50</b>	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	<b>20</b>	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: SOx: 4 mg/Nm<sup>3</sup>, NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

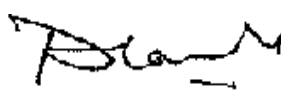
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/07/MSPVL/S-004	Report Issue Date	30/07/2020
Service Request form No.	UURL/AIR/SRF/07/S-004	Service Request Date	25/07/2020
Sample ID No.	UURL/AIR/ID/S-20/07/004	Field Data Sheet No.	UURL/AIR/FDS/S-20/07/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	25/07/2020	Date of Testing	27/07/2020
Stack Sampling Attached to	<b>NOx Exhaust Line No.02</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	34
5.	Exit Gas Velocity	m/s	8.6
6.	Exit Gas Flow	m <sup>3</sup> /h	7353

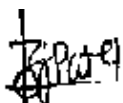
➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	BDL	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: SOx: 4 mg/Nm<sup>3</sup>, NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

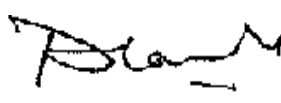
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

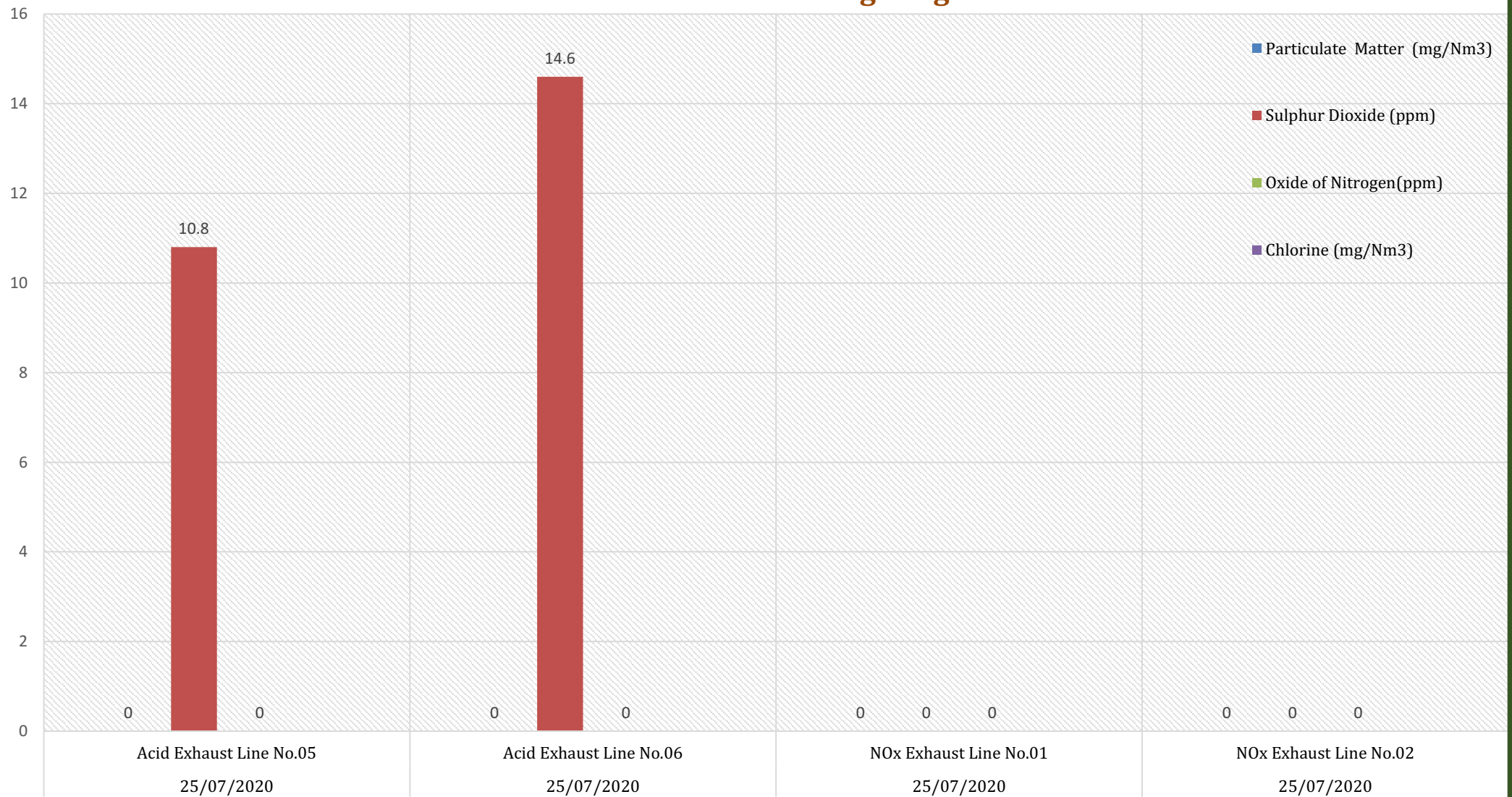
## Graphical Presentation of Stack Monitoring Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### Stack Monitoring Programme





# ENVIRONMENTAL MONITORING REPORT

Period: August - 2020

FOR



**M/s.MUNDRA SOLAR PV LIMITED**



**At**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
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**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**



**By – UniStar Environment and Research Labs Pvt. Ltd.**

Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in August -20
1.	Ambient Air Quality Monitoring	PM <sub>10</sub> , PM <sub>2.5</sub> , Oxide of Sulphur, Oxide of Nitrogen	04	Monthly	04
2.	Stack Monitoring - Process Scrubber	PM, Sulphur Dioxide, Oxide of Nitrogen, Chlorine	12	Monthly	04
3.	Stack Monitoring for D.G. Set	PM, Sulphur Dioxide, Oxide of Nitrogen, CO <sub>2</sub> , NMHC	02	Quarterly	**
4.	Noise Level Monitoring Company Premises.	dB (a)	05	Monthly	05
5.	Equipment Noise Monitoring.	dB (a)	02	Monthly	**
6.	Cooling Tower Blow Down Water Sample Analysis.	pH, COD, BOD, TSS, TDS, E- Coli	01	Half Yearly	**
7.	ETP (Inlet and Outlet) Water Sample Analysis.	pH, Temperatures, Color, Suspended solids, Oil & Grease, Phenolic compounds, Cyanides, Fluorides, Sulphides, Ammonical Nitrogen, Total Chromium, Hexavalent Chromium, Mercury, BOD (3 days at 25 °C), COD, Chlorides, Sulphates, Total Dissolved Solids, Insecticides / Pesticides, Sodium absorption ratio, Percent sodium	02	Monthly	02
8.	STP (Inlet and Outlet) Water Sample Analysis.	pH, BOD (5 days at 20 °C), Suspended Solids, Residual Chlorine,	04	Monthly	04
9.	Drinking water Sample analysis	as per IS 10500:2012	01	Half Yearly	01

**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in August -20
10.	Soil Sample Analysis	pH, Texture, Nitrogen available, Nitrates, Magnesium, Colour, Calcium, Organic carbon, Phosphorous, Potassium, water soluble salt, sulphate, Electrical Conductivity, Cation exchange Capacity, Magnesium. SAR, Permeability, Water holding capacity, Porosity	03	Half Yearly	**
11.	ETP Sludge Sample Analysis	pH, Moisture Contain, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Total Inorganic Solids (TIS), Oil & Grease, Cadmium as Cd, Iron as Fe, Nickel as Ni, Chromium Hexavalent as Cr+6, Chromium Total as Cr, Zinc as Zn, Cobalt as Co, Copper as Cu, Manganese as Mn, Lead as Pb, Volatile Matter, Calorific Value and additional parameters <b>As per TLCP parameters chemical sludge from Chemical effluent treatment plant</b>	01	Yearly	**
12.	Used Oil	PCB, Lead, Arsenic, Cd+ Cr + Ni, PAH.	01	Yearly	**



# 1.0 AMBIENT AIR QUALITY MONITORING REPORT



**Period: August - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh&Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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QCNABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

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

Test Report No.:	URAL/20/08/MSPVL/A-001	Report Issue Date	28/08/2020
Service Request form No.:	UERL/AIR/SRF/08/A-001	Service Request Date	19/08/2020
Sample ID No.:	UERL/AIR/ID/A-20/08/001	Field Data Sheet No.	UERL/AIR/FDS/A-20/08/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	19/08/2020	Date of Testing	21/08/2020
Location of Sampling / Monitoring:	<b>Near Canteen Area.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

➤ **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	19/01/2020	19/01/2021
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	21/04/2019	19/04/2021

➤ **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>	1843.2
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	64	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	22	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	10.4	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	12.1	<b>80</b>

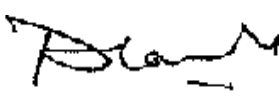
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/08/MSPVL/A-002	Report Issue Date	28/08/2020
Service Request form No.:	UERL/AIR/SRF/08/A-002	Service Request Date	19/08/2020
Sample ID No.:	UERL/AIR/ID/A-20/08/002	Field Data Sheet No.	UERL/AIR/FDS/A-20/08/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	19/08/2020	Date of Testing	21/08/2020
Location of Sampling / Monitoring:	<b>Near ETP Guard Basin (MSTPL)</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	06/07/2020	07/07/2021

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	23.52
2.	Flow Rate of PM <sub>10</sub>	m <sup>3</sup> /min	1.33
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1876.89
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	23.56

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	56	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	14	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	12.3	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	14.2	80

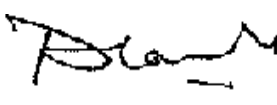
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/08/MSPVL/A-003	Report Issue Date	28/08/2020
Service Request form No.:	UERL/AIR/SRF/08/A-003	Service Request Date	19/08/2020
Sample ID No.:	UERL/AIR/ID/A-20/08/003	Field Data Sheet No.	UERL/AIR/FDS/A-20/08/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	19/08/2020	Date of Testing	21/08/2020
Location of Sampling / Monitoring:	<b>Near Occupational Health Center.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/22	Respirable Dust Sampler	1745-DTB-2013, 1151-DTB-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/22	Fine Particulate Sampler	129-DTB-2013	06/07/2020	07/07/2021

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	24.10
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>	1821.96
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.14

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	52	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	12	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	8.4	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	10.3	<b>80</b>

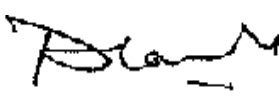
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



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

Test Report No.:	URAL/20/08/MSPVL/A-004	Report Issue Date	28/08/2020
Service Request form No.:	UERL/AIR/SRF/08/A-004	Service Request Date	21/08/2020
Sample ID No.:	UERL/AIR/ID/A-20/08/004	Field Data Sheet No.	UERL/AIR/FDS/A-20/08/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	21/08/2020	Date of Testing	24/08/2020
Location of Sampling / Monitoring:	<b>Near Village Vandh</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	06/07/2020	07/07/2021

➤ **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

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	76	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	24	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	11.1	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	14.3	80

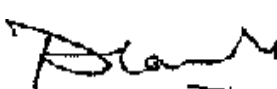
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

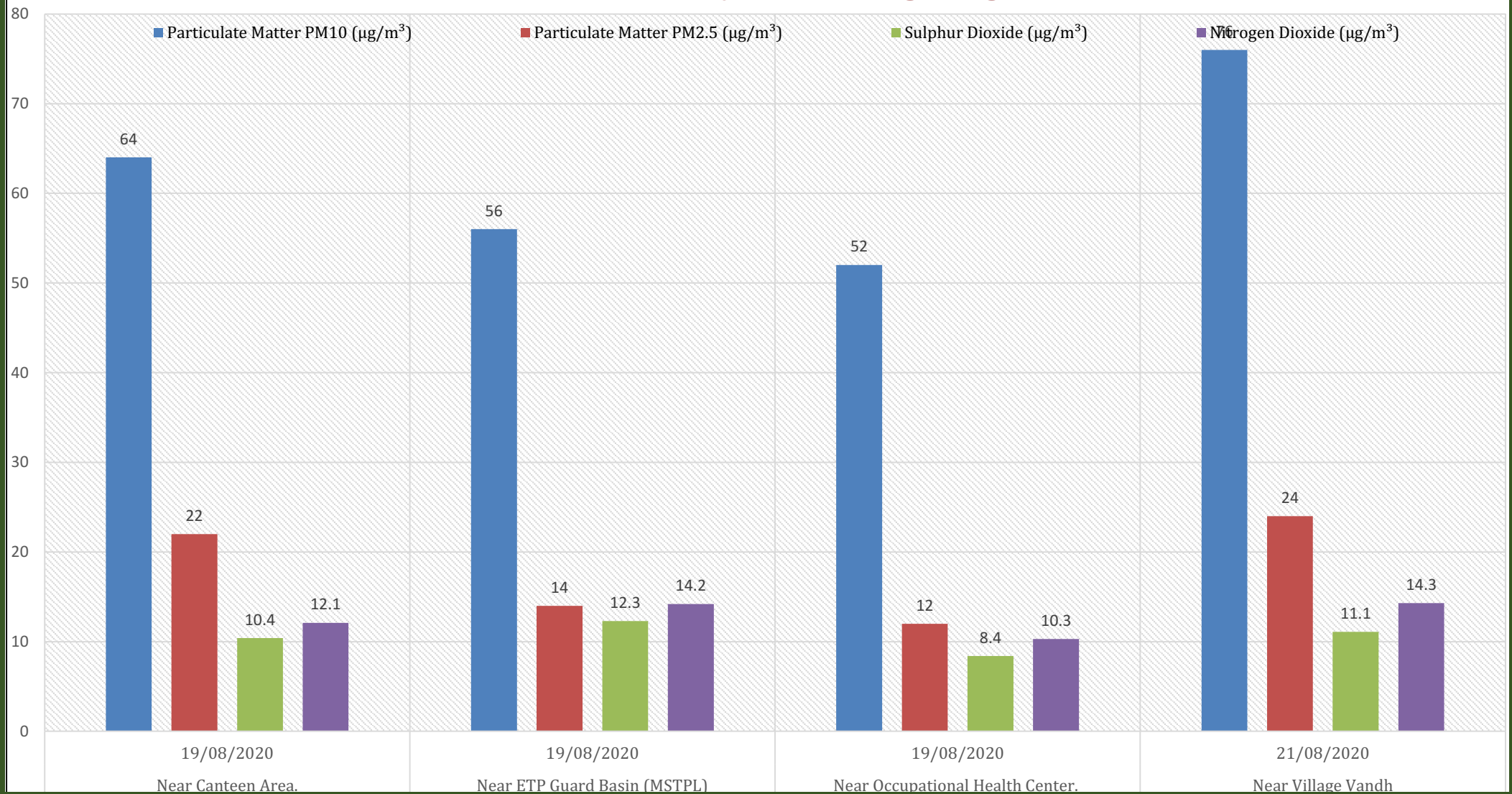
## Graphical Presentation of Ambient Air Quality Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### Ambient Air Quality Monitoring Programme



# 2.0 WATER QUALITY MONITORING REPORT



**Period: August - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**



**Monitoring Organization**

White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TESTREPORT

Report No.	URC/20/08/MSPL-001	Date of Report	25/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Light turbid
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-001			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	9.86
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	95
CHEMICAL QUALITY (In mg/L)			
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	BDL (MDL :2.0)
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	BDL (MDL :1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	BDL (MDL :2.0)
4.	Total Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.052
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	0.19
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH <sub>3</sub> B)	20.4
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	BDL (MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	BDL (MDL :0.05)
9.	Total Kjeldahal Nitrogen (TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> -B&C, &4500 N <sub>ORG</sub> , B,	25.3
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F, D)	55.1
11.	Cyanide as CN	IS 3025(Part27)1986	BDL (MDL :0.05)
12.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	BDL (MDL :0.001)
13.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	BDL (MDL :0.1)
14.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.038



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Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TEST REPORT

Report No.	URC/20/08/MSPL-001	Date of Report	25/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet sample	Sample Qty.	5 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Light turbid
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-001			

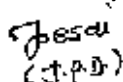
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
CHEMICAL QUALITY (In mg/L)			
15.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	BDL(MDL:0.01)
16.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.071
17.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.035
18.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.145
19.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.024
20.	Iron as Fe	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	1.265

**BDL= Below Detection Limit, MDL= Minimum Detection Limit**

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By



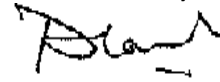
(Chemist)

Checked By



(Sr. Chemist)

Authorized By



(Technical Manager)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TESTREPORT

Report No.	URC/20/08/MSPL-001	Date of Report	25/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Light turbid
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-001			

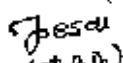
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	200
2.	Temperature ° C	IS 3025(Part 9)1984	27
CHEMICAL QUALITY (In mg/L)			
1.	Residual Free Chlorine	APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	BDL(MDL:0.2)
2.	% Sodium	By Calculation	65.5
3.	Selenium as Se	IS 3025(Part 56)2003	BDL(MDL:0.1)
4.	Vanadium as V	AAS Method	BDL(MDL:0.1)
5.	Sodium Absorption Ratio (SAR)	By Calculation	3.46

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/08/MSPL-002	Date of Report	25/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-002			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	6.5 – 8.5	7.37
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	100	75
CHEMICAL QUALITY (In mg/L)				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	250	BDL (MDL :2.0)
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	100	BDL (MDL :1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	20	BDL (MDL:2.0)
4.	Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDL (MDL :0.05)
5.	Phenolic Compounds	IS 3025(Part 43)1992, Amd.2	5.0	BDL (MDL:0.1)
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH <sub>3</sub> B)	50	12.4
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	1.0	BDL (MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	5.0	BDL (MDL :0.05)
9.	Total Kjeldahal Nitrogen (TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> - B&C, &4500 N <sub>ORG</sub> , B,	100	17.8
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F, D)	15	6.15
11.	Cyanide as CN	IS 3025(Part27)1986	0.2	BDL (MDL :0.05)
12.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	0.01	BDL (MDL :0.001)
13.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	2.0	BDL (MDL :0.1)
14.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDL (MDL:0.01)

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Consultant Organization

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Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TEST REPORT

Report No.	URC/20/08/MSPL-002	Date of Report	25/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-002			

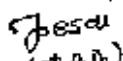
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
15.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	0.2	BDL(MDL:0.01)
16.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	BDL (MDL :0.05)
17.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	5.0	0.031
18.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	10.0	BDL (MDL :0.05)
19.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	0.028
20.	Iron as Fe	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	0.985

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



### TEST REPORT

Report No.	URC/20/08/MSPL-002	Date of Report	25/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-002			

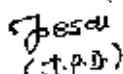
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	100	70
2.	Temperature ° C	IS 3025(Part 9)1984	40	27
CHEMICAL QUALITY (In mg/L)				
1.	Total Residual Chlorine	APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	1.0	BDL(MDL:0.2)
2.	% Sodium	By Calculation	60	50.8
3.	Sodium Absorption Ratio (SAR)	By Calculation	26	2.48
4.	Selenium as Se	IS 3025(Part 56)2003	0.05	BDL(MDL:0.1)
5.	Vanadium as V	AAS Method	0.2	BDL(MDL:0.1)

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

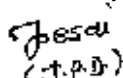
Report No.	URC/20/08/MSPL-003	Date of Report	25/08/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet- Water Sample (MSPVL Area)	Sample Qty.	2 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Grey Colour
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-003			

### TEST RESULTS


DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
<b>PHYSICAL QUALITY</b>			
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	7.15
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540 -D),	68
<b>CHEMICAL QUALITY (In mg/L)</b>			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	36.4
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl-B)	BDL(MDL:0.2)

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/08/MSPL-004	Date of Report	25/08/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet Water Sample (MSPVL Area)	Sample Qty.	2 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Grey Colour
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-004			

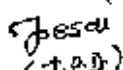
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H+B)	--	7.32
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<100	40
CHEMICAL QUALITY (In mg/L)				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<30	15
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	0.75

BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/08/MSTPL-005	Date of Report	25/08/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno Park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet Water Sample (MSTPL Area)	Sample Qty.	2 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Grey Colour
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-005			

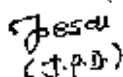
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	6.85
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540 -D),	110
CHEMICAL QUALITY (In mg/L)			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	52.4
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl-B)	BDL(MDL:0.2)

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



### TEST REPORT

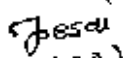
Report No.	URC/20/08/MSTPL-006	Date of Report	25/08/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno Park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet Water Sample (MSTPL Area)	Sample Qty.	2 Lit.
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance of Sample	Grey Colour
Test Started Date	20/08/2020	Test Completion Date	25/08/2020
UERL Lab Sample ID.No. 20/08/MSPL-006			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H+B)	--	7.02
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<30	15
CHEMICAL QUALITY (In mg/L)				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<20	12.6
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	1.02

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

**TEST REPORT**  
**(Microbiology)**

Report No.	URB/20/08/MSPVL-0190	Date Of Report	22/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	Waste Water Sample	Sample Qty.	500ml.
Location	STP Inlet (MSPVL Area)	Temperature at sampling point	25° C
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	20/08/2020	Test Completion Date	22/08/2020
UERL Lab Sample ID. No.: 20/08/MSPVL-0190			

**TEST RESULTS:**

DISCIPLINE : Biological Testing			NAME OF GROUP: Pollution and Environment	
Sr. No.	Parameters	Test Method	Unit Of Measurement	Results
1	Fecal Coliform	IS 1622: 1981	MPN Index/100ml	17

**Opinions and Interpretations: (if required)**

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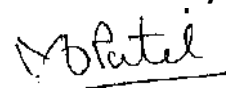
\*\*\*\*\* End of Report \*\*\*\*\*

**Tested By**



Shweta Rana  
Microbiologist

**Authorized By**



Meera D. Patel  
Sr. Microbiologist

**TEST REPORT**  
**(Microbiology)**

Report No.	URB/20/08/MSPVL-0191	Date Of Report	22/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	Waste Water Sample	Sample Qty.	500ml.
Location	STP Outlet (MSPVL Area)	Temperature at sampling point	25° C
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	20/08/2020	Test Completion Date	22/08/2020
UERL Lab Sample ID. No.: 20/08/MSPVL-0191			

**TEST RESULTS:**

DISCIPLINE : Biological Testing			NAME OF GROUP: Pollution and Environment		
Sr. No.	Parameters	Test Method	Unit Of Measurement	Specific Value	Results
1	Fecal Coliform	IS 1622: 1981	MPN Index/100ml	<1000	12

**Opinions and Interpretations: (if required)**

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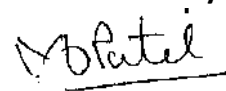
\*\*\*\*\* End of Report \*\*\*\*\*

**Tested By**



Shweta Rana  
Microbiologist

**Authorized By**



Meera D. Patel  
Sr. Microbiologist

**TEST REPORT**  
**(Microbiology)**

Report No.	URB/20/08/MSPVL-0192	Date Of Report	22/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	Waste Water Sample	Sample Qty.	500ml.
Location	STP Inlet (MSTPL Area)	Temperature at sampling point	26° C
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	20/08/2020	Test Completion Date	22/08/2020
UERL Lab Sample ID. No.: 20/08/MSPVL-0192			

**TEST RESULTS:**

DISCIPLINE : Biological Testing			NAME OF GROUP: Pollution and Environment	
Sr. No.	Parameters	Test Method	Unit Of Measurement	Results
1	Fecal Coliform	IS 1622: 1981	MPN Index/100ml	23

**Opinions and Interpretations: (if required)**

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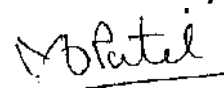
\*\*\*\*\* End of Report \*\*\*\*\*

**Tested By**



Shweta Rana  
Microbiologist

**Authorized By**



Meera D. Patel  
Sr. Microbiologist



**TEST REPORT**  
**(Microbiology)**

Report No.	URB/20/08/MSPVL-0193	Date Of Report	22/08/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	Waste Water Sample	Sample Qty.	500ml.
Location	STP Outlet (MSTPL Area)	Temperature at sampling point	26° C
Sampling Date	19/08/2020	Sample Received Date	20/08/2020
Sampled By	Party.	Appearance Of Sample	Colourless
Test Started Date	20/08/2020	Test Completion Date	22/08/2020
UERL Lab Sample ID. No.: 20/08/MSPVL-0193			

**TEST RESULTS:**

DISCIPLINE : Biological Testing			NAME OF GROUP: Pollution and Environment		
Sr. No.	Parameters	Test Method	Unit Of Measurement	Specific Value	Results
1	Fecal Coliform	IS 1622: 1981	MPN Index/100ml	<1000	08

**Opinions and Interpretations: (if required)**

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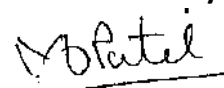
\*\*\*\*\* End of Report \*\*\*\*\*

**Tested By**



Shweta Rana  
Microbiologist

**Authorized By**



Meera D. Patel  
Sr. Microbiologist

# 3.0 NOISE LEVEL MONITORING REPORT



**Period: August - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### NOISE LEVEL MONITORING REPORT

Test Report No.:	UERL/20/08/MSPVL/N-001	Date Of Report:	28/08/2020
Name & Add. Of Industries	M/s. Mundra Solar PV Limited Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		

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

Instrument Id No.	Instrument Name	Model Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/Q630838	Sound Level Meter	SL 4023 SD	31/01/2020	30/01/2021
Sampling Method.	CPCB Guideline			

Date of Monitoring : 19/08/2020

### Result

Sr. No.	Location within company premises	Noise Level dB(A)		Permissible Limit CPCB	
		Day Time	Night Time	Day Time	Night Time
1.	North: Near Canteen area	42.4	41.8	<75 dB(A)	<70 dB(A)
2.	South: Near 66 KVA Sub Station	44.8	42.6	<75 dB(A)	<70 dB(A)
3.	East: Near COE Building	46.3	44.7	<75 dB(A)	<70 dB(A)
4.	West: Near ETP Guard basin	51.2	42.4	<75 dB(A)	<70 dB(A)

**Note:** Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

\*\*\*\*\* End of Report \*\*\*\*\*

### NOISE LEVEL MONITORING REPORT

Test Report No.:	UERL/20/08/MSPVL/N-002	Date Of Report:	28/08/2020
Name & Add. Of Industries	M/s. Mundra Solar PV Limited Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		

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

Instrument Id No.	Instrument Name	Model Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/Q630838	Sound Level Meter	SL 4023 SD	31/01/2020	30/01/2021
Sampling Method.	CPCB Guideline			

Date of Monitoring : 19/08/2020

#### Result

Sr. No.	Location within company premises	Noise Level	Permissible Limit
		Day Time	
1.	Near Pump House	56.3	<85 dB(A)
2.	Near Compressor Area	78.4	<85 dB(A)
3.	Near Module Line-4	82.3	<85 dB(A)
4.	PECVD Area Bay-2	81.2	<85 dB(A)

**Note:** Permissible exposure in cases of continuous noise as per Model Factories Rules 120 (MFR 120) under Section 87.

Sr.No.	Total time of exposure (continuous short term exposures)	Sound pressure level in or a number of dB(A) per day, in hours
(1)	8 hrs.	85
(2)	6 hrs.	87
(3)	4 hrs.	90
(4)	3 hrs.	92
(5)	1 ½ hrs.	97
(6)	1 hrs.	100
(7)	¾ hrs.	102
(8)	½ hrs.	105
(9)	¼ hrs.	110

\*\*\*\*\* End of Report \*\*\*\*\*



# 4.0 STACK MONITORING REPORT



**Period: August - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCHNABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/08/MSPVL/S-001	Report Issue Date	31/08/2020
Service Request form No.	UURL/AIR/SRF/08/S-001	Service Request Date	19/08/2020
Sample ID No.	UURL/AIR/ID/S-20/08/001	Field Data Sheet No.	UURL/AIR/FDS/S-20/08/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	19/08/2020	Date of Testing	21/08/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.01</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	7.2
6.	Exit Gas Flow	m <sup>3</sup> /h	6156


➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	12.6	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

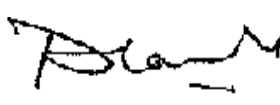
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/08/MSPVL/S-002	Report Issue Date	31/08/2020
Service Request form No.	UURL/AIR/SRF/08/S-002	Service Request Date	19/08/2020
Sample ID No.	UURL/AIR/ID/S-20/08/002	Field Data Sheet No.	UURL/AIR/FDS/S-20/08/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	19/08/2020	Date of Testing	21/08/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.02</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	33
5.	Exit Gas Velocity	m/s	8.2
6.	Exit Gas Flow	m <sup>3</sup> /h	7011

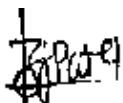
➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	16.1	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

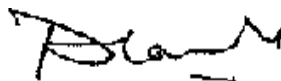
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/08/MSPVL/S-003	Report Issue Date	31/08/2020
Service Request form No.	UERL/AIR/SRF/08/S-003	Service Request Date	19/08/2020
Sample ID No.	UERL/AIR/ID/S-20/08/003	Field Data Sheet No.	UERL/AIR/FDS/S-20/08/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	19/08/2020	Date of Testing	21/08/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.03</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	7.4
6.	Exit Gas Flow	m <sup>3</sup> /h	6327

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	14.3	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: SO<sub>x</sub>: 4 mg/Nm<sup>3</sup>, NO<sub>x</sub>: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

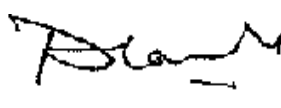
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/08/MSPVL/S-004	Report Issue Date	31/08/2020
Service Request form No.	UURL/AIR/SRF/08/S-004	Service Request Date	19/08/2020
Sample ID No.	UURL/AIR/ID/S-20/08/004	Field Data Sheet No.	UURL/AIR/FDS/S-20/08/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	19/08/2020	Date of Testing	21/08/2020
Stack Sampling Attached to	<b>NOx Exhaust Line No.03</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	7.4
6.	Exit Gas Flow	m <sup>3</sup> /h	6327

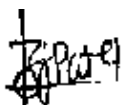
➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	BDL	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: SOx: 4 mg/Nm<sup>3</sup>, NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

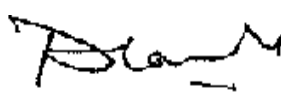
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

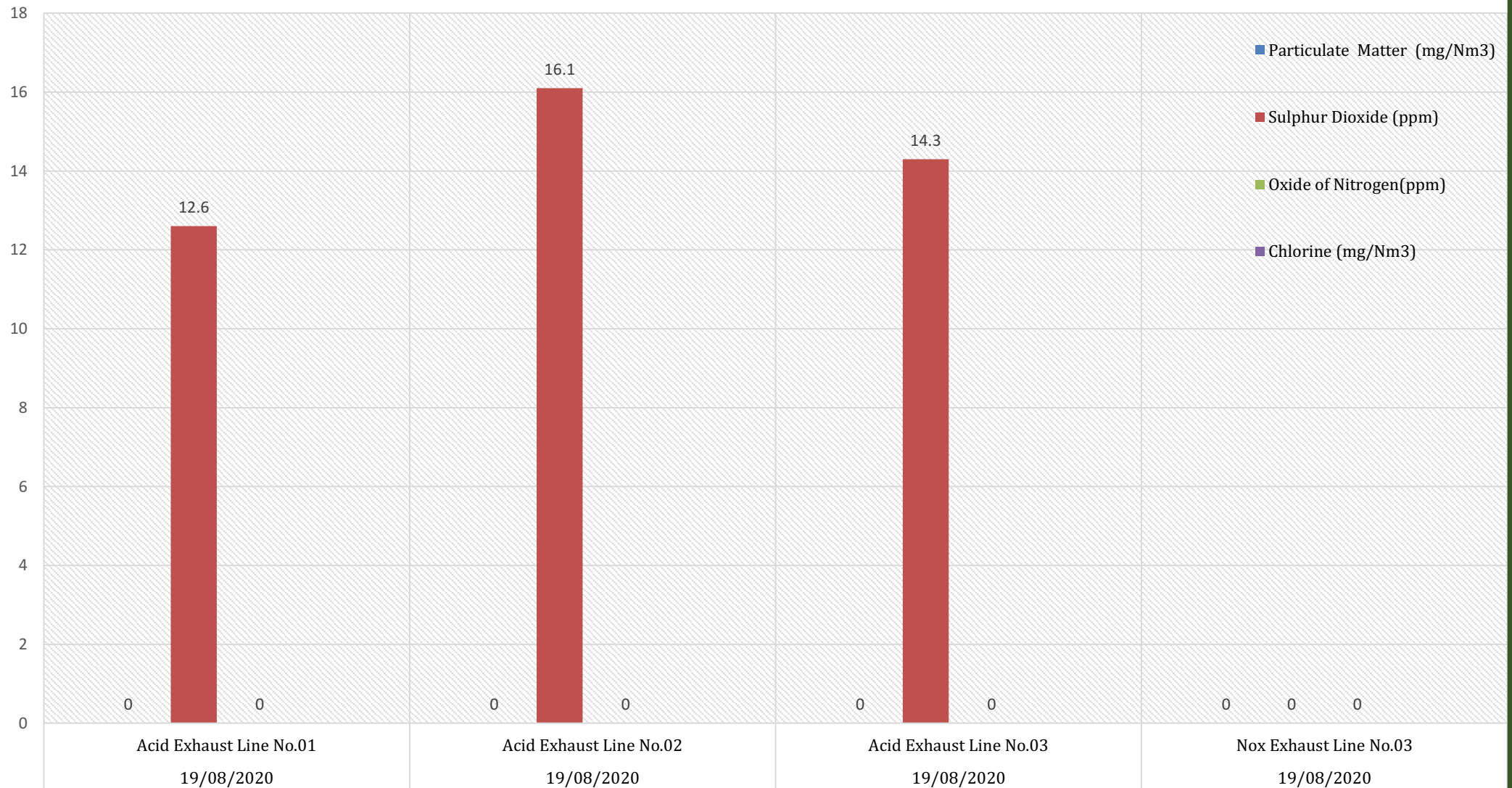
## Graphical Presentation of Stack Monitoring Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### Stack Monitoring Programme



# ENVIRONMENTAL MONITORING REPORT

Period: September - 2020

FOR



**M/s.MUNDRA SOLAR PV LIMITED**



**At**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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Consultant Organization

GPCB Recognized Environmental  
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ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

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**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in September-20
1.	Ambient Air Quality Monitoring	PM <sub>10</sub> , PM <sub>2.5</sub> , Oxide of Sulphur, Oxide of Nitrogen	04	Monthly	04
2.	Stack Monitoring - Process Scrubber	PM, Sulphur Dioxide, Oxide of Nitrogen, Chlorine	04	Monthly	04
3.	Stack Monitoring for D.G. Set	PM, Sulphur Dioxide, Oxide of Nitrogen, CO <sub>2</sub> , NMHC	02	Quarterly	02
4.	Noise Level Monitoring Company Premises.	dB (a)	04	Monthly	04
5.	Equipment Noise Monitoring.	dB (a)	03	Monthly	03
6.	Cooling Tower Blow Down Water Sample Analysis.	pH, COD, BOD, TSS, TDS, E- Coli	01	Half Yearly	**
7.	ETP (Inlet and Outlet) Water Sample Analysis.	pH, Temperatures, Color, Suspended solids, Oil & Grease, Phenolic compounds, Cyanides, Fluorides, Sulphides, Ammonical Nitrogen, Total Chromium, Hexavalent Chromium, Mercury, BOD (3 days at 25 °C), COD, Chlorides, Sulphates, Total Dissolved Solids, Insecticides / Pesticides, Sodium absorption ratio, Percent sodium	02	Monthly	02
8.	STP (Inlet and Outlet) Water Sample Analysis.	pH, BOD (5 days at 20 °C), Suspended Solids, Residual Chlorine.	04	Monthly	04
9.	Drinking water Sample analysis	as per IS 10500:2012	01	Half Yearly	**

**Environmental Monitoring Plan**  
**For M/s.MUNDRA SOLAR PV LIMITED**  
**By – UniStar Environment and Research Labs Pvt. Ltd.**



Sr. No.	Environmental Component	Parameters	Location	Frequency	Monitoring carried out in September-20
10.	Soil Sample Analysis	pH, Texture, Nitrogen available, Nitrates, Magnesium, Colour, Calcium, Organic carbon, Phosphorous, Potassium, water soluble salt, sulphate, Electrical Conductivity, Cation exchange Capacity, Magnesium. SAR, Permeability, Water holding capacity, Porosity	03	Half Yearly	**
11.	ETP Sludge Sample Analysis	pH, Moisture Contain, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Total Inorganic Solids (TIS), Oil & Grease, Cadmium as Cd, Iron as Fe, Nickel as Ni, Chromium Hexavalent as Cr+6, Chromium Total as Cr, Zinc as Zn, Cobalt as Co, Copper as Cu, Manganese as Mn, Lead as Pb, Volatile Matter, Calorific Value and additional parameters <b>As per TLCP parameters chemical sludge from Chemical effluent treatment plant</b>	01	Yearly	**
12.	Used Oil	PCB, Lead, Arsenic, Cd+ Cr + Ni, PAH.	01	Yearly	**

# 1.0 AMBIENT AIR QUALITY MONITORING REPORT



**Period: September - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh&Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
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GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company



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

Test Report No.:	URAL/20/09/MSPVL/A-001	Report Issue Date	16/09/2020
Service Request form No.:	UERL/AIR/SRF/09/A-001	Service Request Date	11/09/2020
Sample ID No.:	UERL/AIR/SRF/09/A-/001	Field Data Sheet No.	UERL/AIR/FDS/A-20/09/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	11/09/2020	Date of Testing	14/09/2020
Location of Sampling / Monitoring:	<b>Near Canteen Area.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

➤ **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	19/01/2020	19/01/2021
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	21/04/2019	19/04/2021

➤ **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	1.32
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1900.8
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	58	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	16	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	11.4	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	14.6	<b>80</b>

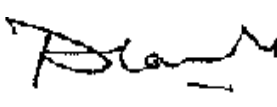
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/09/MSPVL/A-002	Report Issue Date	16/09/2020
Service Request form No.:	UERL/AIR/SRF/09/A-002	Service Request Date	11/09/2020
Sample ID No.:	UERL/AIR/SRF/09/A-002	Field Data Sheet No.	UERL/AIR/FDS/A-20/09/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	11/09/2020	Date of Testing	14/09/2020
Location of Sampling / Monitoring:	<b>Near ETP Guard Basin (MSTPL)</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	06/07/2020	07/07/2021

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

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	H	24.10
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>	1850.88
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.14

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	62	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	18	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	12.3	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	16.4	80

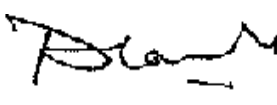
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/09/MSPVL/A-003	Report Issue Date	16/09/2020
Service Request form No.:	UERL/AIR/SRF/09/A-003	Service Request Date	11/09/2020
Sample ID No.:	UERL/AIR/SRF/09/A-003	Field Data Sheet No.	UERL/AIR/FDS/A-20/09/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	11/09/2020	Date of Testing	14/09/2020
Location of Sampling / Monitoring:	<b>Near Occupational Health Center.</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/22	Respirable Dust Sampler	1745-DTB-2013, 1151-DTB-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/22	Fine Particulate Sampler	129-DTB-2013	06/07/2020	07/07/2021

➤ **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	1.33
3.	Volume of Air Sampled for PM <sub>10</sub>	m <sup>3</sup>	1915.2
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	46	<b>100</b>
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	14	<b>60</b>
3.	Sulphur Dioxide	µg/m <sup>3</sup>	11.3	<b>80</b>
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	14.8	<b>80</b>

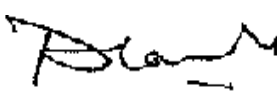
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

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

Test Report No.:	URAL/20/09/MSPVL/A-004	Report Issue Date	18/09/2020
Service Request form No.:	UERL/AIR/SRF/09/A-004	Service Request Date	12/09/2020
Sample ID No.:	UERL/AIR/SRF/09/A-004	Field Data Sheet No.	UERL/AIR/FDS/A-20/09/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b>  Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Dates of Sampling :	12/09/2020	Date of Testing	15/09/2020
Location of Sampling / Monitoring:	<b>Near Village Vandh</b>		
Sampling Method	<b>IS:5182(Part-14) and IS:5182 (Part-5)</b>		

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

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/27	Respirable Dust Sampler	1751-DTA-2013,1142-DTA-2013	19/01/2020	19/01/2021
UERL/AIR/FPS/42	Fine Particulate Sampler	125-DTD-2013	06/07/2020	07/07/2021

➤ **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
4.	Volume of Air Sampled for PM <sub>2.5</sub>	m <sup>3</sup>	24.04

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit	Result	Specific Value (As per NAAQMS)
1.	Particulate Matter PM <sub>10</sub>	µg/m <sup>3</sup>	81	100
2.	Particulate Matter PM <sub>2.5</sub>	µg/m <sup>3</sup>	26	60
3.	Sulphur Dioxide	µg/m <sup>3</sup>	14.3	80
4.	Nitrogen Dioxide	µg/m <sup>3</sup>	18.1	80

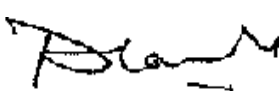
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



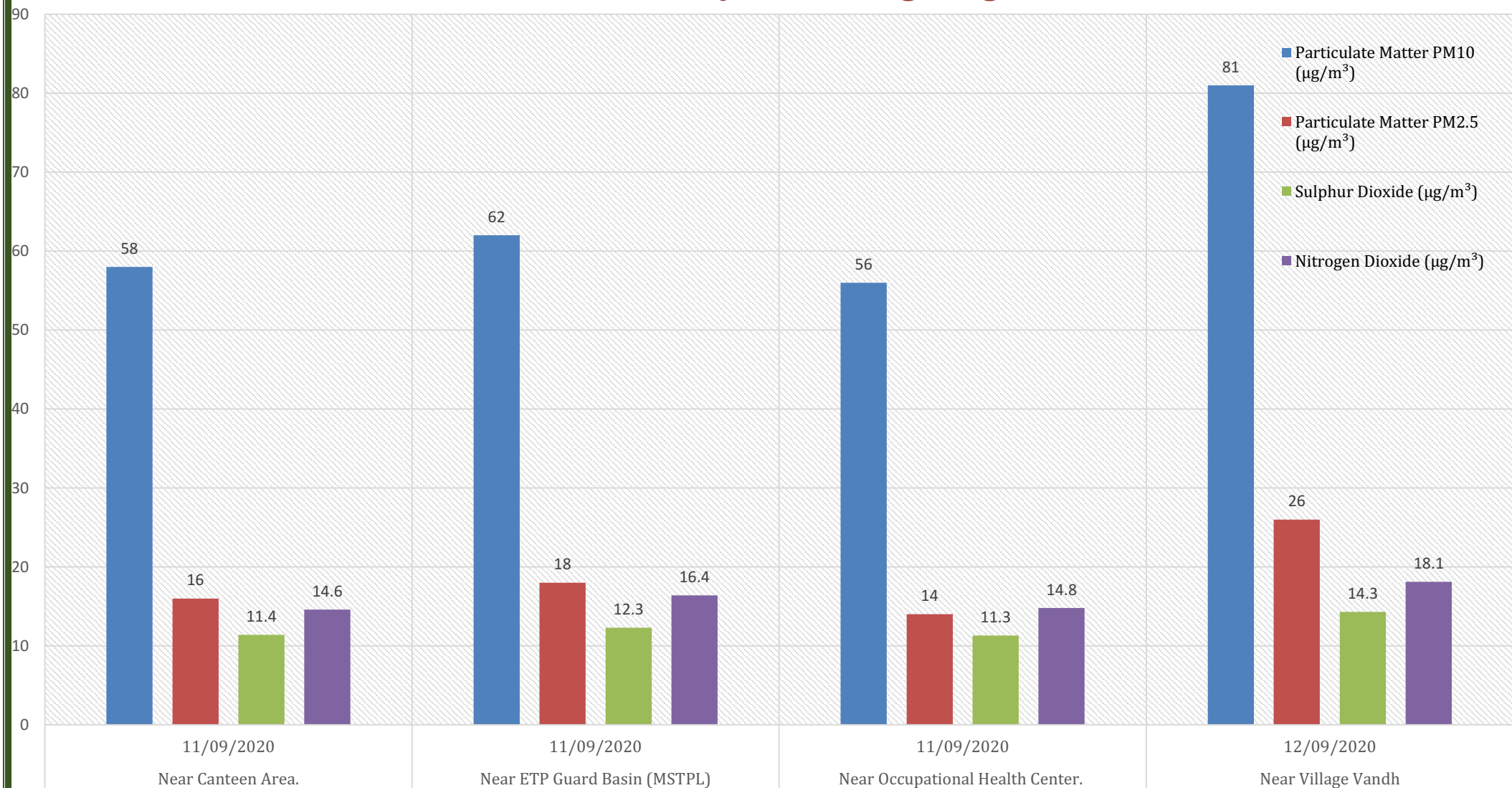
## Graphical Presentation of Ambient Air Quality Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### Ambient Air Quality Monitoring Programme



# 2.0 WATER QUALITY MONITORING REPORT



**Period: September - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**



**Monitoring Organization**

White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TESTREPORT

Report No.	URC/20/09/MSPL-001	Date of Report	19/09/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	12/09/2020	Sample Received Date	14/09/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	14/09/2020	Test Completion Date	18/09/2020
UERL Lab Sample ID.No. 20/09/MSPL-001			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	6.28
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	50
CHEMICAL QUALITY (In mg/L)			
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	BDL (MDL :2.0)
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	BDL (MDL :1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	BDL (MDL :2.0)
4.	Total Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.064
5.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	BDL (MDL :0.05)
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH <sub>3</sub> B)	16.5
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	BDL (MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	BDL (MDL :0.05)
9.	Total Kjeldahal Nitrogen (TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> -B&C, &4500 N <sub>ORG</sub> , B,	21.3
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F, D)	8.75
11.	Cyanide as CN	IS 3025(Part27)1986	BDL (MDL :0.05)
12.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	BDL (MDL :0.001)
13.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	BDL (MDL :0.1)
14.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.032

### TEST REPORT

Report No.	URC/20/09/MSPL-001	Date of Report	19/09/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet sample	Sample Qty.	5 Lit.
Sampling Date	12/09/2020	Sample Received Date	14/09/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	14/09/2020	Test Completion Date	18/09/2020
UERL Lab Sample ID.No. 20/09/MSPL-001			

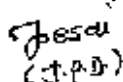
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
CHEMICAL QUALITY (In mg/L)			
15.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	BDL(MDL:0.01)
16.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.053
17.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.064
18.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.132
19.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	0.022
20.	Iron as Fe	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	1.112

**BDL= Below Detection Limit, MDL= Minimum Detection Limit**

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By



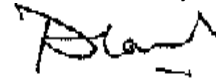
(Chemist)

Checked By



(Sr. Chemist)

Authorized By



(Technical Manager)

### TESTREPORT

Report No.	URC/20/09/MSPL-001	Date of Report	19/09/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Inlet Sample	Sample Qty.	5 Lit.
Sampling Date	12/09/2020	Sample Received Date	14/09/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	14/09/2020	Test Completion Date	18/09/2020
UERL Lab Sample ID.No. 20/09/MSPL-001			

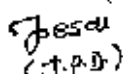
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
PHYSICAL QUALITY			
1.	Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	100
2.	Temperature ° C	IS 3025(Part 9)1984	29
CHEMICAL QUALITY (In mg/L)			
1.	Residual Free Chlorine	APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	18.1
2.	% Sodium	By Calculation	43.2
3.	Selenium as Se	IS 3025(Part 56)2003	BDL(MDL:0.1)
4.	Vanadium as V	AAS Method	BDL(MDL:0.1)
5.	Sodium Absorption Ratio (SAR)	By Calculation	1.76

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



### TEST REPORT

Report No.	URC/20/09/MSPL-002	Date of Report	19/09/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	12/09/2020	Sample Received Date	14/09/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	14/09/2020	Test Completion Date	18/09/2020
UERL Lab Sample ID.No. 20/09/MSPL-002			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	6.5 – 8.5	7.32
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 –D),	100	25
CHEMICAL QUALITY (In mg/L)				
1.	Chemical Oxygen Demand (COD)	(APHA 23 <sup>rd</sup> Ed.,2017,5220-B),	250	BDL (MDL :2.0)
2.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	100	BDL (MDL :1.0)
3.	Oil & Grease	IS 3025(Part39)1991, Amd.1	20	BDL (MDL:2.0)
4.	Chromium as Cr	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDL (MDL :0.05)
5.	Phenolic Compounds	IS 3025(Part 43)1992, Amd.2	5.0	BDL (MDL:0.1)
6.	Ammonical Nitrogen	(APHA 23 <sup>rd</sup> Ed.,2017,4500- NH <sub>3</sub> B)	50	6.5
7.	Hexavalent Chromium	APHA 23 <sup>rd</sup> Ed.,2017,3500CrB	1.0	BDL (MDL :0.05)
8.	Sulphide as S <sup>-2</sup>	(APHA 23 <sup>rd</sup> Ed.,2017,4500 S <sup>-2</sup> F)	5.0	BDL (MDL :0.05)
9.	Total Kjeldahal Nitrogen (TKN)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 NH <sub>3</sub> - B&C, &4500 N <sub>ORG</sub> , B,	100	11.6
10.	Fluoride (as F)	(APHA 23 <sup>rd</sup> Ed.,2017,4500 F, D)	15	13.5
11.	Cyanide as CN	IS 3025(Part27)1986	0.2	BDL (MDL :0.05)
12.	Mercury as Hg	(APHA 23 <sup>rd</sup> Ed.,2017,3112-B)	0.01	BDL (MDL :0.001)
13.	Manganese as Mn	APHA 23 <sup>rd</sup> Ed.,2017,3500 Mn B	2.0	BDL (MDL :0.1)
14.	Lead as Pb	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	BDL (MDL:0.01)

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Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QC-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### TEST REPORT

Report No.	URC/20/09/MSPL-002	Date of Report	19/09/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	12/09/2020	Sample Received Date	14/09/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	14/09/2020	Test Completion Date	18/09/2020
UERL Lab Sample ID.No. 20/09/MSPL-002			

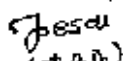
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
CHEMICAL QUALITY (In mg/L)				
15.	Arsenic as As	APHA 23 <sup>rd</sup> Ed.,2017,3114-C	0.2	BDL(MDL:0.01)
16.	Copper as Cu	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	BDL (MDL :0.05)
17.	Nickel as Ni	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	5.0	0.042
18.	Zinc as Zn	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	10.0	BDL (MDL :0.05)
19.	Cadmium as Cd	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	2.0	0.018
20.	Iron as Fe	(APHA 23 <sup>rd</sup> Ed.,2017,3111-B)	3.0	1.052

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/09/MSPL-002	Date of Report	19/09/2020
Name & Address of Customer	M/s. Mundra Solar PV Limited Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	ETP Outlet sample	Sample Qty.	5 Lit.
Sampling Date	12/09/2020	Sample Received Date	14/09/2020
Sampled By	Party.	Appearance of Sample	Colourless
Test Started Date	14/09/2020	Test Completion Date	18/09/2020
UERL Lab Sample ID.No. 20/09/MSPL-002			

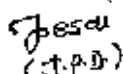
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	Colour (Pt.Co.Scale)	IS 3025(Part 4)1983	100	50
2.	Temperature ° C	IS 3025(Part 9)1984	40	29
CHEMICAL QUALITY (In mg/L)				
1.	Total Residual Chlorine	APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B	1.0	0.78
2.	% Sodium	By Calculation	60	37.4
3.	Sodium Absorption Ratio (SAR)	By Calculation	26	1.32
4.	Selenium as Se	IS 3025(Part 56)2003	0.05	BDL(MDL:0.1)
5.	Vanadium as V	AAS Method	0.2	BDL(MDL:0.1)

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

MoEF&CC (GOI) Recognized Environmental  
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QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

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Certified Company

ISO 45001:2018  
Certified Company

### TEST REPORT

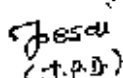
Report No.	URC/20/09/MSPL-003	Date of Report	19/09/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Inlet- Water Sample (MSPVL Area)	Sample Qty.	2 Lit.
Sampling Date	12/09/2020	Sample Received Date	14/09/2020
Sampled By	Party.	Appearance of Sample	Grey Colour
Test Started Date	14/09/2020	Test Completion Date	18/09/2020
UERL Lab Sample ID.No. 20/09/MSPL-003			

### TEST RESULTS


DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
<b>PHYSICAL QUALITY</b>			
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-H <sup>+</sup> B)	7.26
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed., 2017, 2540 -D),	60
<b>CHEMICAL QUALITY (In mg/L)</b>			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	54.2
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed., 2017, 4500-Cl-B)	BDL(MDL:0.2)

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

Report No.	URC/20/09/MSPL-004	Date of Report	19/09/2020
Name & Address of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	STP Outlet Water Sample (MSPVL Area)	Sample Qty.	2 Lit.
Sampling Date	12/09/2020	Sample Received Date	14/09/2020
Sampled By	Party.	Appearance of Sample	Grey Colour
Test Started Date	14/09/2020	Test Completion Date	18/09/2020
UERL Lab Sample ID.No. 20/09/MSPL-004			

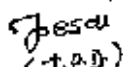
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
PHYSICAL QUALITY				
1.	pH @ 25 ° C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H+B)	--	7.18
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<100	30
CHEMICAL QUALITY (In mg/L)				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<30	17.5
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	0.72

BDL= Below Detection Limit, MDL= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(J.P.D.)  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)



### TEST REPORT

Report No.	URC/20/09/MSTPL-005	Date of Report	19/09/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno Park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	<b>STP Inlet Water Sample (MSTPL Area)</b>	Sample Qty.	<b>2 Lit.</b>
Sampling Date	<b>12/09/2020</b>	Sample Received Date	<b>14/09/2020</b>
Sampled By	<b>Party.</b>	Appearance of Sample	<b>Grey Colour</b>
Test Started Date	<b>14/09/2020</b>	Test Completion Date	<b>18/09/2020</b>
UERL Lab Sample ID.No. <b>20/09/MSPL-005</b>			

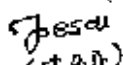
### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment	
Sr. No.	Parameters	Test Method	Results
<b>PHYSICAL QUALITY</b>			
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H <sup>+</sup> B)	7.06
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	95
<b>CHEMICAL QUALITY (In mg/L)</b>			
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	46.2
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	BDL(MDL:0.2)

Note: **BDL**= Below Detection Limit, **MDL**= Minimum Detection Limit

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

### TEST REPORT

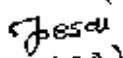
Report No.	URC/20/09/MSTPL-006	Date of Report	19/09/2020
Name & Address of Customer	<b>M/s. Mundra Solar Techno Park Pvt Ltd (MSTPL)</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Sample Details	<b>STP Outlet Water Sample (MSTPL Area)</b>	Sample Qty.	<b>2 Lit.</b>
Sampling Date	<b>12/09/2020</b>	Sample Received Date	<b>14/09/2020</b>
Sampled By	<b>Party.</b>	Appearance of Sample	<b>Grey Colour</b>
Test Started Date	<b>14/09/2020</b>	Test Completion Date	<b>18/09/2020</b>
UERL Lab Sample ID.No. <b>20/09/MSPL-006</b>			

### TEST RESULTS

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment		
Sr. No.	Parameters	Test Method	GPCB Limit	Results
<b>PHYSICAL QUALITY</b>				
1.	pH @ 25 °C	(APHA 23 <sup>rd</sup> Ed.,2017,4500-H+B)	--	7.35
2.	Total Suspended Solids (mg/L)	(APHA 23 <sup>rd</sup> Ed.,2017,2540 -D),	<30	20
<b>CHEMICAL QUALITY (In mg/L)</b>				
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	IS 3025(Part44)1993, Amd.1	<20	15.3
2.	Residual Chlorine	(APHA 23 <sup>rd</sup> Ed.,2017,4500-Cl-B)	0.5 Min.	0.95

\*\*\*\*\* End of Report \*\*\*\*\*

Tested By

  
(Chemist)

Checked By

  
(Sr. Chemist)

Authorized By

  
(Technical Manager)

# 3.0 NOISE LEVEL MONITORING REPORT



**Period: September - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House,  
Near G.I.D.C. Office, Char Rasta,  
Vapi-396 195, Gujarat, India.  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

MoEF&CC (GOI) Recognized Environmental  
Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCI-NABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

### NOISE LEVEL MONITORING REPORT

Test Report No.:	UERL/20/09/MSPVL/N-001	Date Of Report:	18/09/2020
Name & Add. Of Industries	<b>M/s. Mundra Solar PV Limited</b> Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		

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

Instrument Id No.	Instrument Name	Model Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/Q630838	Sound Level Meter	SL 4023 SD	31/01/2020	30/01/2021
Sampling Method.	CPCB Guideline			

Date of Monitoring : **12/09/2020**

#### Result

Sr. No.	Location within company premises	Noise Level dB(A)		Permissible Limit CPCB	
		Day Time	Night Time	Day Time	Night Time
1.	North: Near Canteen area	61.2	48.6	<75 dB(A)	<70 dB(A)
2.	South: Near 66 KVA Sub Station	67.4	56.7	<75 dB(A)	<70 dB(A)
3.	East: Near COE Building	62.6	44.2	<75 dB(A)	<70 dB(A)
4.	West: Near ETP Guard basin	66.3	51.6	<75 dB(A)	<70 dB(A)

**Note:** Ambient Air Quality Standards in respected of Noise as per CPCB.

Area Code	Category of Area/Zone	Limit in dB (A) Leq	
		Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

\*\*\*\*\* End of Report \*\*\*\*\*

Sampling Done By:



(Chemist) / (Environment Engg.)

Authorized By:



(Sr. Chemist)

### NOISE LEVEL MONITORING REPORT

Test Report No.:	UERL/20/09/MSPVL/N-002	Date Of Report:	18/09/2020
Name & Add. Of Industries	M/s. Mundra Solar PV Limited Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		

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

Instrument Id No.	Instrument Name	Model Number	Cali. Date	Next Cali. Date
UERL/AIR/SLM/Q630838	Sound Level Meter	SL 4023 SD	31/01/2020	30/01/2021
Sampling Method.	CPCB Guideline			

Date of Monitoring : 12/09/2020

**Result**

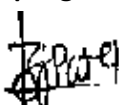
Sr. No.	Location within company premises	Noise Level	Permissible Limit
		Day Time	
1.	Near Pump House	72.4	<85 dB(A)
2.	Near MSPVL STP Inlet Water Pump	82.1	<85 dB(A)
3.	Near D.G Set-1	81.7	<85 dB(A)
4.	Near D.G Set-2	82.5	<85 dB(A)

**Note:** Permissible exposure in cases of continuous noise as per Model Factories Rules 120 (MFR 120) under Section 87.

Sr.No.	Total time of exposure (continuous short term exposures)	Sound pressure level in or a number of dB(A) per day, in hours
(1)	8 hrs.	85
(2)	6 hrs.	87
(3)	4 hrs.	90
(4)	3 hrs.	92
(5)	1 ½ hrs.	97
(6)	1 hrs.	100
(7)	¾ hrs.	102
(8)	½ hrs.	105
(9)	¼ hrs.	110

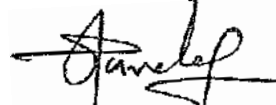
\*\*\*\*\* End of Report \*\*\*\*\*

Sampling Done By:



(Chemist) / (Environment Engg.)

Authorized By:



(Sr. Chemist)



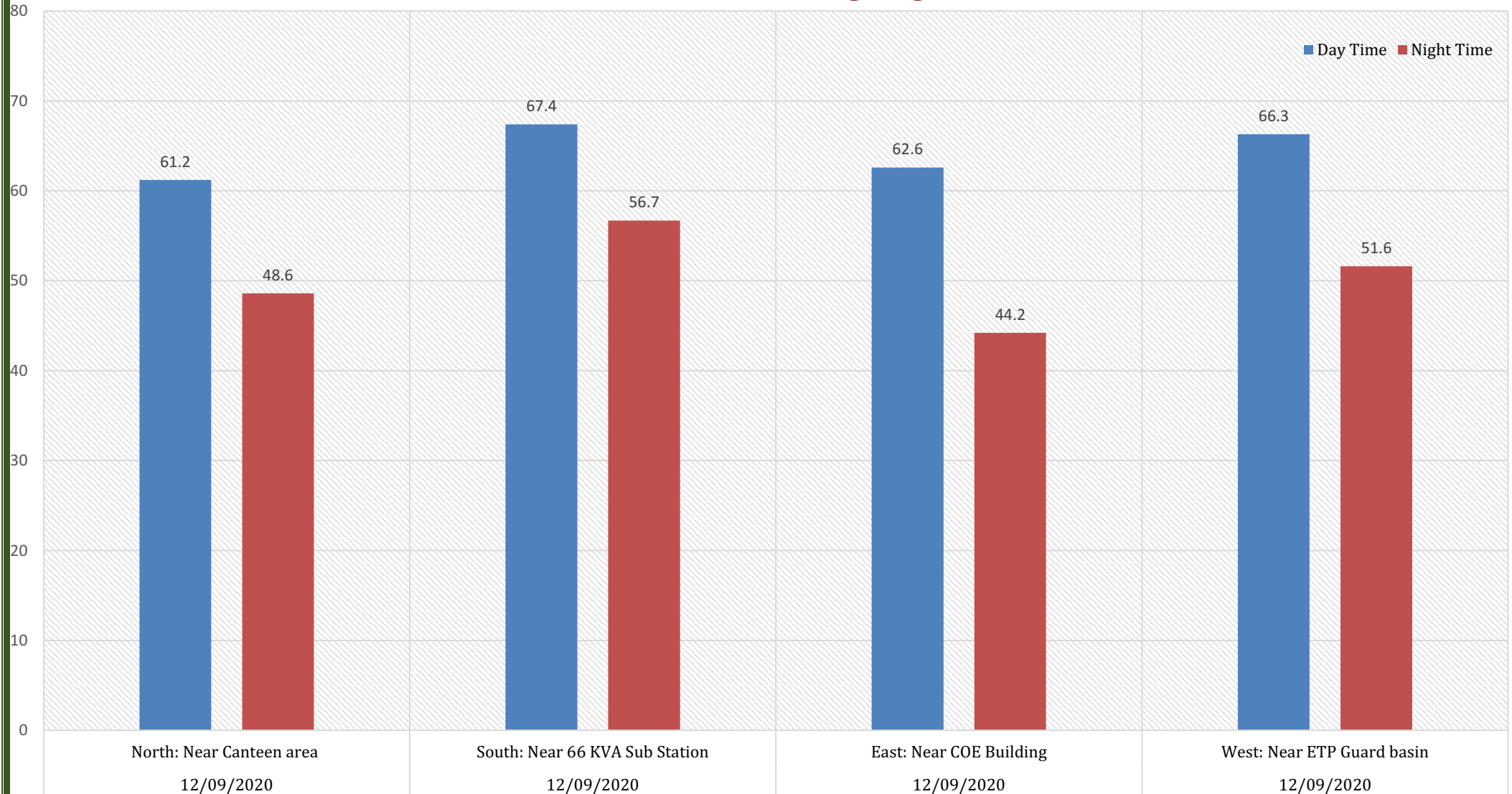
## Graphical Presentation of Noise Level Monitoring Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### *NM: "Noise Level Monitoring Programme"*



# 4.0 STACK MONITORING REPORT



**Period: September - 2020**

**FOR**



**M/s.MUNDRA SOLAR PV LIMITED**

**Village Vandh & Tunda, Taluka Mundra,  
Mundra, Kutch 370 435, Gujarat. India.**

**Monitoring Organization**



White House  
Near G.I.D.C. Office, Char Rasta  
Vapi-396 195, Gujarat, India  
Phone : +91 260 2433966 / 2425610  
Email : [response@uerl.in](mailto:response@uerl.in) Website : [www.uerl.in](http://www.uerl.in)

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Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023)

QCHNABET Accredited EIA  
Consultant Organization

GPCB Recognized Environmental  
Auditor (Schedule-II)

ISO 9001:2015  
Certified Company

ISO 45001:2018  
Certified Company

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/09/MSPVL/S-001	Report Issue Date	18/09/2020
Service Request form No.	UERL/AIR/SRF/09/S-001	Service Request Date	11/09/2020
Sample ID No.	UERL/AIR/ID/S-20/09/001	Field Data Sheet No.	UERL/AIR/FDS/S-20/09/001
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	11/09/2020	Date of Testing	15/09/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.04</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	8.1
6.	Exit Gas Flow	m <sup>3</sup> /h	6925.5


➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	<b>150</b>	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	17.2	<b>100</b>	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	<b>50</b>	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	<b>20</b>	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

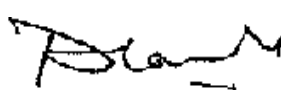
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/09/MSPVL/S-002	Report Issue Date	18/09/2020
Service Request form No.	UURL/AIR/SRF/09/S-002	Service Request Date	11/09/2020
Sample ID No.	UURL/AIR/ID/S-20/09/002	Field Data Sheet No.	UURL/AIR/FDS/S-20/09/002
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	11/09/2020	Date of Testing	15/09/2020
Stack Sampling Attached to	<b>Acid Exhaust Line No.08</b>		
Air Pollution Control Device	Acid Scrubber		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	8.6
6.	Exit Gas Flow	m <sup>3</sup> /h	7353

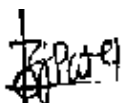
➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	21.3	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	50	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	20	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

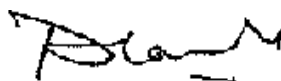
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/09/MSPVL/S-003	Report Issue Date	18/09/2020
Service Request form No.	UERL/AIR/SRF/09/S-003	Service Request Date	11/09/2020
Sample ID No.	UERL/AIR/ID/S-20/09/003	Field Data Sheet No.	UERL/AIR/FDS/S-20/09/003
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	11/09/2020	Date of Testing	15/09/2020
Stack Sampling Attached to	<b>NOx Exhaust Line No.01</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	7.1
6.	Exit Gas Flow	m <sup>3</sup> /h	6070.5


➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	<b>150</b>	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	BDL	<b>100</b>	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	<b>50</b>	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	<b>20</b>	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: SOx: 4 mg/Nm<sup>3</sup>, NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

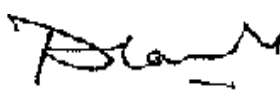
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)



**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URAL/20/09/MSPVL/S-004	Report Issue Date	18/09/2020
Service Request form No.	UURL/AIR/SRF/09/S-004	Service Request Date	11/09/2020
Sample ID No.	UURL/AIR/ID/S-20/09/004	Field Data Sheet No.	UURL/AIR/FDS/S-20/09/004
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh&Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	11/09/2020	Date of Testing	15/09/2020
Stack Sampling Attached to	<b>NOx Exhaust Line No.04</b>		
Air Pollution Control Device	---		
Fuel Used	---		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2020	Next Calibration Due On	26/06/2021

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	25
3.	Stack Area	m <sup>2</sup>	0.2375
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	7.6
6.	Exit Gas Flow	m <sup>3</sup> /h	6498


➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	N.D	<b>150</b>	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	BDL	<b>100</b>	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	BDL	<b>50</b>	IS 11255(Part 7)
4.	Chlorine	mg/Nm <sup>3</sup>	N.D	<b>20</b>	US EPA Method.

**Note:** 1) BDL: Below Detection Limit: SOx: 4 mg/Nm<sup>3</sup>, NOx: 5 mg/Nm<sup>3</sup>, 2) N.D: Not Detected: PM:10 mg/Nm<sup>3</sup>, Cl<sub>2</sub>: 1 mg/Nm<sup>3</sup>

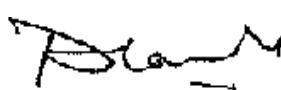
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/V/20/09/ MSPVL/S-005	Report Issue Date	18/09/2020
Service Request form No.	UERL/AIR/SRF/09/S-005	Service Request Date	11/09/2020
Sample ID No.	UERL/AIR/ID/S-20/09/005	Field Data Sheet No.	UERL/AIR/FDS/S-20/09/005
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	11/09/2020	Date of Testing	15/09/2020
Stack Sampling Attached to	<b>D.G Set-1</b>		
Air Pollution Control Device	--		
Fuel Used	Diesel		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2019	Next Calibration Due On	26/06/2020

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
3.	Stack Area	m <sup>2</sup>	0.1256
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	11.6
6.	Exit Gas Flow	m <sup>3</sup> /h	4657.24

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	74	<b>150</b>	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	32	<b>100</b>	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	44	<b>50</b>	IS 11255(Part 7)

**Note:** 1) BDL: Below Detection Limit, 2) N.D: Not Detected

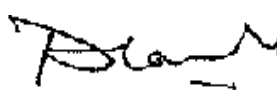
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

**TEST REPORT**  
**(STACK MONITORING)**

Test Report No.	URA/V/20/09/ MSPVL/S-006	Report Issue Date	18/09/2020
Service Request form No.	UURL/AIR/SRF/09/S-006	Service Request Date	11/09/2020
Sample ID No.	UURL/AIR/ID/S-20/09/006	Field Data Sheet No.	UURL/AIR/FDS/S-20/09/006
Name & Add. of Customer	<b>M/s. Mundra Solar PV Limited</b> Village Vandh & Tunda, Taluka Mundra, Mundra, Kutch 370 435, Gujarat. India.		
Date of Sampling	11/09/2020	Date of Testing	15/09/2020
Stack Sampling Attached to	<b>D.G Set-2</b>		
Air Pollution Control Device	--		
Fuel Used	Diesel		

➤ **Details of Instrument Used for Monitoring**

Instrument Id No.	UURL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	27/06/2019	Next Calibration Due On	26/06/2020

➤ **General Stack Monitoring Observation**

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
3.	Stack Area	m <sup>2</sup>	0.1256
4.	Ambient Temperature	°C	32
5.	Exit Gas Velocity	m/s	11.3
6.	Exit Gas Flow	m <sup>3</sup> /h	5109.40

➤ **Test Parameter Results**

Sr. No.	Test Parameter	Unit of measurement	Result	Specific GPCB Value	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	82	150	IS 11255(Part 1)
2.	Sulphur Dioxide	ppm	38	100	IS 11255(Part 2)
3.	Oxide of Nitrogen	ppm	42	50	IS 11255(Part 7)

**Note:** 1) BDL: Below Detection Limit, 2) N.D: Not Detected

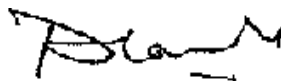
\*\*\*\*\* End of Report \*\*\*\*\*

**Sampling Done By:**



(Chemist) / (Environment Engg.)

**Tested By:**



(Chemist) / (Sr. Chemist)

**Authorized By:**



(Sr. Chemist)

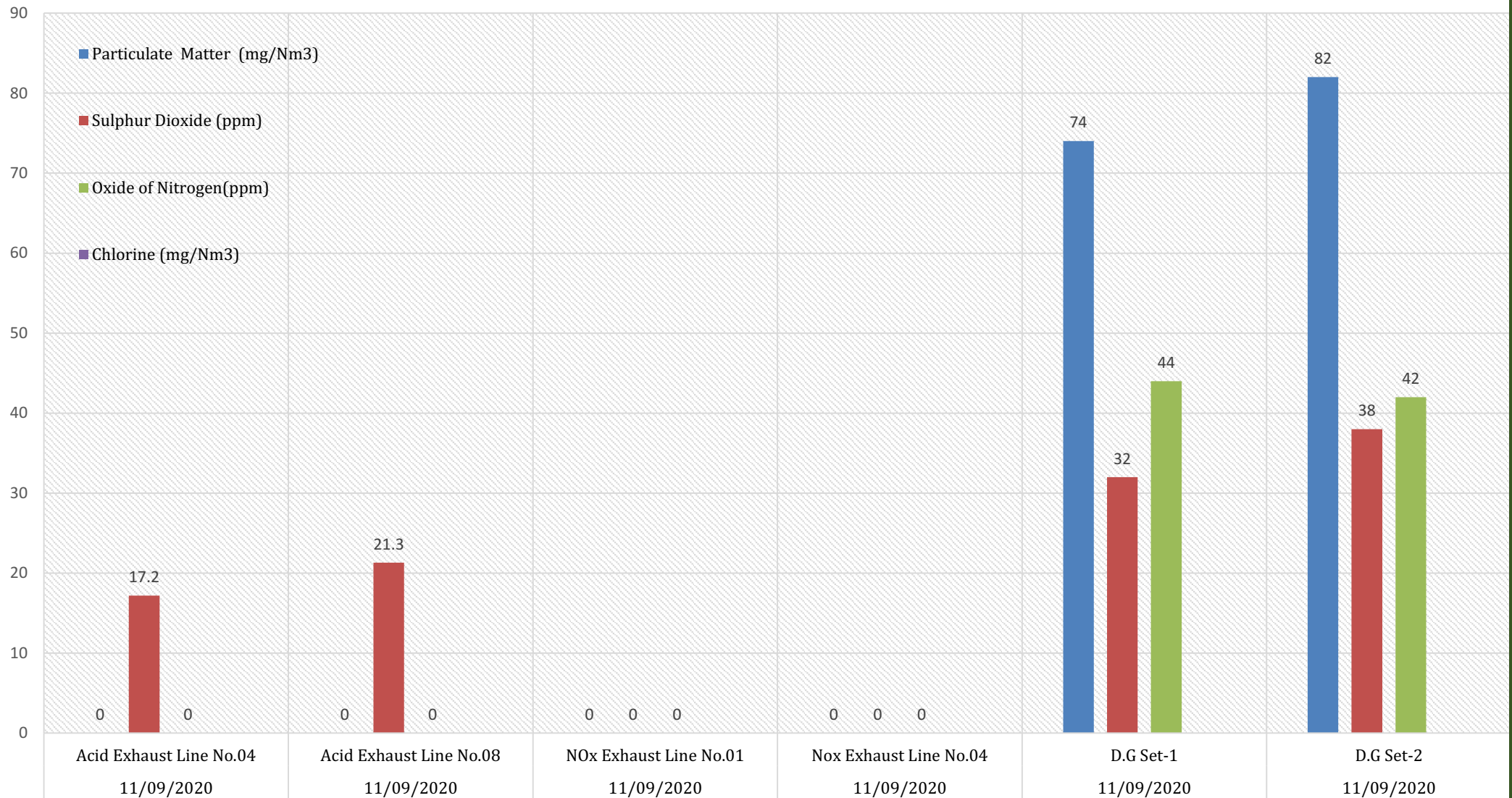
## Graphical Presentation of Stack Monitoring Data

For M/s. Mundra Solar PV Limited.

By – UniStar Environment and Research Labs Pvt. Ltd.



### Stack Monitoring Programme





# Earth Envirotech

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

## EARTH ENVIROTECH

F & 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/2020/07/002

Date: 29/07/2020

### ANALYSIS REPORT

Name and Address Of Client	M/s Oriental Carbon & Chemicals Ltd. Plot No. 141/P, Mundra SEZ Taluka - Mundra Dist. Kutch 370421
Sampling Done By :	Earth Envirotech Team
Sampling Equipment	Sound Level Meter (HTC/SL-1830)
Sampling Start on	20.07.2020
Sampling end on	20.07.2020
Method used for Sampling:	IS 9876 : 1981 & 9889 : 1981
Sampling code	EE/20/Q2/QCC/NI-N6

### NOISE MONITORING RESULTS

Sl. No.	Location Name	Units	Day Time	
			Observed Value	Standard Limit
1.	Near Main gate	dB (A)	70.6	75.0
2.	Near Refiner Area	dB (A)	72.8	75.0
3.	Near ETP plant	dB (A)	65.3	75.0
4.	Near CP Boiler	dB (A)	69.8	75.0
5.	Near Packaging area Line-3 & 4	dB (A)	71.2	75.0
6.	Near Material gate security Office	dB (A)	68.0	75.0

Checked By:



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







# Earth Envirotech

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## EARTH ENVIROTECH

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E-Mail: earthenvirotech@gmail.com  
Web: www.earthenvirotech.com

Report No: - EE/LAB/EA/2020/07/003

Date: 29/07/2020

### ANALYSIS REPORT

Name and Address Of Client	M/s. Oriental Carbon & Chemicals Ltd. Plot No. 141/P, Mundra SEZ, Taluka: Mundra Dist: Kutch-370423
Sampling Done By:-	Earth Envirotech Team.
Analysis Start on	23/07/2020
Analysis end on	29/07/2020
Method Used for Sampling	Sampling: Guidelines on methodologies for source emission monitoring IATS/80/2013-14
Method used for Gaseous Analysis	CO, CO <sub>2</sub> and O <sub>2</sub> analyzed by Ace Multi gas Analyzer
Method used for SO <sub>2</sub> analysis	IS 11255 - Part 2
Method Used for NO <sub>x</sub> analysis	NO <sub>x</sub> : IS 11255 - Part 2
Method used for SPM analysis	IS 11255 - Part 2

### STACK MONITORING ANALYSIS RESULTS

Stack Attached To	Refiner U2	Refiner U3	D.G set 1	D.G set 2	C.F boiler
Fuel Used	HSD	HSD	HSD	HSD	Coal
Stack Height (m)	10	10	22	22	40
Stack Diameter(mm)	300	800	600	600	1000
Sampling Date	20/07/2020	20/07/2020	20/07/2020	20/07/2020	21/07/2020
Sample Code	EE/20/Q2/ OCCL/ST1	EE/20/Q2/ OCCL/ST2	EE/20/Q2/ OCCL/ST3	EE/20/Q2/ OCCL/ST4	EE/20/Q2/ OCCL/ST5
SPM in Mg/NM <sup>3</sup> GPCB Limit - 150 mg/NM <sup>3</sup>	79.65	75.59	74.00	81.79	155.60
SO <sub>2</sub> in ppm GPCB Limit - 100 ppm	19.78	20.81	38.53	21.96	28.98
NO <sub>x</sub> in ppm GPCB Limit - 50 ppm	12.46	13.32	11.14	14.59	

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 in any court including judicial purpose without our prior permission.
- Sample will be retained till one month from the date of sampling.





# Earth Envirotech

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Web: www.earthenvirotech.com

Report No: EE/LAB/EA/2020/07/004

Date: 29/07/2020

### ANALYSIS REPORT

Name and Address Of Client:	M/s Oriental Carbon & Chemicals Ltd Plot No. 143/P, Mundra SEZ Taluka: Mundra Dist: Kutch 370423
Sampling Done By:	Earth Envirotech Team
Method of Sampling:	IS 3025 Part 1
Date of Sampling:	20/07/2020
Date of Analysis:	23/07/2020 - 29/07/2020
Mode of Collection:	Grab

### WASTE WATER ANALYSIS RESULTS ( STP )

Sr. No.	Parameters	Unit	Reference Method	Result	
				STP inlet EE/01/20/OCCUWW1	STP outlet EE/02/20/OCCUWW2
1.	pH	---	IS 3025 ( P-11 )	5.68	6.76
2.	Temperature	°C	APHA 2550	24.5	25.1
3.	Colour	Units	APHA 2120	27	15
4.	Total Suspended Solids	mg/l	APHA 2540 D	58	43.8
5.	Oil & Grease	mg/l	IS 3025 ( P-39 )	4.6	2.8
6.	Ammonical Nitrogen	mg/l	IS 3025 ( P-34 )	11.3	9.5
7.	Biochemical Oxygen Demand ( 5 days at 20°C )	mg/l	IS 3025 ( P-44 )	20.8	13.4
8.	Chemical Oxygen Demand	mg/l	APHA 5220 B Open reflux method	25.33	32
9.	Chlorides	mg/l	IS 3025 ( P-32 )	285.8	
10.	Total Dissolved Solids	mg/l	IS 3025 ( P-16 )	782	

BDL - Below Detectable Limit.

Checked By:



- 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.



11-09-2018



# Earth Envirotech

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY  
An NABL Accredited Laboratory, GPCB Approved Environmental Auditor.

## EARTH ENVIROTECH

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Phone: 02836-237150, Cell: 99724734757.  
E-Mail: earthenvirotech@gmail.com.  
Web: www.earthenvirotech.com

Report No: EE/LAB/EA/2020/07/005

Date: 29/07/2020

### ANALYSIS REPORT

Name and Address Of Client	M/s Oriental Carbon & Chemicals Ltd. Pice No. 141/P, Mundra SEZ Taluka: Mundra Dist. Kutch-370421
Sampling Done By:	Earth Envirotech Team
Method of Sampling	IS 3025 Part 1
Date of Sampling	20/07/2020
Date of Analysis	23/07/2020 - 28/07/2020
Mode of Collection	Grab

### WASTE WATER ANALYSIS RESULTS (ETP)

Sr. No.	Parameters	Unit	Reference Method	GPCB limit for treated Effluent	Result		
	Sampling Location	—	—	—	ETP Inlet	Aeration	ETP Outlet
	Sample Code	—	—	—	EE/02/20/00CL /WWE	EE/02/20/00CL /WWA	EE/02/20/00CL /WWB
1.	pH	—	IS 3025 (P-13)	6.5-8.5	4.08	6.23	6.76
2.	Temperature	°C	APHA 2550	40	23.4	25.8	25.3
3.	Total Suspended Solids	mg/l	APHA 2540 D	100	321	405	30.4
4.	Oil & Grease	mg/l	IS 3025 (P-38)	10	1.6	1.2	1.2
5.	Phenolic Compound	mg/l	IS 3025 (P-40)	1.0	BDL	BDL	BDL
6.	Ammonical Nitrogen	mg/l	IS 3025 (P-34)	50	5.4	3.8	2.2
7.	BOD (5 days at 20°C)	mg/l	IS 3020 (P-60)	30	15.9	11.9	8.2
8.	COD	mg/l	APHA 5210 B	100	160	64	31
9.	Chlorides	Mg/l	IS 3025 (P-52)	600	383.01	324.4	254.99
10.	Total Dissolved Solids	mg/l	IS 3025 (P-18)	2100	1000	1000	892
11.	SAR	mg/l	IS 2162 F	26	2.5	2.6	6.8
12.	Total Chromium	mg/l	IS 3025 (P-52)	0.2	BDL	BDL	BDL
13.	Hexavalent Chromium	mg/l	IS 3025 (P-52)	0.1	BDL	BDL	BDL
14.	Copper	mg/l	APHA 3500 Cu B	1.0	BDL	BDL	BDL
15.	Total Iron (as Fe)	mg/l	IS 3025 (P-53)	1.0	BDL	BDL	BDL

BDL - Below Detectable Limit.

Checked By:

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





Report No: - EE/LAB/EA/2020/07/006

Date: 29/07/2020

### ANALYSIS REPORT OF PARAMETER NOT COVERED IN NABL SCOPE

Name and Address Of Client	M/s Oriental Carbon & Chemicals Ltd Plot No. 141/P, Mundra SEZ Taluka - Mundra Dist. Kutch 370421
Sampling Done By :	Earth Envirotech Team
Method of Sampling	IS 3025 Part 1
Date of Sampling	20/07/2020
Date of Analysis	23/07/2020 - 29/07/2020
Mode of Collection	Grab

### WASTE WATER ANALYSIS RESULTS

Sr. No.	Parameters	Unit	Reference Method	GPCR limit for treated effluent	Result				
					ETP Inlet	Aeration	ETP Outlet	STP Inlet	STP outlet
	Sampling Location	—	—	—	—	—	—	—	—
	Sample Code	—	—	—	EE/Q2/20/OCCL/WW3	EE/Q2/20/OCCL/WW4	EE/Q2/20/OCCL/WW5	EE/Q2/20/OCCL/WW1	EE/Q2/20/OCCL/WW3
1.	Colour	Units	APHA 2120	100	25	22	18	42	10
2.	Sulphate as SO <sub>4</sub>	mg/l	IS 3025 (P-24)	1000	98.52	106.84	87.83	128.42	135.96

BDL - Below Detectable Limit.

 Checked By : 


- 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 for 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-B, Opp. D-Mart Mall,  
Gandhidham, Dist.: Kutch - 370201, Gujarat, INDIA  
Phone: 02835-237150, Cell: 09724734757  
E-Mail: earthenvirotech@gmail.com,  
Web: www.earthenvirotech.com

Report No.: EE/LAB/EA/2020/07/001

Date: 29/07/2020

### ANALYSIS REPORT

Name and Address Of Client	M/s Oriental Carbon & Chemicals Ltd Plot No. 141/P, Mundra SEZ Taluka: Mundra, Dist. Kutch: 370420
Sampling Done By:	Earth Envirotech Team
Method of Sampling	IS 5182 Part - 5: 2014
Analysis Start on	23/07/2020
Analysis end on	28/07/2020

### 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:	20.07.2020	20.07.2020	21.07.2020	21.07.2020
				Code	EE/20/Q2/OCC/AA1	EE/20/Q2/OCC/AA2	EE/20/Q2/OCC/AA3	EE/20/Q2/OCC/AA4
1.	Particulate Matter $PM_{10}$	$\mu g/m^3$	100	IS 5182 Part 3: 2017	70.52	75.88	72.24	69.47
2.	Particulate Matter $PM_{2.5}$	$\mu g/m^3$	60	CPCB manual Volume I	28.63	35.47	30.41	27.63
3.	Sulphur Dioxide ( $SO_2$ )	$\mu g/m^3$	80	IS 5182 Part 2: 2017	20.68	25.63	23.67	18.47
4.	Nitrogen Dioxide ( $NO_2$ )	$\mu g/m^3$	80	IS 5182 Part 6: 2017	25.41	27.89	23.00	

Checked By:

Authorized Signatory:

- Analysis is subject to the conditions in which the sample is received at our laboratory.
- Report can not be used as an evidence anywhere including judicial purpose without our prior permission.
- Sample will be retained for one month from the date of sampling.





Report No.: EE/EA/ENV/12/0025/001094

Date: 14/05/2020

### ANALYSIS REPORT

Client Details		Sample Details	
Name	M/s. Jagan Cement Private Ltd.	Sample Code	EE/EA/TO/0001
Address	Plot No. 1, Block - B, Sector 13, Gurgaon Adm. Part & 123, 1st Floor	Location	Adm. Adm. Building
Sampling Done By	Earth Envirotech Lab	Quantity	100g
Analysis Starts on	13/05/2020	Date of Sampling	13/05/2020
Analysis Completion On	14/05/2020	Sampling Method	IS 3102 Part 1 - 2017
		Sample Received Date	12/05/2020

### AMBIENT AIR MONITORING RESULTS

Sl. No.	Parameters	Unit	Result Meta Adm. Building	National Ambient Air Quality Standards (NAAQS)	Reference Method
1.	Total Suspended Particulate (TSP)	ug/m <sup>3</sup>	17.43	50	IS 3102 Part 1 - 2017
2.	Particulate Matter (PM <sub>10</sub> )	ug/m <sup>3</sup>	14.22	50	IS 3102 Part 1 - 2017
3.	Respirable Suspended Particulate (RSP)	ug/m <sup>3</sup>	14.22	50	IS 3102 Part 1 - 2017
4.	Nitrogen Dioxide (NO <sub>2</sub> )	ug/m <sup>3</sup>	24.48	50	IS 3102 Part 1 - 2017

Checked By:

M. A. Jagan



- All data is subject to the accuracy of the data provided by the client.
- Report is for information only and not for legal proceedings.
- Sample will be retained for 15 days from the date of analysis.



*[Handwritten Signature]*

Report No.: ETE/14-E-ENV/02/2020/01/0919

304/100220007

### ANALYSIS REPORT

Client Details		Sample Details	
Name	M/L Tarang Chemicals Pvt. Ltd.	Sample Code	ET/02/20/01/0919
Address	Plot No. 2, Block - B, Sector 12 E, Kirti Park, GATE, Ind. Nagar, Gurgaon, Haryana	Location	Block
Sampling Done By	Earth Envirotech Team	Sampling Instrument	Stack Monitoring Kit
Analysis Station	1507/2020	Date of Sampling	11/07/2020
Analysis Completion On	15/07/2020	Sampling Method	Continuous Monitoring per IS 1507-1:2007
		Sample Received Date	11/07/2020

### STACK MONITORING ANALYSIS RESULTS

Sr. No.	Parameters	Unit	Result Earlier	Limit as per CPCB Norms	Reference Method
1.	Particulate Matter (PM)	mg/m <sup>3</sup>	85.76	100	IS 1507-1:2007
2.	Sulphur dioxide (SO <sub>2</sub> )	ppm	23.48	100	IS 1507-2:2007
3.	Oxides of Nitrogen (NOx)	ppm	22.98	50	IS 1507-3:2007

Checked By:

*E. A. T. O.*



- Report is valid only for the purpose of which the sample is received at our laboratory.
- Report can not be used for any other purpose without our prior permission.
- Sample will be retained 15 days from the date of sampling.



*Signature*

Report No.: EE/AN/ENV/25/000597/006

Date: 16/02/2020

### ANALYSIS REPORT

Client Details		Sample Details	
Name	M/s. Ferran Construction Pvt. Ltd.	Sample Code	EE/25/000597/017
Address	Plot No. 5, Block - 5, Sector 12-3, Acara Park & 522, Tarun Mehra East Gurgaon	Location	TS-5a
Sampling Done By	Earth Envirotech Team	Sampling Instrument	Stack Analyzing Kit
Analysis Starts on	16/02/2020	Date of Sampling	11/02/2020
Analysis Completion On	16/02/2020	Sampling Method	Gas Metro Sampling G17255, PX2F-23
		Sample Received Date	11/02/2020

### STACK MONITORING ANALYSIS RESULTS

Sr. No.	Parameters	Unit	Results	Limit as per GPCB Norms	Reference Method
1.	Particulate matter (PM)	mg/m <sup>3</sup>	180.70	500	IS 11955 Part 1
2.	Sulphur dioxide (SO <sub>2</sub> )	ppm	35.68	100	IS 11955 Part 2
3.	Oxides of Nitrogen (NOx)	ppm	75.54	50	IS 11955 Part 3

Checked By:  
R.A. Jany



- ✓ We hereby declare that the analysis is done as per the sample received at our Laboratory.
- ✓ Report is not for legal or evidential purpose. It is only for information.
- ✓ We do not hold any liability for the cost of sampling.



*Signature*



**Report No.: IITL-AM-97-02 (XEROGRAPH)**

Received: 18 July 2021

## ANALYSIS REPORT

Client Details		Sample Details	
Name	ABC Chemicals Corporation, Pvt. Ltd.	Sample Code	CC-2024/001/005
Address	Plot No. 12, Sector 45, Gurgaon	Location	At site location
	Area: Plot 12/1, 1st Floor	Quantity	1kg
	State: Haryana	Date of Measurement	11/07/2024
Measurement Done By	Dr. R. Sharma	Sampling Instrument	Standard Gravimetric Method
Measurement Completion Date	11/07/2024	Sampling Method	Gravimetric Method (ISO 11035)

### NOISE MONITORING RESULTS

Sr. No.	Location Name	Units	Day Time	Night Time
			Spot Noise level dB (A) Maximum	Spot Noise level dB (B) Maximum
	Standard Limit	dB	75	70
1.	Conveying Jams	dB	73.5	68.5
2.	Near Operation Machine	dB	74.5	67.5
3.	Near Window Area	dB	71.0	65.0
4.	Extruder Floor	dB	69.4	65
5.	Footstep	dB	72.2	68.0
6.	Utility Room	dB	69.9	66.4

Checked by \_\_\_\_\_

2000

Authorized Representative



- Analysis subject to the condition in which the sample was used in the laboratory
- Do not use sample used in other ways previously including scientific, forensic, without our express permission
- Samples will be disposed of 10 days from the date of sampling



Form No.: EEA/ANAL/02/002-01-008

Date: 18/07/2020

### ANALYSIS REPORT

Client Details		Sample Details	
Name	M/s. Arun Agrochemicals Pvt. Ltd.	Sample Code	EEA/02/002/2020
Address	Plot No. 18, Block - F, Sector-12, II Phase, Jyoti S. 22, Sector-28, Khariv, Dist. Kuruk.	Location	127-20/01
		Quantity	25
Sampling Done By	Earth Envirotech Team	Date of Sampling	17/07/2020
Analysis Start on	17/07/2020	Sampling Method	APHA-1000
Analysis Completion On	18/07/2020	Sample Received Date	17/07/2020

### WASTE WATER ANALYSIS RESULTS

Sr. No.	Parameters	Unit	Results
1.	pH	-	8.34
2.	Temperature	°C	25
3.	Total Dissolved Solids	mg/L	490
4.	Total Suspended Solids	mg/L	17
5.	Chloride	mg/L	2
6.	Ammoniacal Nitrogen	mg/L	0.1
7.	Chemical Oxygen Demand	mg/L	55.00
8.	Biochemical Oxygen Demand at 20°C in 5 days (BOD <sub>5</sub> )	mg/L	100
9.	Total Chlorine	mg/L	10
10.	Potential Sodium	mg/L	2.1

Checked By:



- Analysis & delivery is the condition of report the sample proceeds at our laboratory.
- Report cannot be used as evidence anywhere including laboratory purpose without our prior permission.
- Samples will be retained till 15 Days from the date of sampling.



*Handwritten signature*





# Earth Envirotech

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY  
an ISO 9001:2015 Certified Laboratory, ISO 14001:2004 Approved Environmental Monitoring

## EARTH ENVIROTECH

7 & 15, Ground Floor, Madhav Palace,  
Plot No. 55, Sector 8, Gurgaon, Haryana, India  
Gurgaon, Dist. Gurgaon - 122001, Gurgaon, India  
Phone: 02834 237150 / Cell: 09726734757  
E-Mail: earthenvirotech@gmail.com  
Web: www.earthenvirotech.com

Report No.: ENV/ANALYST/001/2014

Date: 18/01/2014

### ANALYSIS REPORT

Client Details		Sample Details	
Name	M/S. JEEVA (Central India Pvt. Ltd.)	Sample Code	EE/AN/01/TH/01/14
Address	Plot No. 1, Block - B, Sector - 12, 1, Gurgaon, Dist. Gurgaon, Haryana	Location	As per label
		Quantity	144
		Date of Measurement	11/01/2014
Measurement Done By	Earth Envirotech Team	Sampling Instrument	Lux Meter (LUX-100 A)
Measurement Completion Date	11/01/2014	Sampling Method	Random - 5x 100 ft. (any place)

### LUX MONITORING RESULTS

Sr. No.	Location Name	In Lux (Day Time)	In Lux (Night Time)	Illumination lux (As per Standard 33-66 Part-3)
1	Near Generator Machine	200	250	200

Checked by:

E. A. Jeeva



*Signature*

- Any analysis is subject to the conditions in which the sample is received at our laboratory.
- Consent can not be given as an evidence provided and signed by the client without our prior permission.
- Sample will be stored for 30 days from the date of sampling.



ISO 9001:2015



ISO 14001:2004



ISO 18001:2007

# **Annexure – 4**

## Chiragsing Rajput

---

**From:** Chiragsing Rajput  
**Sent:** Wednesday, May 13, 2020 4:34 PM  
**To:** 'ro-gpcb-kute@gujarat.gov.in'; rowz.bpl-mef@nic.in; mefcc.ia3@gmail.com; monitoring-ec@nic.in; ms-gpcb@gujarat.gov.in  
**Cc:** Shalin Shah; Azharuddin Kazi; Vivek Gundraniya; Kripa Shah; Mahendra Kumar Ghritlahre (Mahendra.Ghritlahare@adani.com); Ashvin Kumar Patni; Dhanesh Tank  
**Subject:** Intimation Letter\_Restart of Environment Monitoring Activities\_APSEZ, Mundra  
**Attachments:** Letter\_Restart Environmental Monitoring\_12.05.2020.pdf

Dear Sir,

In reference to trailing mail, please find attached intimation letter regarding of restarting of environmental monitoring activities within Adani Ports and SEZ Limited, Mundra (Kutch) from 12<sup>th</sup> May, 2020 after getting requisite permission from Port authority / district administration.

Kindly consider above submission and oblige.

Thanks & Regards  
Chiragsing Rajput

---

**From:** Chiragsing Rajput  
**Sent:** Monday, April 6, 2020 6:14 PM  
**To:** 'ro-gpcb-kute@gujarat.gov.in' <ro-gpcb-kute@gujarat.gov.in>; rowz.bpl-mef@nic.in; mefcc.ia3@gmail.com; monitoring-ec@nic.in; 'ms-gpcb@gujarat.gov.in' <ms-gpcb@gujarat.gov.in>  
**Cc:** Shalin Shah <Shalinm.Shah@adani.com>; Azharuddin Kazi <Azharuddin.Kazi@adani.com>; Vivek Gundraniya <vivek.gundraniya@adani.com>; Kripa Shah <Kripa.Shah@adani.com>; Mahendra Kumar Ghritlahre (Mahendra.Ghritlahare@adani.com) <Mahendra.Ghritlahare@adani.com>; Ashvin Kumar Patni <AshvinKumar.Patni@adani.com>; Dhanesh Tank <Dhanesh.Tank@adani.com>  
**Subject:** Intimation Letter\_Stoppage of Environment Monitoring due to COVID-19\_APSEZ, Mundra

Dear Sir,

Please find attached intimation letter w.r.t. stoppage of environmental monitoring within Adani Ports & SEZ Limited, Mundra, Kutch (Gujarat) since 23<sup>rd</sup> March, 2020 considering COVID-19 Pandemic lockdown.

So kindly consider this submission and oblige.

Thanks & Regards,  
Chiragsing Rajput  
Environment Cell | Adani Ports & Special Economic Zone Ltd.  
Mob +91 9687678443 | Ext: 52132 | [chiragsing.rajput@adani.com](mailto:chiragsing.rajput@adani.com) | [www.adani.com](http://www.adani.com)  
Adani House, 1<sup>st</sup> Floor, P.O. Box 1, Mundra 370421, Gujarat, India.



APSEZL/EnvCell/2020-21/006

Date: 12.05.2020

To,

**Regional Officer,**

**Regional Office – East Kutch**

Gujarat Pollution Control Board,

Gandhidham – 370201.

**Subject:** Intimation for Restart of environmental monitoring within APSEZ, Mundra (Kutch, Gujarat).

**Ref.:** Our letter & E-mail dated 06.04.2020 (**Annexure – A**)

Dear Sir,

With reference to above stated subject, we would like intimate you that, we have stopped the environmental monitoring activities within APSEZ, Mundra since 23<sup>rd</sup> March, 2020 due to COVID – 19 Pandemic lockdown and same has been intimated to your good office vide our letter as well as E-mail dated 06.04.2020.

Now we have restarted environmental monitoring activities within APSEZ, Mundra from 12<sup>th</sup> May, 2020 after obtaining requisite permissions from Port authority and district administration.

This is for your kind information and reference.

Thanks & Regards

**For, Adani Ports and Special Economic Zone Limited**



**Shalin Shah**

**(Head – Environment)**

**CC To:**

1. Member Secretary, GPCB – Head Office, Paryavaran Bhavan, Sector 10 A, Gandhi Nagar – 382 010.
2. APCCF, Regional Office (WZ), MoEF&CC, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Link Road No. – 3, Bhopal – 462 016.
3. The Director (IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003.

Adani Ports and Special Economic Zone Ltd  
Adani House,  
PO Box No. 1  
Mundra, Kutch 370 421  
Gujarat, India  
CIN: L63090GJ1998PLC034182

Tel +91 2838 25 5000  
Fax +91 2838 25 51110  
info@adani.com  
www.adani.com

## Chiragsing Rajput

---

**From:** Chiragsing Rajput  
**Sent:** Monday, April 6, 2020 6:14 PM  
**To:** 'ro-gpcb-kute@gujarat.gov.in'; rowz.bpl-mef@nic.in; mefcc.ia3@gmail.com; monitoring-ec@nic.in; 'ms-gpcb@gujarat.gov.in'  
**Cc:** Shalin Shah; Azharuddin Kazi; Vivek Gundraniya; Kripa Shah; Mahendra Kumar Ghritlahre (Mahendra.Ghritlahare@adani.com); Ashvin Kumar Patni; Dhanesh Tank  
**Subject:** Intimation Letter\_Stoppage of Environment Monitoring due to COVID-19\_APSEZ, Mundra  
**Attachments:** Letter\_Stoppage of Envionmental Monitoring due to COVID-19.pdf

Dear Sir,

Please find attached intimation letter w.r.t. stoppage of environmental monitoring within Adani Ports & SEZ Limited, Mundra, Kutch (Gujarat) since 23<sup>rd</sup> March, 2020 considering COVID-19 Pandemic lockdown.

So kindly consider this submission and oblige.

Thanks & Regards,  
Chiragsing Rajput  
Environment Cell | Adani Ports & Special Economic Zone Ltd.  
Mob +91 9687678443 | Ext: 52132 | [chiragsing.rajput@adani.com](mailto:chiragsing.rajput@adani.com) | [www.adani.com](http://www.adani.com)  
Adani House, 1<sup>st</sup> Floor, P.O. Box 1, Mundra 370421, Gujarat, India.





APSEZL/EnvCell/2020-21/001

Date: 06.04.2020

To,

**Regional Officer,**

**Regional Office – East Kutch**

Gujarat Pollution Control Board,

Gandhidham – 370201.

**Subject:** Intimation for stoppage of environmental monitoring within APSEZ, Mundra (Kutch, Gujarat) during COVID – 19 Pandemic lockdown.

**Ref.:** Regulatory Permission obtained by APSEZ, Mundra (Kutch, Gujarat) as per attached **Annexure – 1.**

Dear Sir,

With reference to above stated subject, we would like intimate you that, in compliance to various regulatory permissions granted by MoEF&CC / SEIAA as well as SPCB for various project, M/s. Adani Ports and SEZ Limited, Mundra (Kutch, Gujarat) has been regularly carrying out post environment clearance, monitoring (environmental attributes viz. Air, Water, Noise, Soil, Marine etc.) through NABL accredited / MoEF recognized laboratory and same is being reported/submitted to regulatory body periodically.

However, considering the current scenario of COVID – 19 Pandemic lockdown, we were forced to stop the Environmental Monitoring from 23<sup>rd</sup> March, 2020 and same shall be restarted after completion of this lockdown period and/or when the condition is normalized (as directed by district administration/State/Central Govt.). The date of restart of Environment Monitoring, shall be communicated to your good office.

Kindly consider our above submission and oblige.

Thanks & Regards

**For, Adani Ports and Special Economic Zone Limited**



**Shalin Shah**

**(Head – Environment)**

**CC To:**

1. Member Secretary, GPCB – Head Office, Paryavaran Bhavan, Sector 10 A, Gandhi Nagar – 382 010
2. APCCF, Regional Office (WZ), MoEF&CC, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Link Road No. – 3, Bhopal – 462 016
3. The Director (IA Division), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003

Adani Ports and Special Economic Zone Ltd  
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Gujarat, India

Tel +91 2838 25 5000  
Fax +91 2838 25 51110  
info@adani.com  
www.adani.com

## ANNEXURE – 1

### REGULATORY PERMISSIONS

Sr. No.	Permission for	Ref. No. & Dated
<b>Environmental / CRZ clearance from MoEF&amp;CC / SEIAA</b>		
1.	Handling facility of General Cargo / LPG /Chemicals and their storage terminal	F. No. J-16011/13/95-IA.III, 25 <sup>th</sup> August, 1995
2.	Port expansion project including dry/break bulk cargo container terminal, railway link and related ancillary and back-up facilities	F. No. J-16011/40/99-IA.III, 20 <sup>th</sup> September, 2000
3.	Single Point Mooring (SPM), Crude Oil Terminal (COT) and connecting pipes	F. No. J-16011/30/2003-IA-III, 21 <sup>st</sup> July, 2004
4.	Development of Multipurpose berth (Terminal- 2)	F. No. 11-84/2006- IA.III, 5 <sup>th</sup> February, 2007
5.	Water Front Development Project	F. No. 10-47/2008- IA.III, 12 <sup>th</sup> & 19 <sup>th</sup> January, 2009, 7 <sup>th</sup> October, 2015
6.	Township and area development project	Letter No. SEIAA/GUJ/EC/8(b)/44 /2010, 20 <sup>th</sup> February, 2010
7.	Establishment of Common Effluent Treatment Plant (CETP) of 17 MLD	Letter no. SEIAA/GUJ/EC/7(h)/43/2010, 20 <sup>th</sup> February, 2010
8.	Multi Product SEZ, Desalination, Sea Water Intake, Outfall Facility and Pipeline	F. No. 10-138/2008-IA.III, 15 <sup>th</sup> July, 2014
<b>Consent to Operate from SPCB</b>		
1.	Mundra Port Terminal ( <b>PCB ID: 17739</b> ) for handling, storage and distribution of Dry, Liquid and Containerized Cargo	Order No. AWH-83561, Dated 09.02.2017
2.	WFDP – West Port ( <b>PCB ID: 35427</b> ) for Dry cargo handling	Order No. AWH-79241, Dated 28.07.2016
3.	SPM and Pipeline for Crude Oil Terminal ( <b>PCB ID: 37436</b> )	Order No. WH-86980, Dated 30.08.2017
4.	Multi Product SEZ ( <b>PCB ID: 31463</b> )	Order No. AWH-88998, Dated 23.11.2017
5.	MUPL – CETP ( <b>PCB ID: 10605</b> ) for 2.5 MLD Capacity	Order No. AWH-79311, Dated 29.07.2016
6.	AMSIPL ( <b>PCB ID: 10602</b> ) for township and area development	Order No. AWH-89533, Dated 05.12.2017
7.	APSEZ, Residential colony ( <b>PCB ID: 17738</b> ) for STPs (350 + 250 KLD) & RO Plant (10 KLPH)	Order No. AWH-81075, Dated 12.09.2016
8.	MLPTPL ( <b>PCB ID: 53331</b> ) for handling, storage and distribution of LPG	Order No. AWH-103906, Dated 09.11.2019

# **Annexure – 5**



# RELIANCE INDUSTRIES LIMITED

Jamnagar IDTA Manufacturing Division  
Village Meghwar (Padma), Taluka : Talpur Dist: Jamnagar  
Gujarat, India PIN-361140

CENTRAL LABORATORY  
REFINERY AND PETROCHEMICALS DIVISION

## BATCH FORMATION CERTIFICATE

High Speed Diesel BS VI

(IS 1460:2017)

Batch No. : HSD/BS-VI/RIL/652-006/696

REF/DIAGNOSTIC No. : RMD/WHI/BS-VI/SSM/016-202

Task No. : 951006

Date of Report : Aug 10, 2020

Date of Testing : Aug 10, 2020

Date of Sampling : Aug 9, 2020

LIMS Id. : 17012185

Sr. No.	Tests	UNIT	Method	Limit	Test Results
1	Appearance		Visual	Clear, bright and free from sediments, suspended matter and undissolved water at normal ambient fuel temperature	Clear, bright and free from sediments, suspended matter and undissolved water at normal ambient fuel temperature
2	Cetane index	Non	ASTM D4737	46.0 Min	54.4
3	Pour point	°C	IS 1448(P-10)	15 MAX	-25
4	Cu corrosion (3 hrs. at 50°C)	Rating	IS 1448(P-15)	Not worse than 1	1b
5	95% Recovery point	°C	IS 1448(P-16)	190.0 Max	151.1
6	Flash point (PWC)	°C	IS 1448(P-21)	66.0 Min	68
7	Kinematic Viscosity at 40°C	cSt	IS 1448(P-25)	2.000 - 4.500	2.030
8	Density at 15°C	kg/m3	ASTM D4052	810.0 - 845.0	818.1
9	Total sulphur	mg/kg	ASTM D5455	10 MAX	7.5

### Note :

- 1) Results relate to the item tested only.
- 2) Test report shall not be reproduced except in full without written permission of the Laboratory.
- 3) The product meets requirements as per IS 1460-2017 (Sixth revision)



# RELIANCE INDUSTRIES LIMITED

Jambhagar-DTA Manufacturing Division  
Village Meghpur/Padana, Taluka : Larpur Dist: Jamnagar  
Gujarat, India. PIN: 361140

CENTRAL LABORATORY  
REFINERY AND PETROCHEMICALS DIVISION

## BATCH FORMATION CERTIFICATE

High Speed Diesel BS VI

(IS 1460:2017)

Batch No. : HSD[BS-VI]/RIL/652-006/696  
BEE/CIA/ISC No. : IND/HSD[BS-VI]/SCB/06-202  
Tank No. : 651006

Date of Report : Aug 10, 2020  
Date of Testing : Aug 10, 2020  
Date of Sampling : Aug 9, 2020  
LIMS ID : 17012185

Place : Sikka, India  
Date : Aug 11, 2020

Kushal S. Shetty  
Authorized Signatory  
For and on behalf of  
RELIANCE INDUSTRIES LIMITED

This is electronically generated document, hence no signature is required.



## **Test Report**

<b>ULR - TC63492000000377P</b>					
<b>Discipline: Chemical Testing,</b>					
<b>Group: Petroleum Products.</b>					
Report No.	:	JOB/CAA/JAM/20/002249	Sample Id No.	:	1779
Received Date	:	10.10.2020	Reported Date	:	12.10.2020

Name of Customer	:	Adani Bunkering Pvt. Ltd.
Address of Customer	:	"Adani Corporate House" Shantigram, Near Vaishno Devi Circle, S.G. Highway, Khodiyar, Ahmedabad, Gujarat – India. 382421.
Samples Received From	:	Customer
Date of Analysis	:	10-12/10/2020
Sample Descriptions (As Declared)		
Product Name	:	LSMGO
Sample Status	:	Sealed & Satisfactory
Other Details	:	Tank No. 107, Date: 09.10.2020 Volumetric Composite Sample

The Above Sample(s) was/were Examined as Detailed Above and The Following Results Obtained.

Sr. No.	Test	Unit	Test Method	Limit	Specification, ISO: 8217:2017	Result
1	Density at 15 °C	Kg/M <sup>3</sup>	ISO 3675	Max	890.0	<b>821.5</b>
2	Viscosity at 40 °C	Mm <sup>2</sup> /S	ISO3104	Min Max	2.000 6.000	<b>2.514</b>
3	Carbon Residue Micro Method on the 10% Volume Distillation Residue	%Mass	ISO 10370	Max	0.30	<b>0.03</b>
4	Water Content	%(V/V)	ISO 3733	Max	--	<b>&lt;0.05</b>
5	Sulphur Content	%Mass	ASTM D 5453	Max	0.1	<b>0.046</b>
6	Total Sediment by Hot Filtration	%(M/M)	ISO 10307-1	Max	Report	<b>&lt;0.01</b>
7	Cold Filter Plugging Point	°C	IP-309	Max	Report	<b>(-) 16</b>
8	Ash Content	%(M/M)	ISO 6245	Max	0.010	<b>0.0015</b>
9	Flash Point	°C	ISO 2719	Min	60	<b>64.0</b>
10	Pour Point (Summer)	°C	ISO 3016	Max	-	<b>(-) 21</b>
11	Cloud Point	°C	ISO 3015	Max	-	<b>(-) 9</b>
12	Calculated Cetane Index	--	ISO 4264	Min	40	<b>54.1</b>
13	Appearance	--	VISUAL		Clear & Bright	<b>Clear &amp; Bright</b>
14	Acid Number	MgKOH/G	ASTM D664	Max	0.5	<b>0.035</b>
15	Oxidation Stability	G/M <sup>3</sup>	ISO 12205	Max	25	<b>16</b>
16	Hydrogen Sulphide	Mg/Kg	IP 570	Max	2	<b>&lt;0.4</b>
17	Lubricity, Corrected Wear Scar Diameter (Wsd 1.4 At 60 °C)	Um	ISO 12156-1	Max	520	<b>418</b>

\*Note: Hydrogen Sulfide Tested at Our Mumbai Lab

-: End of Report: -

  
Jayanti Koringa  
(Authorized Signatory)

# **Annexure – 6**

### Cost of Environmental Protection Measures

Sr. No.	Activity	Cost incurred (INR in Lacs)			Budgeted Cost (INR in Lacs)
		2018 – 19	2019 – 20	2020 – 21 (Till Sep'20)	2020 – 21
1.	Environmental Study / Audit and Consultancy	6.7	0.33	2.0	51.0
2.	Legal & Statutory Expenses	4.42	0.84	10.09	11.0
3.	Environmental Monitoring Services	20.36	21.74	8.46	30.0
4.	Hazardous / Non Hazardous Waste Management & Disposal	95.72	108.43	44.34	119.8
5.	Environment Days Celebration and Advertisement / Business development	0.28	1.5	0.94	10.0
6.	Treatment and Disposal of Bio-Medical Waste	1.21	1.62	1.08	1.68
7.	Mangrove Plantation, Monitoring & Conservation	47.0	Nil	Nil	Nil
8.	Other Horticulture Expenses	579.32	734.18	490	910
9.	O&M of Sewage Treatment Plant and Effluent Treatment Plant (including STP, ETP of Port & SEZ & Common Effluent Treatment Plant)	144.29	110.18	81.09	160.08
10.	Expenditure of Environment Dept. (Apart from above head)	109.28	105.13	41.44	107.44
Total		1008.58	1083.95	679.44	1401.0

# **Annexure – 7**



# C S R   K U T C H

## ► Six Monthly Report 2020-21

### **Adani Foundation**

Adani House, Port Road, Mundra – Kutch 370 421  
[[info@adanifoundation.com](mailto:info@adanifoundation.com)] [[www.adanifoundation.com](http://www.adanifoundation.com)]





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# Fight Against COVID-19

While most of the nation is locked in the safe confines of home, Adani foundation is doing various activity in villages during lock-down period to fight against COVID-19.

24

villages of Mundra block Sanitized



Adani Foundation had done sanitization work with coordination of Fire Department APSEZ in 22 Villages in Mundra.

45000+

Mask prepared by SHG group



Adani Foundation has supported SHG Groups of Mundra, Mota Kapaya, Navinal, Nakhtrana and Lakhpatri for mask preparation.

1800+

food packet per day two time



For The workers, drivers and labors of APSEZ and AWL Cost free Fresh Food Support (Breakfast, Lunch and Dinner) in AWL premises , Port premises and SEZ Premises.

9000+ ration kit support



Ration Kit support to Daily Wage Labors and Needy people

150+ beneficiaries covered



Mobile health care unit is providing primary treatment to community at door step and also creating awareness to fight against Corona virus.

12500 people connected



By Awaz De software creating awareness in people in local kutchi language.

1400+ patient covered



AHMPL is providing all services IPD and OPD during lockdown period. social distance maintained during Pharmacy and queue for consultancy.

Important of handwashing & hygiene



Creating awareness of handwashing and hygiene by Sangini

57 senior citizens of old age home



During lockdown period our team providing medical facility to senior citizens at old age home in Mandvi and Gundala

# Environmental Sustainability

Sustainable development has many important facets/components like social, economic, environmental, etc. these components are closely interrelated and mutually re-enforcing. Under Corporate Environmental responsibility 10 km radius villages from SEZ Boundaries.

To make connections between human actions and the level of biological diversity found within a habitat and/or ecosystem, this year we launch project "Sanrakshan" in coordination with GUIDE and Sahjeevan.





# Environmental Sustainability

## Water Conservation Projects

Since 10 years considerable Water Conservation Work carried out in Mundra Taluka. Due to satisfactory rain in current year 1.11 mtr ground water table increased as per Government Figures. Our water conservation work is as Below.

- A large number of water harvesting structure ( 18 Nos. of check dams in coordination with salinity department)
- Ground recharge activities (pond deepening work for more than 52 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers
- Roof Top Rain Water Harvesting 54 Nos. which is having 10,000 litre storage which is sufficient for one year drinking water purpose for 5 people family.
- Recharge Bore well 75 Nos which is best ever option to conserve ground water





# Environmental Sustainability

## Water Conservation Projects

- Drip Irrigation 823 Farmers benefitted in coordination with Gujrat Green Revolution Company
- Participatory Ground Water Management in ten villages with holistic approach for Kankavati Sandstone Aquifer Programme
- **As per Average Calculation more than 450 hac. area benefitted with increased in 109 MCFT water Quantity.**



# Environmental Sustainability

## Bio Diversity Park – Mundra

Ecological greenbelt development plan expects to attract and provide habitats for many species of major faunal groups such as amphibians, reptiles, birds (terrestrial and aquatic), butterflies and mammals. Further this developed area can act as recreational, educational and interpretation center for the community of the corporate sector to understand and enhance their knowledge base on local environmental and ecological scenario.

Adani Foundation, Mundra-Kutchh proposed a biodiversity park at 5 acres Nandi Sarovar area and approached to Sahjeevan, Bhuj for technical support for same. Sahjeevan team visited this proposed site for development of greenbelt to support biodiversity and enhancement of overall ecological food web existing in and around the landscape in first phase.

In addition, senior team of Adani Foundation and Sahjeevan also discussed in details for this program and suggested to initiate an interpretation center for awareness to various stakeholders on very unique biodiversity of Kutchh region in second phase.



# Environmental Sustainability

## Bio Diversity Park – Mundra

Zone wise different habitats identified by technical team, i.e. Outside Plot Area, Along Waterlogged Area, Climber/Twiner Area, New Plantation Area, Entry Gap Filing Area, Gate Area, and Wetland Area within the proposed project area, technical team will develop a list of species that are representative of mature, undisturbed local forests, grasslands and wetlands. The chosen species will be typical of the species composition of local habitats. Main objectives are :-

Develop a list of plant species that can be chosen on the basis of aesthetic characteristics, in particular for the beauty/abundance of their flowers, eventually of their fruits/foilage.

Define information on different types activities involved under this ecological greenbelt development project (i.e. butterflies areas, medicinal plants areas, birds areas etc.).

Develop a manual that will give guidelines for habitats based on local practices, for short term and long-term management.

Till date more than 2500 medicinal plants and 1000 native plants are planted, due to good rain growth is considerable





# Environmental Sustainability





# Environmental Sustainability

## Coastal Bio Diversity Park – Luni

Bio diversity Project has been Continue with three species *Rhizophora Mucronata*, *Ceripos Tagal*, *Ceriops Decandra* with good growth at Luni Bandar.

The mangrove biodiversity enrichment project in and around Adani ports special economic zone limited (APSEZL) aims to introduce select true mangrove species on a pilot scale in suitable coastal belts and assess their survival. Because this project is the first of its kind, the expected survival rate is between 20-30.

The project is currently in its initial stages of establishing nurseries and sowing seeds of several different species brought in from multiple locations in and outside of Gujarat state. These nurseries have been developed in tidal flats near the village of Luni, Kutchh, Gujarat.

The mangrove seeds/propagules) for the establishment of the nursery were brought in from various locations in India, namely, Machilipatnam (Andhra Pradesh), Pondicherry (Tamil Nadu), Parangipettai (Pichavaram Mangroves, Tamil Nadu), Kandla (Gujarat) and Jamnagar (Gujarat).





# Environmental Sustainability

## Coastal Bio Diversity Park – Luni

In most of these locations, there is adequate fresh water supply available due to high/substantial rainfall and/or presence of major rivers (also important river confluences and deltas that give rise to a thriving estuarine environment). Consequently, the mangrove species that successfully grow in those regions are adapted to a low-salinity environment (where salinity is approximately 20 ppt) against that of 37-44 ppt prevailing in Kutchh coastal waters. Furthermore, the species selected to establish the biodiversity enrichment project also belong to this group of mangrove species. This subsequently creates a challenge for the team heading this project because the Kachchh region does not provide adequate salinity ranges for survival of most of these species. In fact, it provides an extremely harsh saline environment (salinity can range up to as high as 44 ppt during summer).

Considering the above-mentioned scenario, the site selection criteria, need for species of high salinity tolerance and studying their natural occurrence in Kutchh becomes critical in ensuring a substantial survival rate of the mangrove species selected to potentially successfully establish a diverse and resilient mangrove community in the Kutchh region. Furthermore, a highly diverse set of mangrove species will ensure resilience in the face of changing climate and could probably provide as a thriving gene pool and seed bank in the future for the Kutchh region.



# Environmental Sustainability

## Tree Plantation

4110 Tree have been planted at various Public places , Schools, GP and crematorium with their responsibility to nurture and maintain regularly.



# Environmental Sustainability

## Drip Irrigation Projects

- **Basis of Requirements of Drip Irrigation**

The main source of livelihood being agriculture, the cultivators tend to use more and more underground water for irrigation. Underground waters have gone very highly saline. The use of such water for irrigation has made the soil also saline and the crop yields have dwindled.

- **Process of Drip Support**

Farmer have to applied in the prescribed form of Adani foundation with photograph.

Inspection and verification will be by AF representative.

Ration card, work order of G.G.R.C, 7/12 certificate and all bills must be attached.

Farmer will be informed by telephonic to have form query.

Primary information about farmer land will be received by telephone.

Farm visit within 10 days of after received of application and verified the installation of system as per map and material as per bill will be checked and get farmer feed back.

Verification report submitted to account office.

Payment within 20 days if all document is complete through net banking.

Farmer economic study after our support. – Follow up

- **We have covered 295 farmers and 1422 acre drip irrigation area in last two years which is remarkable for water conservation – in this six months we have covered 51 farmers and 310 Acre land for the same.**



# Environmental Sustainability

## Sea Weed Projects

The cultivation of seaweed have significant potential for the sequestration of carbon dioxide (CO<sub>2</sub>) and will very fulfill in mitigating the climate change. Seaweeds are macrophysics algae, a primitive type of plants lacking true roots, stems and leaves. They provides valuable source of raw material for industries like health food, medicines, pharmaceuticals, textiles, fertilizers, animal feed etc.

As per study of government of Gujarat, Seaweed culture can be best developed along the coast lines of Amreli and Kutchh districts in Gujarat. Juna bandar has good potential for seaweed farming as it has Calm and less wind action. We started this project as Pilot base at Junabadar with 50Kg Quantity. though there was good growth but due to cyclone it was damaged at present it 600Kg.

**In July 2020, We have done MOU with VRTI who is expert in Sea weed cultivation for supporting 20 fisherman in first phase for tank based sea weed farming. Dr. CVR Reddy (Ex- Director CSMSRI) is our Guide for the Project.**





# Environmental Sustainability

## Homebiogas Project

Home biogas is the Israel based company was founded in 2012 manufactures dynamic biogas unit not only for farm waste but for kitchen waste too.

Under Gram Utthan Project, Adani Foundation is supporting home biogas to farmers to Uthhan Villages phase wise. Current year supported 95 home biogas in Dhrub, Zarpara and Navinal Villages.

- Reducing organic waste,
- Transitioning to renewable energy
- Motivation for reduction in use for fertilizer

And Improving the health and living conditions for the millions of families that are still cooking on charcoal and wood. Adani Foundation is not only supporting but creating awareness to save environment and health of the community who regularly cooking on Chula. It is proven that one hour cooking on Chula is as dangerous as smoking 40 cigrates.

As a Main Process, Bacteria break down organic waste in a naturally occurring process, and Home Biogas stores and harnesses the energy created so that it can be used for gas.

Earlier we had proceeded for capacity 2 cum but after visit and series of meetings with farmer group – we need to take up plant capacity 6 cum.

Till date 54 farmers are utilizing it with satisfaction and considerable outcome by saving Average Rs. 1250 for gas and fertilizer as well.



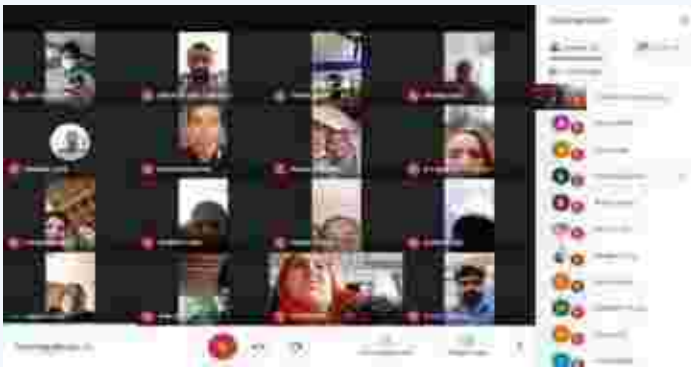


# Utthan

## Academic

- ✓ Utthan Sahayaks connected through WhatsApp and phone calls with the progressive learners from April – July
- ✓ July onwards structured 'Online classes' were started for Utthan Schools focusing Progressive learner on Google meet platform
- ✓ Utthan Shayaks made Annual syllabus, customized worksheets and TLM
- ✓ Weekly IT and Sports material were circulated in all Utthan Schools

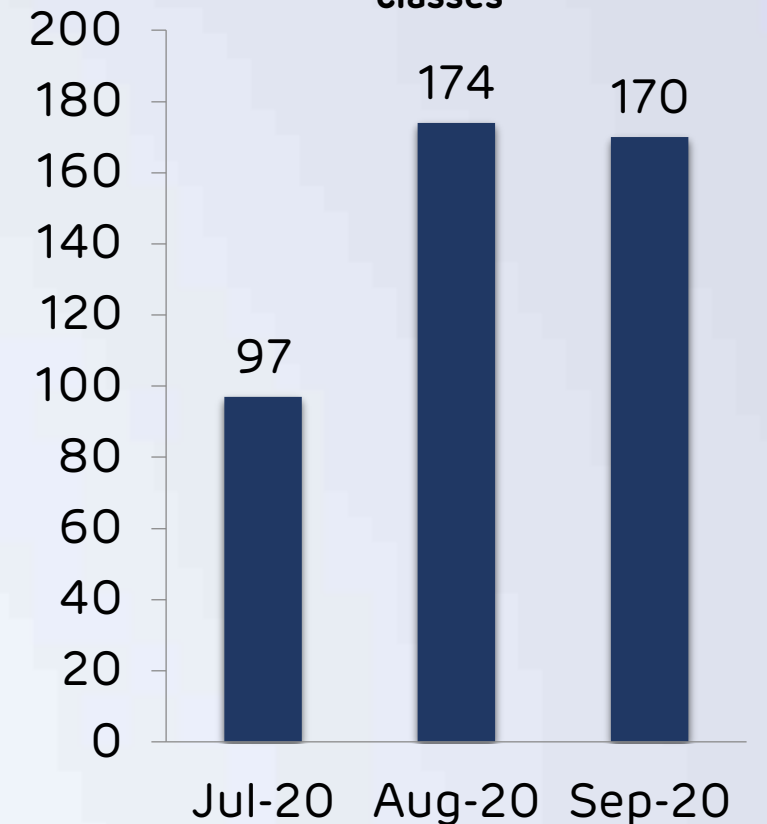
**Mother's meet** 3 Mothers' meet conducted 148 Mothers' were addressed



### Topic covered –

- Precaution during heavy rainfall and covid
- Active participation in online classes
- Spend quality time with your child
- Focus to develop creative skills amongst your kids

**Priya Vidyarthi in 17 Government Primary School : 259 (2020-21)**  
**No. of Priya Vidyarthi attending online classes**



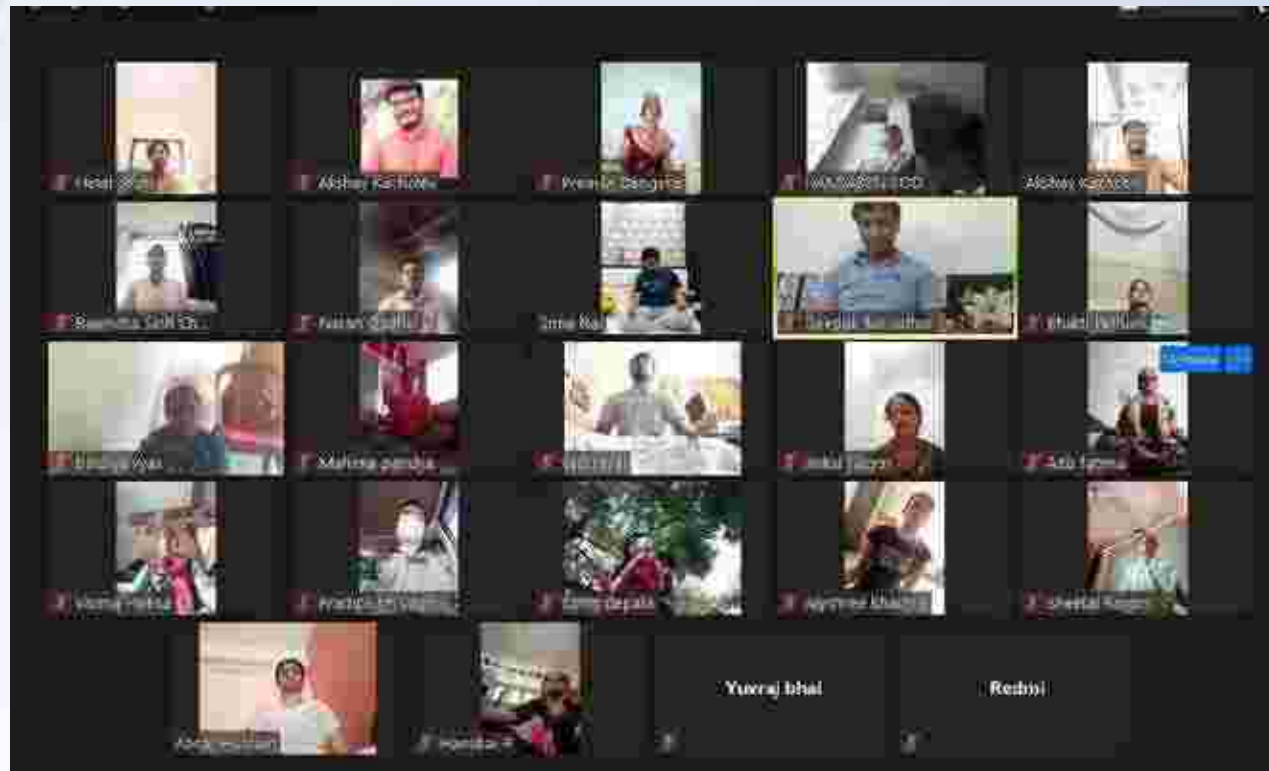
# Utthan

## 06 Virtual Capacity Building Program on various topic through Microsoft team

Apart from CPD Utthan Sahayks attended 30+ educational webinar during lockdown.

Topics covers -

- We're all at home-but you're not alone,
- Think big! Boost your learning
- Project for teen
- Teaching CLIL
- Building up confidence in writing skills
- An introduction to positive psychology well being for your classroom



# Utthan



Arrange various competition and celebration for Priya Vidyarthi



School Visit and Home Visit by Utthan Sahayak

## Meeting with School principals and Utthan Sahayaks

Conduct meeting with Principal / Teacher of Utthan schools, TPEO, BRC, CSR Head, Education Coordinator, Project Officer and Utthan Sahayaks through Microsoft Team

### Agenda:

- Utthan Sahayaks strengthen themselves by attending 30 + webinar
- Online courses conducted by Cambridge University
- Prepare worksheets especially for *Priya Vidyarthi* Annual curriculum for Reading, Writing, Maths, English, Library, IT, Sports
- Prepared Teaching Learning material Connect with *Priya Vidyarthi* by Online class + WhatsApp + Text messages + Home Visit
- Meeting with government officials



# Adani Vidya Mandir Bhadreshwar

Adani Vidya Mandir Bhadrashwar **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 **2020-21 490 students are studying.**

**82.60%** - Result SSC Board Exam



## Tab Distribution

Tablet provide to students of std 10<sup>th</sup> for online study through Employee Volunteering Programme and we distributed the tablets to students of Std 10. HOD's and HOS's of Adani Ports, Adani Power, Solar and Adani Wilmar and Adani Tuna had supported for online studies of Standard 10<sup>th</sup> Students of AVMB for smooth studies.





# Adani Vidya Mandir Bhadreshwar

## Activities Covered

- Admission process of std 1 students through draw system. 80 students selected out of 91. remain 11 students in waiting list
- Online Class through WhatsApp and you tube video
- Teachers are regularly visiting students house for checking homework and lessons with PPE's.
- supported Text-books to the students of all classes.
- Tab distribution to Std 10<sup>th</sup> students
- House Visit by Principal Madam & Vice Principal to irregular students.
- Hindi Day celebration
- Unit test conducted as per GSEB circular for the students. Paper received from CRC & Board for std 9<sup>th</sup> and 10<sup>th</sup>.





# Health

During this panic situation health is the basic need for development of community. Adani Foundation focuses on ensuring good health for better contribution to growth and progress.

## 11 Rural Clinic

8 from Mundra 3 from Anjar block treated ;

**8196** patients.

**31** villages covered, with 109 types of general and life saving medicines through Mobile healthcare unit

**6879** patients benefited during six month

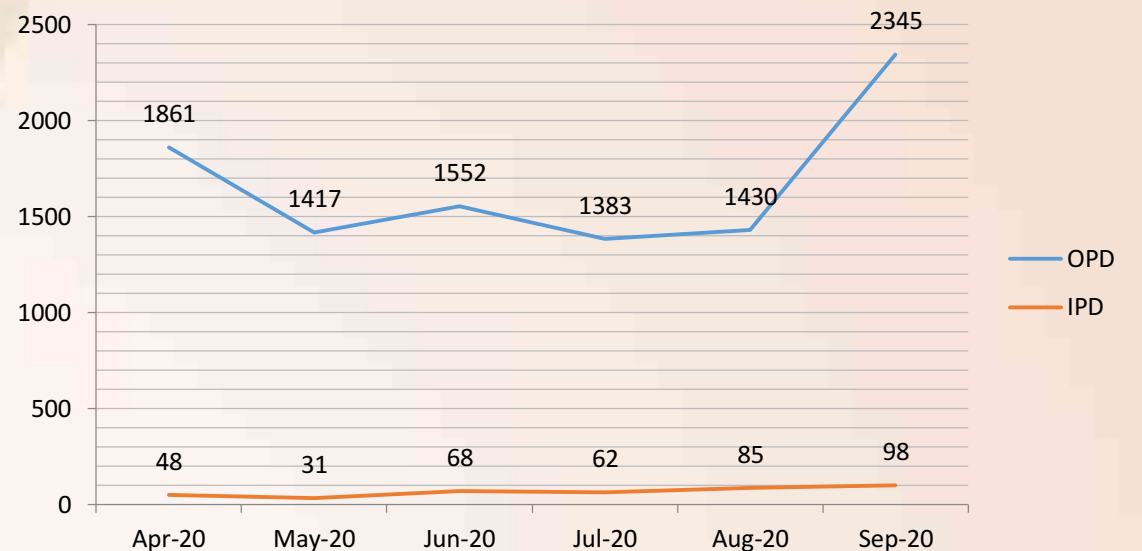


# Health

## Project wise detail

Project`	OPD/IPD						
	20-Apr	20-May	20-Jun	20-Jul	20-Aug	20-Sep	Total
Senior citizen	471	537	694	504	313	402	2921
Medical Supports	106	89	70	41	60	100	466
Dialysis Supports	43	51	41	36	35	30	236
Medical Mobile van	50	1470	1107	1234	1445	1573	6879
Rural Clinic	0	1653	1557	1705	1591	1690	8196
Total	670	3800	3469	3520	3444	3795	18698

## AHMPL OPD & IPD detail



AHMPL	Month						
	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Total
OPD	1861	1417	1552	1383	1430	2345	9988
IPD	48	31	68	62	85	98	392
Total	1909	1448	1620	1445	1515	2443	10380

# Health

## Dialysis Support



Due to high salinity, in Kutch cases of kidney failures are comparatively more. At Adani Hospital we are providing dialysis treatment with token charges. We have provided treatment to 6 patients of kidney failure 236 times.



### Sr. Citizen project

8672 Card holders of 68 villages get benefit under this project .

2921 sr. citizen patients benefited during six month 8000 limit for three year per patients



## Medical Support

470 Needy patients had been facilitated with Medical Support OPD & IPD treatment with token charges during this six month

# Health

## Abhimanyu Project

Having pregnancy is the precious for women as well as her family. But sometimes some complication may arise which can be fatal for mother and child due to incomplete knowledge and irregular health check-up.

To resolve its at some extent we design Abhimanyu health calendar with all details about diet, vaccination, symptoms and precautionary measures in Gujarati language with pictures so the pregnant women can be align with it's regularly.



**1150** health calendar were distributed to various PHC,CHC and ICDS department of Mundra, Mandvi, Nakhtrana, Lakhpatt, Abadasa, Anjar & Gandidham block.

**594** Protein Powder packet distributed to ANC woman of Utthan villages and TB patient of Mundra block.





# Sustainable Livelihood Development

## Education:-

Education play significant role for any individual as well as community transformation.

Covid pandemic has severely impacted on education system. Hence to keep them connected and motivated various intervention have been made.



**55** Higher secondary Fishermen students of Sekhadiya, Navinal, Zarpara & Junabandar benefitted with book support. Mother meeting and telephone Discussion for their wards discussion.

## Alternative livelihood

## Fisher folk



Providing Option livelihood to Fishermen during Fishing Off season by Mangroves plantation and Maintenance. It also creating environment sustenance.

**4830** Man-days work was provided over **236** Fishermen family during this six months



# Sustainable Livelihood Development

## Government Scheme Facilitation.



To avail Fishermen Government scheme (**Fishermen Credit card**) one day program was arranged with social distancing and all precaution.

**30 KCC form fill-up at Navinal.**

Created awareness with Telephonic about same.

## Sea Weed Culture

To create option livelihood over fishermen with co-ordination of VRTI.

Pilot phase -3500Kg seaweed was harvested  
Based on that MOU with **ICCSIR** (Branch of VRTI) to expand sea weed Culture by Offshore and inshore Method  
We have to support for Community Mobilization and land for inshore Seaweed Culture.



## Potable Water at Fishermen Vasahat

Potable Water to Fisher Folk at vasahat-2020-21			
Sr.	Vasahat	family	Requirement Per day
1	Luni Bandar	110	15000
2	Bavdi Bandar	117	15000
3	Kutdi Bandar	140	15000
4	Randh Bandar	350	25000
	Total	717	70000

Availing pure drinking water to fishermen vasahat.

To mitigate born disease and women drudgery to get water

**1113 fishermen** are getting benefit of its

Juna Bandar Fishermen vasahat been water sustain with linking to Mundra Gram Panchayat

# Sustainable Livelihood Development

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.

Adani Foundation had coordinated with Village Development Committee, Gram Panchayat and Gau Seva Samiti of Siracha Village Gauchar Development.

Total 85 Acre Gauchar Land was approved by GP for Development by decision taken in Gram Sabha . Among them 72 Acre land Has been Sowed and Remaining land would be Grow with Wild Grass.

## Fodder cultivation

- To Increase production and availability of green and dry Fodder.
- Village driven fodder sustainability through cultivation in village Gauchar land..
- Zarpara -25 Acre & Siracha- 85 Acre Gauchar land development is in progress – We got very good support from Village Development Committee in post care.



# Sustainable Livelihood Development

## Government Scheme Facilitation

Facilitate widows, senior Citizens and Divyang to various schemes of government like widow pension, free bus pass, Senior citizen pension scheme sankat mocha sahay etc. support for process and documentation

Sr.	Name of Scheme	Nos of beneficiaries	Supports amount
1	Widow pension	51	Rs.1250 per month
2	Divyang Buss	8	Free of cost traveling
3	Senior Citizen pension scheme	3	Rs.750 per month
4	Sankatmochan sahay	2	Rs.20,000 once in life for BPL
5	Cabin support to widow	2	by foundation

66 people are getting benefits of various government scheme





# Sustainable Livelihood Development

## 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.

5-SHG had been Facilitated for Rs1.0 lac bank loan through DRDA to start-up new business for women empowerment.

facilitated artisan for artisan support by District collector Kutch Rs.1000/- per month for four month

11 members Shradha saheli SHG of Motakapaya village is prepared snacks and meals for catering.

The group's catering tender has been sanction to providing snacks and meals service for Government program in mundra block.



₹ 6,00,000+  
income has been earned



60,000+ three layer mask has been prepared and sold by Umang SHG group @ Rs.10.00 per mask

# Sustainable Livelihood Development



Registration of "Kutchh Kalptaru Farmer's Producer Company and meeting with Director, DRDA for Equipment and Agri mall Grant is done.

## Fodder support

Fodder support in 20 villages of Mundra and Anjar block.

Dry fodder 6.70 lacs kg  
Green fodder 11.60 lacs kg



## Tissue Culture

Our periphery villages are famous for the dates farming as having appropriate weather and soil condition.

To Doubling the farmer income by availing "Barahi Varieties Tissue plant" has good productivity 850 plants have been distributed to 34 farmers 25 plants / Farmers cost of a plants is Rs.3500. 50% Contribution have been collected from Farmers which will further utilized to purchase more tissue plants to availed more farmers.



# Sustainable Livelihood Development



## Home Bio Gas

Installation of 53 Home Bio-gas with SOP Awareness and trouble shoot of problem as well.

## Model Farming

To promote cow-based farming two model farm have been developed with 25 type innovative activities. This will be utilized for demonstration and replication at other farms.



## Dragon Fruit Farming

To promote dragon food farming to doubling farmer income as having good economic value. 10,000 dragon food sapling , Pole and wire have been supported to 5 farmers.

# Sustainable Livelihood Development



95 Farmers benefitted with NB -20 Off suite to bring fodder sustainability.



Kitchen garden Kits (Seeds, Fertilizer and Pesticides) were facilitated to 48 SC family with the help of horticulture department and aware about its importance in diet.



Organic farmer hat at shantivan colony  
To avail pure organic vegetables ,Milk, ghee, buttermilk as well as webinar was also organized to aware about the importance of healthy food for healthy life.

# Community Infrastructure Development

Adani foundation has designed, planned and built a infrastructure community health, agriculture and living standards, all initiatives were fulfilled according to the needs of people of community.

## Development of Prisha Park at Mundra.



## Pond Bund strengthening at Zarpara Village





# Community Infrastructure Development

## Work In Progress:-

1. Drainage Line and Chamber work at Bhopavandh.
2. Drainage Maintenance & JCB Hiring & Other Mis. Work.
3. Road Repairing at Kutdi Bandar.
4. Road Repairing at Zarapra Fisherman Vashat.
5. Road Repairing at Luni Pagadiya Fisherman



# SuPoshan

The purpose of the Project is to reduce occurrence of malnutrition and anemia.  
create awareness about malnutrition and anemia 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.





# SuPoshan

Covid-19 awareness in village & Slum Area

100 beneficiaries covered in Menstrual Hygiene Day - with slogan called "RED-ACHHA HAI"

204 beneficiaries covered in Breastfeeding Week

320 beneficiaries covered in National Deworming Day

20 villages covered in celebration of NATIONAL NUTRITION MONTH

42 FAMILY COUNSELLING

Participate in Umbre Anganwadi episode



# SuPoshan

## THANKS GIVING PROGRAMME" MUNDRA & BITTA Site

Community Engagement and other Activities		
Sr.No	Activity	Total
1	No of Sangini	24
2	Total Village Cover	41
3	Total Anganwadi Cover	70
4	SAM to MAM Monitoring Progress	03
5	MAM to Normal Monitoring Progress	15
6	Focus Group Discussion	85
7	Family Based Counselling	42
8	Village level Events	05
9	No of SAM children referred to CMTC	06
10	Total Anthropometric screening	140
11	Total Family Cover through video & Audio Calling	20
12	Total House Hold Family Visit	130
13	No. of Severe Acute Malnourished children (SAM) Telephonic Counselling	08
14	No. of Severe Underweight children (SUW) Telephonic Counselling	03
15	No. of adolescent girls-Telephonic Counselling	190
16	No. of pregnant women-Telephonic Counselling	100
17	No. of lactating mothers-Telephonic Counselling	230
18	No IFA Tablet Distribution to adolescent girls	200
19	Total Family Cover	9178
20	No of Sangini completed online POSHAN Abhiyan E- Learning module	15

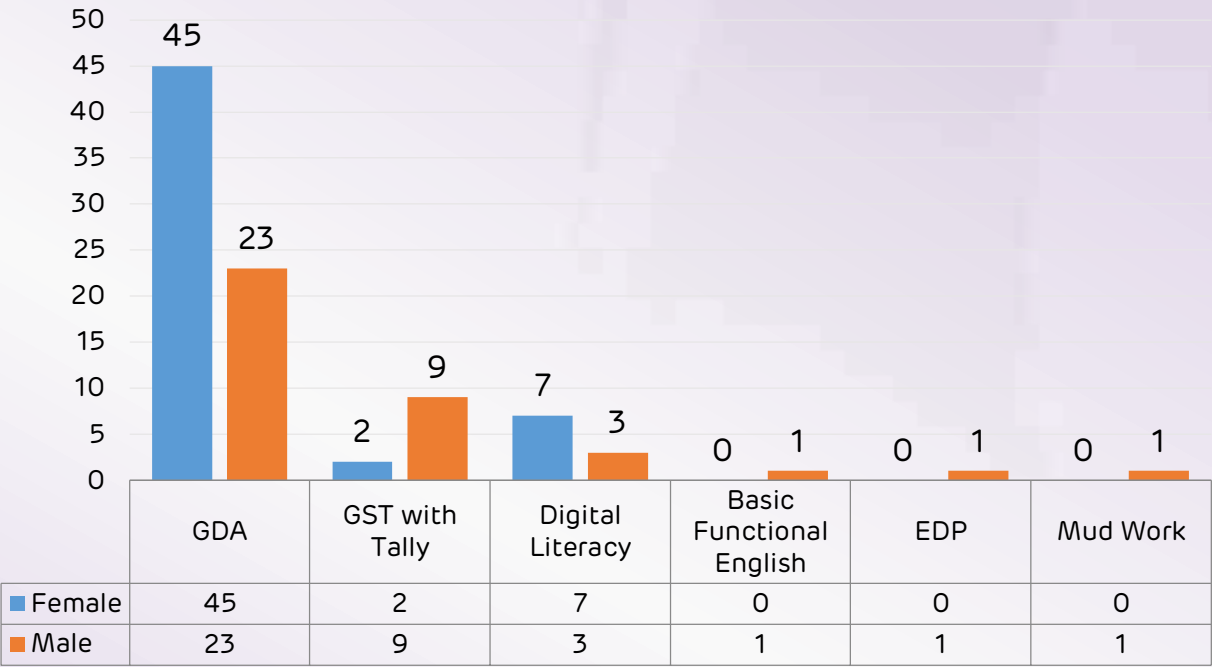


SuPoshan Thanksgiving program was organized. In this webinar DDO, CDPO Mundra and other dignitaries remained present and appreciated the efforts to overcome malnourishment in Mundra and Bitta.

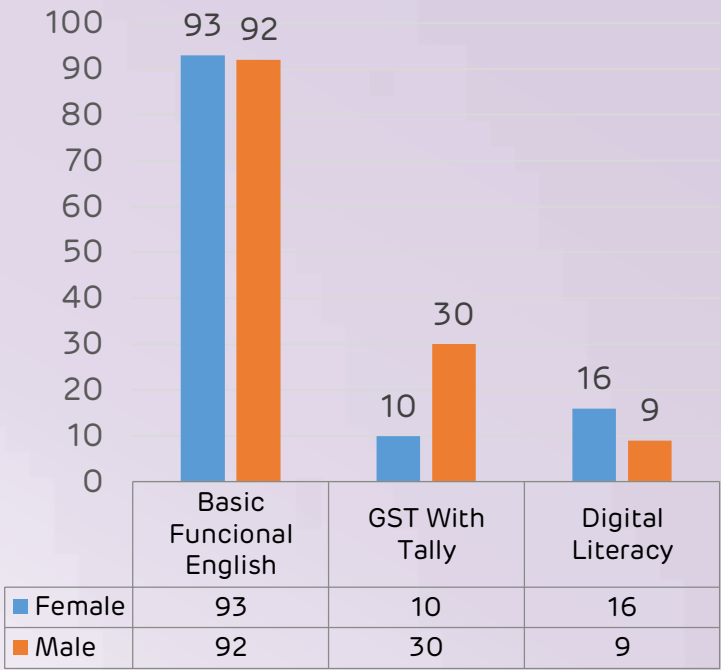
# Adani Skill Development Centre

Admissions From April to September, 2020

OHO Model (Subsidized)

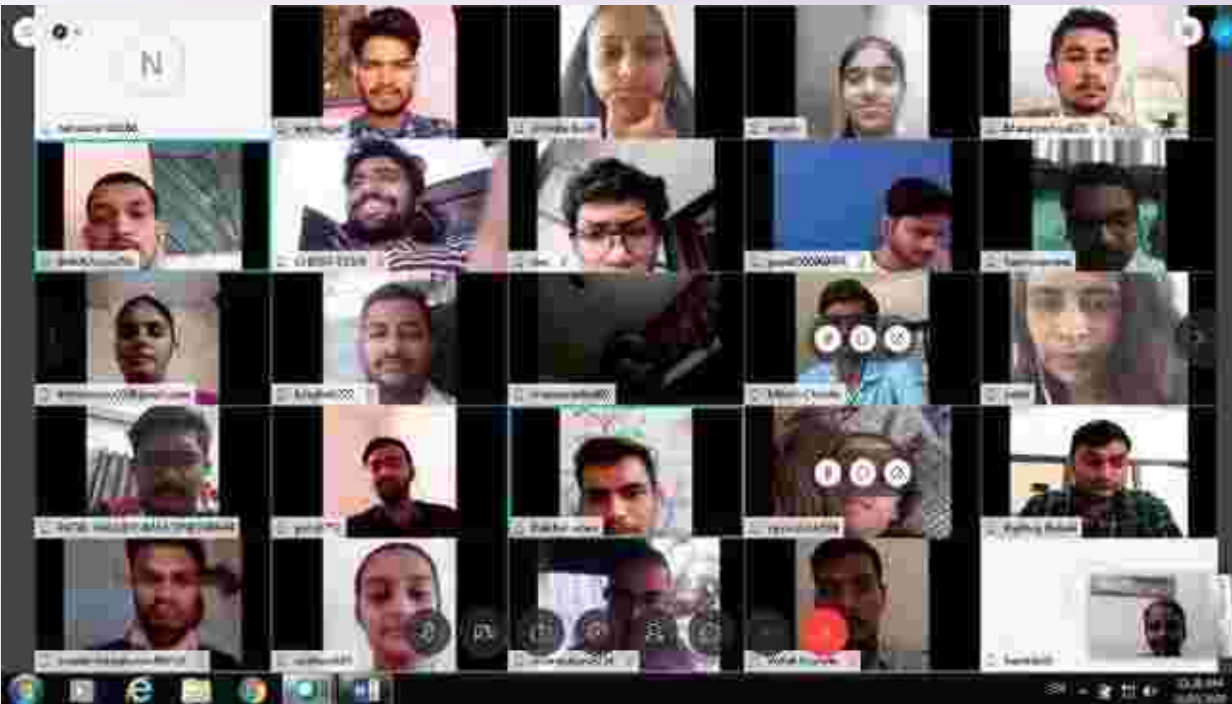


Free Training Model



# Adani Skill Development Centre

**E-Learning** 324 students Enrolled in Online Training



## Various Activity

The students of DDU-GKY (GDA) creating awareness regarding Covid-19 in their own village through various activity





# Adani Skill Development Centre

## Interview and Placement

Arranged interview of DDU-GKY GDA students at Sterling Hospital – Gandhidham, GAIMS (Sodexo), Chanakya College, Accord Hospital, Fire Academy.

**27** students get placement in GAIMS (sodexo), Alilance Hospital, Shreeji Hospital, Bhuj Fire Academy, Divine Hospital etc.

**3 students are working in COVID-19 Hospital**



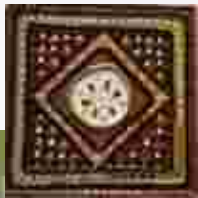


# Adani Skill Development Centre

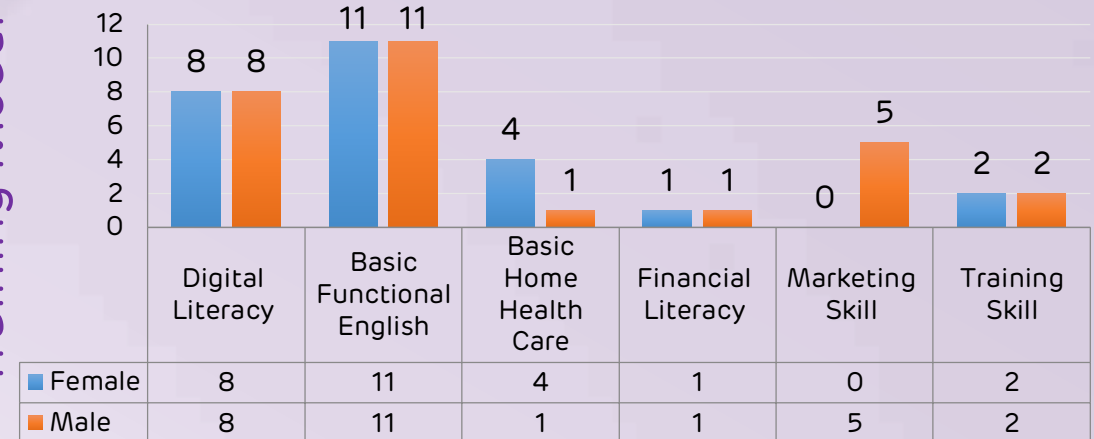
## Admissions From April to September, 2020

### E-Learning & Activity

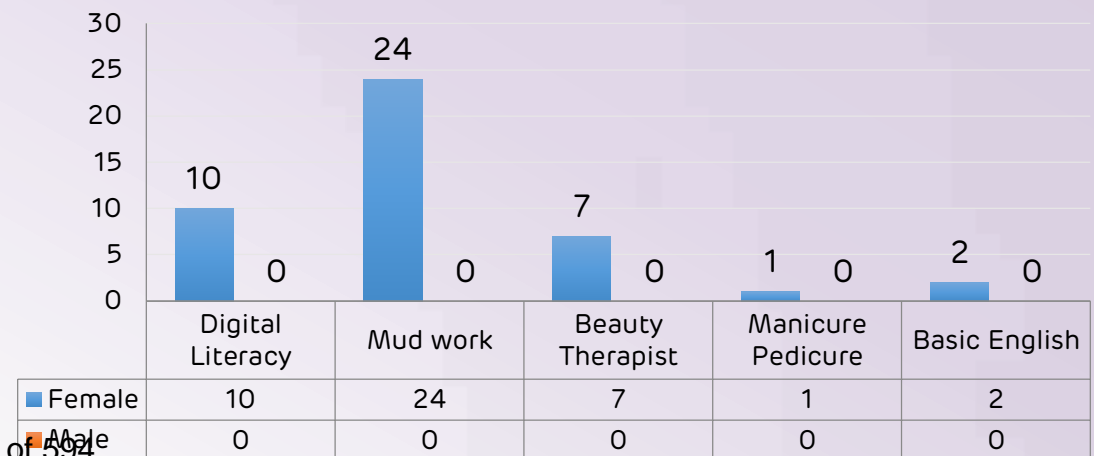
- Online E- Learning training of Interview skill course
- Online training of Mud work – Theory and practical



### Free Training Model



### Subsidized Training Model



# CSR - Nakhatrana

## Recharge Bore well

Adani Foundation, Nakhatrana had revived ground water table by recharging the bore wells and wells in Amara and Jinjay village. Total 15 Bore well recharge work will be beneficial to more than 70 beneficiaries in irrigation.



## Benches and Otta Work

In Jinjay Village 5 cement benches were grouted and 2 sitting places – otta were repaired at public places. Also in Amara village 6 cement benches was grouted near Village Pond which brought visibility of our entry point activity work for Green Energy Projects.

## Tree Guard Support

Adani Foundation always believes in Nature conservation. For purpose of planting and protection of trees, Adani Foundation provided 50 cages in Ugedi village of Nakhatrana taluka and 100 cages in Ratadia village..



# CSR - Nakhatrana



## Swavlamban Divyang Support

The Adani Foundation, Nakhatrana provides a variety of tools to help people with disabilities become financially self-sufficient. Disabled people are given various support for livelihood such as cabin shop, sewing machine, Atta chakki in which they earn income by selling various things.

## SETU Agriculture Projects

Adani Foundation supported agriculture projects by linkages of Government Scheme. Facilitated 23 SC Farmers of Ugedi, Amara, Ratadiya and Desalpar village by Kitchen Garden kits worth Rs 2000 by coordination with Department of Horticulture GOG.



## SETU Widow/Divyang Support

We act as a bridge between Government schemes for Widows and Divyang people. 104 Widow women were supported to fulfill formalities of filling pension scheme forms and started getting aid of Rs. 1250 per month. Tricycle, Bus pass and sewing machine support was also coordinated with social welfare department



# CSR - Nakhatrana

## Biodiversity - Ugedi

Adani Foundation also works for the conservation of biodiversity. To do such work, Adani Foundation works with the advice of experts and the guidance of an expert organization to protect the environment and also to protect and preserve the wild biodiversity. It works to protect biodiversity.

This work has been entrusted to Sahajivan, an expert organization for the protection and conservation of biodiversity, as part of which a Biodiversity Conservation Committee has been formed in Ugedi village (BMC). As well as in the garden of Ugedi village and in the place of Angalwadi, trees have been planted. Also, in the seam area of Ugedi village, more than 300 native trees have been planted, In which trees like Pilu, Desi Bawal, Khejari, Liar have been planted. As well as the seeds of the native trees have been sprinkled, babool has been removed from the roots in the village pastures by JCB and the pastures have been cleared so that the native trees can grow more and the sprinkled seeds grow there and It has been tried to grow back the native trees of Kutch. Also, a small pond has been constructed in Shim of Ugedi village, in which wild animals can get water as well as survive





# CSR - Lakhpatt



## Tree Guard Support

Adani Foundation always believes in Nature conservation. For purpose of planting and protection of trees, Adani Foundation provided 100 cages in Kapurashi village of Lakhpatt taluka and 100 cages in Koriyani village..



## Fodder Cultivation

Animal Husbandry is the main livelihood of Lakhpatt. Due to good rain we motivated more than 61 farmers to grow fodder in at least one acre of land to become self sustainable.



# CSR-Tuna



## Rations Kits Support

We believe in growth with Goodness and giving back to society.

We are Always ready to support during any Nature calamities and pandemic.

During the Covid -19 pandemic we had started Ration kit Distributed campaign with spreading precautionary awareness to needy and poor people.

Total 1100 Ration Kits Distributed to Tuna Rampar and Vandi Villages

## SETU – Widow/Divyang Support

We act as a bridge between Government schemes for Widows and Divyang people. social welfare department.

We arranged Awareness program with Anarde Foundation , setu and Government Officers.





# CSR-Tuna



## Potable water Distribution

at Vira and Ghavarvado  
Fishermen Vasahat

## Water Project

Water Pipe Line installation & Storage tank  
construction with Collaboration with WASMO ,  
GP and AKBTL at Tuna



Adani Foundation always believes in Nature conservation. For purpose of planting  
and protection of trees, Adani Foundation have Done Tree planation at Tuna ,  
Rampar , Vandi Government Schools and Police station.



## Fodder Support

Fodder distribution to Rampar and Tuna Villages.  
**Rampar**

15520 Kg dry Fodder Rs.1.1 Lacs

122930 Kg Green Fodder Rs.3.50 Lacs

**Tuna**

32430 Kg Dry Fodder Rs.2.65 Lacs

212800 Kg Green Fodder Rs.6.06Lacs.

## Tree Plantation



# EVP-Employee Volunteering program



802 students of  
Vallabh Vidhalaya  
schools has been  
adopted by Adani  
employee

35 tablet  
for students of AVMB

Amid covid-19 its difficult to continue 10<sup>th</sup> standard study for the financial weaker students who don't have any digital gadget for online learning . Hence to enable them for online learning our APSEZ Employee volunteering support to provide Lenovo tablet to AVMB Students . .



All the 802 students are in the school are from migrants labour families who are working in various industries in and around of Mundra. Laborer children are in addition to resource constrain at home and also bear the dis-advantages of unfamiliarity of local language and culture, which inhabiting them to participation in school. Vallabh vidhalaya by passes the language barrier as the medium of instruction is Hindi.

Total Rs.16.04Lacs cheque had been handed over to Mr. Dharmendra who is the director of Vallabha vaiadhalaya On 1<sup>st</sup> may as the world labour day.



# Events

## World Environment Day

World Environment Day was celebrated in Four Talukas by different activities related to conservation of Environment.

- Mangrove Plantation at Luni sea coast with fisher folk community
- Tree Plantation at Mundra, Nakhtrana, Lakhpat & Tuna block.
- Inauguration of Gauchar land development work in 22 acres at Siracha village
- Tissue culture plant distribution to farmer
- 1500 herbal plants like meshvak, amla, galo, gugal, ardusi, pilu, etc planted at Nandi Sarovar biodiversity park



# Events

## Vanmhotsav

4100+ tree plantation

Vanmhotsav tree plantation :

**Tunda, Siracha, Navinal , Zarpara, Dharb, Baroi, Luni, Samgoga, Nani bhujapar, Moti bhujapar, Mota bhadiya, Gundiya, Anjar, Tuna, Rampar and Wandi Village.**

For Mota bhdiya, Ravalpirdada tample and Zarpara with Government 1000 plants received from Forest Department.





# Events

## World Mangrove day

Web talk show was organized on the occasion of "World Mangrove days On Multi species Mangrove bio diversity with Joint effort of Guide and Adani Foundation, mundra.

Dr.V.Vijayan Kumara (Director of Gujarat institute of Desert ecology) , Mr. C.R.K Reddy (Former chief scientist ,CSIR-CSMCRI CEO) and Respected PNR sir and Gadhvi sir had delivered occasionally speech. As well as Paper presentation by GUIDE and with KSKV Scientist . Total 70 participated had joint this webinar.



# Events

## World ocean day

### World ocean day

World ocean day celebration on 8<sup>th</sup> June at Luni bandar with spreading cleanliness message through coastal cleaning program and aware about government scheme with maintaining of social distancing





## My Mother's dream became true

**Name:** Mura Keshabhai Dhuva

**Place:** Khavda, Bhuj, Kutch, Gujarat

**Employer:** Alliance Hospital (Covid 19 hospital), Mundra, Kutch, Gujarat.

**Job:** Joined as Nursing Assistant.

**Salary:** Rs. Up to 9000/- per month with lodging and boarding facilities.

### Candidate Brief:

He belongs to rural family. Father is Carpenter and mother is Home maker. Parental household's monthly income prior to his placement was Rs.8, 000. His prior educational qualifications is 12th pass.

### In his own words:

My mother's dream is that one of the sons should be in medical field. But due to financial constraint, I couldn't study further. I thought I will never be able to fulfill my mother's dream but fortunately, I got opportunity to get trained under GDA course and soon after its completion, I got placement in hospital. I feel proud to serve Covid19 patients and will continue doing fearlessly.

Thanks to Adani Skill Development Centre to give me opportunity to take training under DDU-GKY scheme and make me capable to take care of my family.





## It helped me to become good team member and work efficiently

**Name:** Nipul Punjabhai Sanjot

**Place:** Bidada-Mandvi, Kutch, Gujarat

**Employer:** Alliance Hospital (Covid 19 hospital), Mundra, Kutch, Gujarat.

**Job:** Joined as Nursing Assistant.

**Salary:** Rs. Up to 9000/- per month with lodging and boarding facilities.

### **Candidate Brief:**

His father and mother works as helping staff (housekeepers) in another hospital. Monthly income of family prior to his placement was 10,000/-. His prior educational qualifications is 12th pass.

### **In his own words:**

I am youngest in Covid19 hospital here but I know this is the time to act wise. When my friends ask me do you fear working as PCA? I simply laugh and say I am trained in GDA course and fully prepared for this work. My duty is to check patient's temperature, blood pressure and oxygen level and maintain record. We get residential facility nearby hospital. To Treat Covid19 patients, needs a courage and team work and I am blessed I got this wonderful chance. Thanks to Adani Skill Development Centre to give me opportunity to take training under DDU-GKY scheme and make me capable to take care of my family.

*When asked how confident he is at his new and challenging work, he replies  
"Along with GDA training we were also trained with soft skills training as it helped me to become good team member and work efficiently."*



## Stick at old ages

Dhanuba a self-esteem lady from Zarpara Village. While I peeped in her life it seems like that her existence is only to bear grief and sadness. Her husband was passed away before 20 Years since that she has been enduring social and economic responsibility of her family by drudgery daily wages. She have two daughter who are married and two sons who are supporting her for daily end meet, day was passed little more good combatively .....Who knows it was for short times .....

Unfortunately one more shock in her life that her elder son get Heart attack and passed away & younger son got mentally ill again she have to drudgery to get them daily bread and butter... Though her daughters called her to lives with them but she denied strongly believed to don't be burden & belongs to daughter. Now she is 70 years old and physically weak and also get ill often.

One day she came to our Rural clinic for medical check-up and was talking with deep sigh & despair about her problem. Fortunately our Employee Mr. Karsanbhai was present at their and promptly talked with her and comprehend the reality. She could not availed benefit of widow pension scheme because of the certain government limitation even after numbers of time applied and Follow-up for the same. He went along with her and Collected the essential document and submitted to the respective department later within two month she received sanction order for the same and further Rs.1250 /- Widow pension has been started which been the great support for daily meet.

She and her daughters expressed great gratitude and said that Adani Foundation is hope For the Poor and needy persons.

## "Vidyadan Mahadan"

**Name:** Sohil Gafur Manjaliya

**Place:** Luni ,Mundra

**AF intervention:-** Education Scholarship Support

**Progress & Achievement:-** Studied intently and perused Graduation Degree and process for LLB admission

**Salary:** Working with Lawyer as a practicenor and earn Rs. 8000/Month

**Back Ground :** He belongs to Poor Fishermen family and sincere to study since child hood. He belongs to Poor Fishermen family and sincere to study since child hood. His father is used to Pagadiya fishing practice to get the daily end meet.

**In his own words:**

In our community most of the youth left study after 8<sup>th</sup> standard and engaged in Fishing practice but when I had interacted with AF staff and persuaded for further study and Scholarship support. I realized that the only education can be the game changer to strengthen my Financial condition. Later I focused to study Intentionally and dreamed to be Lawyer.

Now am working with Advocate as Assistance and do Financially support to my family.

Indeed AF sensitized me and act as catalyst to transform my life than others really I am honored by friends and Society

*Really AF Scholarship support intervention could be the Community transformation rather than Individual.*





***The sewing machine  
act as legs to made me  
earned and confident  
for my family***

## Real Support

Name: Harkhumben hirabhai Rabari

Place: Jinjauu, Nakhtrana

AF intervention:- Sewing Machine Support.

Progress & Achievement:- Started Embroidery and sewing work

Income : Rs.2500 to 3000/Month

Back Ground : She is 40 year old lady and disable by polio in childhood. They are five members three Children and Husband wife. Her husband is driver and the only person to earn hence financial problem is always remain host. However She is illiterate & handicapped but symbol of etiquette and dedication. She always thought to be financial Supporter to her life partner . As belongs to Rabari community stitching & hand work is imbibed in her and she want to purchase Sewing machine for the same but Financial constrain did not allow them for same.

During community interaction she express her willing sewing machine support. we met her and after verification Support accordingly.

In his own words:

It was difficult to me as house wife to maintain budget but since I have started sewing work which added some extra money which can we expence for our children nurturing and education for their bright future.

Thanks to Adani foundation to be supporter to such disable persons

## Sea of Change – I got a job ....

Manjaliya Jakum Osman is 36 years old Fishermen Youth though he was little dull in study but has insight sense and dedication to work. After completion of primary education he had been engaged in fishing practice with his father. Though he was earning but not enough to sustain his big family with Five Daughters .

He was always thinking to get hike and asking to provide work according to his skill like drivering ,electrician and painting work.

One day we offer him contract work in our dry cargo department for loading Unloading work. He started enthusiastically with 30 Labors teams and paid 100% Efforts to fetch the targets but.....Unfortunately he had to left contract due to some constrain.

Again he engaged in fishing as routine but destiny define another for him. we had called From APSEZ to need Casual labors and referenced for Jakum as having Good feedback for dedication toward work.

he accepted opportunity even did not know the process. Initially We supported for gate pass and other mandatory formalities. Currently 22 Fishermen youth are working under him.

He is saying that I am earning Approx Rs.40000/Month. And message to Fishermen youth that I am grateful to AF to provide chance to proof my self and sustaining well. now I can Fulfill all basic amenities and invest to my daughter education.

He message to Fishermen Youth that we have great Opportunity as having ADANI port and companies to get employed.



# Media coverage



**જીવન સાથે જીવનનિર્વાહની સામર્થ્યવાન કામગીરી કરતું: અદાણી ફાઉન્ડેશન**

[illegible]

અદાણી ફાઉન્ડેશન દ્વારા દેશના ૧૮ રાજ્યમાં ૨,૨૫૦ ગામડાઓમાં કરવામાં આવેલ લોક કલ્યાણના વિવિધ કાર્યો : મુન્દ્રા તાલુકાના ૨૨ ગામોને સેનીટાઈઝ કરવામાં આવ્ય અસરગ્રસ્ત પરિવારોને ૧૦,૦૦૦ જેટલી રાશન કીટનું વિતરણ

સેન્ટ્રલ બાઈસ હોટલનું વિચાર  
અમલમાં આવ્યું છે તથા આ  
અમલીકરણ અમલીકરણ અમલીકરણ  
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અમલમાં લેવામાં આવ્યું છે તથા આ

આપણા સુપ્રોબથ ડોપિડને  
“હમીની કહેનો” ડોપિડ ૧૦૯  
અથવા ૧૦૯ ડોપિડિનની કહે  
પોલિટી ડોપિડને અને પાલ ડોપિડ  
અનુલ પો-પોલ આપણાં અને  
ડોપિડ ૧૦૯ ડોપિડિ કહેનો પો  
ડોપિડ ૧૦૯ આપણાં અને

અમિતભાઈ રાહલ જાધવના મહેતમ  
જાદુની બોલાવણી જાણિતી પણ  
અમુકિય પેટરોઈમ ડ્રાડા આપવામાં  
આવે છે. આ સામે અન્ય રોગચાળા  
પીડાતા હોમિયોને પણ કોન કરીને  
નિષ્કર્ષિત થવા જોવા અને મરબની  
ભાડા ન નીકળવા કલે અનુરોધ

[illegible]

**આરેક, દાડમ અને કેરીના ઝેડિંગ, કલોનિંગ અને પેકિંગ માટે ખાસ વ્યવસ્થા ઉભી કરાયે**

**મુંદ્રાના ૧૧ ગામોના ખેડૂતોના ઉત્થાન માટે 'કચ્છ કલ્પતરૂ પ્રોડ્યુસર્સ કંપની લિ.' એગ્રોમોલ બનાવશે !**



માસિક એ શારીરિક પ્રક્રિયા હોવાથી અપવિત્રતા સાથે ન જોયો  
અદાણી ફાઉન્ડેશન દ્વારા રાષ્ટ્રીય માસિક  
સ્ત્રાવ સ્વચ્છતા દિવસની ઉજવણી કરાઈ

1992  
 1993

समय लक्ष्यका हिमाली भाषावा  
होती-मुलत भाषा हिमाली भाषा  
भाषी होती. आ प्रत्येक भाषा ही  
प्रत्येक भाषावा लक्ष्यका भाषा  
मे आहोती. प्रत्येक भाषा ही  
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भाषा भाषा भाषा भाषा भाषा

● અદાથી ક્વાન્ટિફિકેશનનો સહયોગ અને ડાયરેક્ટરો સમન્વય થકી ધરતીપ્રભોને કૃષિ ક્ષેત્રે મળશે સાચા

● ઓક્ટોબરના અંત સુધીમાં ૨૦૦ સભાસદોને મુદ્દા તાલુકાના ૮ ગામોના ૩૪ ખેડૂતોને બારદી બારેકના ટીસ્યુક્લર રોપાઓનું વિતરણ કરાયું.

ભુજપુર આસપાસ ૨૩ સાબના ખર્ચે વિવિધ વિકાસકામો સંપન્ન : ખાનગી કંપનીનો સહયોગ

1. 1997-98 2. 1998-99 3. 1999-00 4. 2000-01 5. 2001-02 6. 2002-03 7. 2003-04 8. 2004-05 9. 2005-06 10. 2006-07 11. 2007-08 12. 2008-09 13. 2009-10 14. 2010-11 15. 2011-12 16. 2012-13 17. 2013-14 18. 2014-15 19. 2015-16 20. 2016-17 21. 2017-18 22. 2018-19 23. 2019-20 24. 2020-21 25. 2021-22 26. 2022-23 27. 2023-24 28. 2024-25 29. 2025-26 30. 2026-27 31. 2027-28 32. 2028-29 33. 2029-30 34. 2030-31 35. 2031-32 36. 2032-33 37. 2033-34 38. 2034-35 39. 2035-36 40. 2036-37 41. 2037-38 42. 2038-39 43. 2039-40 44. 2040-41 45. 2041-42 46. 2042-43 47. 2043-44 48. 2044-45 49. 2045-46 50. 2046-47 51. 2047-48 52. 2048-49 53. 2049-50 54. 2050-51 55. 2051-52 56. 2052-53 57. 2053-54 58. 2054-55 59. 2055-56 60. 2056-57 61. 2057-58 62. 2058-59 63. 2059-60 64. 2060-61 65. 2061-62 66. 2062-63 67. 2063-64 68. 2064-65 69. 2065-66 70. 2066-67 71. 2067-68 72. 2068-69 73. 2069-70 74. 2070-71 75. 2071-72 76. 2072-73 77. 2073-74 78. 2074-75 79. 2075-76 80. 2076-77 81. 2077-78 82. 2078-79 83. 2079-80 84. 2080-81 85. 2081-82 86. 2082-83 87. 2083-84 88. 2084-85 89. 2085-86 90. 2086-87 91. 2087-88 92. 2088-89 93. 2089-90 94. 2090-91 95. 2091-92 96. 2092-93 97. 2093-94 98. 2094-95 99. 2095-96 100. 2096-97 101. 2097-98 102. 2098-99 103. 2099-00 104. 2100-01 105. 2101-02 106. 2102-03 107. 2103-04 108. 2104-05 109. 2105-06 110. 2106-07 111. 2107-08 112. 2108-09 113. 2109-10 114. 2110-11 115. 2111-12 116. 2112-13 117. 2113-14 118. 2114-15 119. 2115-16 120. 2116-17 121. 2117-18 122. 2118-19 123. 2119-20 124. 2120-21 125. 2121-22 126. 2122-23 127. 2123-24 128. 2124-25 129. 2125-26 130. 2126-27 131. 2127-28 132. 2128-29 133. 2129-30 134. 2130-31 135. 2131-32 136. 2132-33 137. 2133-34 138. 2134-35 139. 2135-36 140. 2136-37 141. 2137-38 142. 2138-39 143. 2139-40 144. 2140-41 145. 2141-42 146. 2142-43 147. 2143-44 148. 2144-45 149. 2145-46 150. 2146-47 151. 2147-48 152. 2148-49 153. 2149-50 154. 2150-51 155. 2151-52 156. 2152-53 157. 2153-54 158. 2154-55 159. 2155-56 160. 2156-57 161. 2157-58 162. 2158-59 163. 2159-60 164. 2160-61 165. 2161-62 166. 2162-63 167. 2163-64 168. 2164-65 169. 2165-66 170. 2166-67 171. 2167-68 172. 2168-69 173. 2169-70 174. 2170-71 175. 2171-72 176. 2172-73 177. 2173-74 178. 2174-75 179. 2175-76 180. 2176-77 181. 2177-78 182. 2178-79 183. 2179-80 184. 2180-81 185. 2181-82 186. 2182-83 187. 2183-84 188. 2184-85 189. 2185-86 190. 2186-87 191. 2187-88 192. 2188-89 193. 2189-90 194. 2190-91 195. 2191-92 196. 2192-93 197. 2193-94 198. 2194-95 199. 2195-96 200. 2196-97 201. 2197-98 202. 2198-99 203. 2199-00 204. 2200-01 205. 2201-02 206. 2202-03 207. 2203-04 208. 2204-05 209. 2205-06 210. 2206-07 211. 2207-08 212. 2208-09 213. 2209-10 214. 2210-11 215. 2211-12 216. 2212-13 217. 2213-14 218. 2214-15 219. 2215-16 220. 2216-17 221. 2217-18 222. 2218-19 223. 2219-20 224. 2220-21 225. 2221-22 226. 2222-23 227. 2223-24 228. 2224-25 229. 2225-26 230. 2226-27 231. 2227-28 232. 2228-29 233. 2229-30 234. 2230-31 235. 2231-32 236. 2232-33 237. 2233-34 238. 2234-35 239. 2235-36 240. 2236-37 241. 2237-38 242. 2238-39 243. 2239-40 244. 2240-41 245. 2241-42 246. 2242-43 247. 2243-44 248. 2244-45 249. 2245-46 250. 2246-47 251. 2247-48 252. 2248-49 253. 2249-50 254. 2250-51 255. 2251-52 256. 2252-53 257. 2253-54 258. 2254-55 259. 2255-56 260. 2256-57 261. 2257-58 262. 2258-59 263. 2259-60 264. 2260-61 265. 2261-62 266. 2262-63 267. 2263-64 268. 2264-65 269. 2265-66 270. 2266-67 271. 2267-68 272. 2268-69 273. 2269-70 274. 2270-71 275. 2271-72 276. 2272-73 277. 2273-74 278. 2274-75 279. 2275-76 280. 2276-77 281. 2277-78 282. 2278-79 283. 2279-80 284. 2280-81 285. 2281-82 286. 2282-83 287. 2283-84 288. 2284-85 289. 2285-86 290. 2286-87 291. 2287-88 292. 2288-89 293. 2289-90 294. 2290-91 295. 2291-92 296. 2292-93 297. 2293-94 298. 2294-95 299. 2295-96 300. 2296-97 301. 2297-98 302. 2298-99 303. 2299-00 304. 2300-01 305. 2301-02 306. 2302-03 307. 2303-04 308. 2304-05 309. 2305-06 310. 2306-07 311. 2307-08 312. 2308-09 313. 2309-10 314. 2310-11 315. 2311-12 316. 2312-13 317. 2313-14 318. 2314-15 319. 2315-16 320. 2316-17 321. 2317-18 322. 2318-19 323.
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અદાણી સિલ ડેવ. દ્વારા નિઃશુલ્ક  
ઓનલાઈન વ્યવસાયલક્ષી અભ્યાસક્રમ

જુષ, ઘ. ૧૦ : અઘણો	તાલિમપદો	શાંતધર્મ
કિંમિત્તેત્તેત્તે દ્વારે મારવા	જાણા છે તાલિમ ૫૦ કિલો	
અધ્યાપકો અભ્યાસ	મુર્તિ, મારણે રોક ને કલા	
સેતેત્તેત્તેત્તેત્તેત્તેત્તે	વાણીના તાલિમપદો	જુષ મારવા
તિલ્લેત્તેત્તેત્તેત્તેત્તે	અઘણી રોકેત્તેત્તે	

નર્સિંગ કોર્સના ૨૦ તાલીમાર્થીઓને પ્રમાણપત્ર પહેલા જ નોકરી મળી

ભુજમાં અદાણી સ્કિલ  
ડેવલોપમેન્ટ દ્વારા  
અપાર્થ હતી તાલીમ

કચ્છમાં જરૂરિયાત મુજબ નિમજ્જીત  
અપાવવામાં ધૈર્યમેન્ટ ઓફિસર  
નિરપ લેઈવા, કિન્નદી ઉમરાણીયા  
તથા શેહન સોની મદદરૂપ  
થયા હતા.

તાલીમ માટે અસ્થિતાબેન  
જેલી અને પૂર્વી ગોસ્વામી  
સહાયરૂપે થયા હતા. હજુ પણ  
જરૂરિયાત મુજબ પ્રવૃત્તિ કરવામાં  
આવી રહ્યા છે.

અને ઉદ્દેશનીય છે કે, ગાય  
ઓકોશોમર-૧૯માં બેચ રારુ થઈ  
હતી. પરંતુ, લોકપ્રિય આવી જતા  
પરિણામ બંધ રાકાઈ નહોતી છતાં  
જન મળ્યું છે.



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We Salute to Corona Warrior Staff of Adani GKGH, Adani Hospital Mundra, Community Health Staff and team....

Our fight against Corona is still continue with new hope and dreams.....



**Adani Foundation-Mundra : Budget F.Y. 2020-21****Executive Summary : Budget Utilization Statement-April to September.2020****F.Y. 2020-21 (Rs. In Lacs)**

Sr. No.	Budget Line Item	Budget 2020-21	Budget Utilization	% of utilization	Remarks
A.	Admin Expense	61.10	24.07	39.39%	
B.	Education	94.56	25.11	26.55%	
B1	Utthan-Education -Mundra	64.11	24.16	37.68%	
B2	Education -Fisherfolk - Balwadi	30.45	0.95	3.12%	
C.	Community Health	420.70	95.29	22.65%	
D.	Sustainable Livelihood Development	365.00	171.83	47.08%	
E.	Community Infrastructure Development	58.30	7.81	13.40%	
F.	EDM Recommended Projects	60.00	1.38	2.30%	
G.	COVID 19 Support	100.00	23.05	23.05%	
Total AF CSR Budget :		1,159.66	348.54	30.06%	
H.	Adani Vidya Mandir-Bhadreshwar	219.67	42.24	19.23%	
I.	Project Udaan-Mundra	50.00	25.92	51.84%	
GRAND TOTAL BUDGET F.Y. 2020-21 :		1,429.33	416.70	29.15%	

The background of the slide is a photograph of a natural landscape. It features a body of water, likely a pond or lake, in the upper right portion. Several trees with dark, gnarled trunks and dense green foliage are scattered throughout the scene, particularly on the left and right sides. The ground is covered with various green plants and grasses. The overall lighting is soft, suggesting an overcast day or a shaded area.

**Development of Biodiversity Park**

**at**

**Nandi Sarovar**

**Mundra- Kachchh**



## Proposed Plan Layout for Biodiversity Park





# Collection of Baseline Data

## PRE MONSOON SURVEY

- 78 Species (under 34 Families and 71 Genera)
- 384 TREES
- 50% plant species are herbs, followed by trees (31%) and grasses (11%).

## POST MONSOON SURVEY

- 25 New NATIVE Species added in List
- 48 SPECIES are planted including 6-7 Saline Mixed Grasses



# Site Clearing and Leveling



- *Before and after Lockdown*
- *Through Labors*
- *Through Machineries*
- *Prosopis juliflora*, debris and other waste



# Nursery Beds and Purchasing Native Saplings (45+ Species)



Sr. No	Species Name	Social Forest Nursery, Dhunai	Normal Forest Nursery, Dhunai	Hightech Nursery, FD, Bhuj	Salvadora Green Nursery, Nakhtrana	Gov. Ayurveda Farm, Reldi	Pvt. Nursery, Adipur	Gulfarm Nursery, Bhuj	TOTAL
1	Manilkara hexandra (Rayan)				12				12
2	Azadirachta indica (Limdo)			10					10
3	Cordia allamanda (Liyar)				63				63
4	Acacia nilotica (Deshi Bavar)			50	50				100
5	Pomegranatum (Dadam)			20					20
6	Psidium (Jamphal)	10							10
39	Withania somnifera (Ashwagandha)					14			14
40	Abrus precatorius (Chanothi)					10			10
41	Canna indica (Canna)						50	50	100
Total from Each Nursery		100	240	150	358	56	60	160	1124



# Collection and Purchased SEEDs (10+ Species)



- ❖ Vegetative cuttings of stem of drought resistant plant species like *Euphorbia caducifolia* (Tuar, Thor)
- ❖ Seeds of *Cassia auriculata* (Awar), *Acacia nilotica* (Desi Baval) and *Pongamia pinnata* (Karanj), from surrounding landscape.
- ❖ Seeds of *Grewia villosa* (Luska), *Premna sp.* (Kundher), *Gymnosporia montana* (Vikado), *Moringa oleifera* (Mitho Saragavo) are collected from wild area of Bhuj Taluka and
- ❖ Seeds of *Ziziphus mauritiana* (Bor) and *Salvadora oleoides* (Mithi Jar) are purchased from Koli communities of Rapar taluka



# Development of Grassland Habitat

More than 10 species planted: Mixed Saline, High Nutritive, Sedges etc.

More than 5 species are planted through roots-saplings from our site





# Development of Wetland Habitat



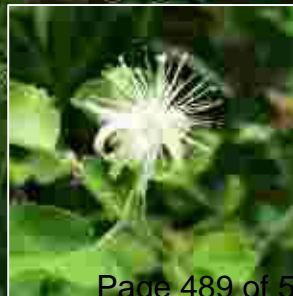
Site composition	Species planted	Strategies
Waterlogged area	<i>Vitex negundo</i> (Nagod), <i>Salvadora persica</i> (Khari Jar), <i>Suaeda nudiflora</i> (Lano, Unt Morad)	Water preferable species, fast growing and saline tolerant; medicinal plant; attract many insects, butterflies during flowering.
Seepages with sewage water	<i>Canna indica</i> (Cana Plant)	Evergreen tuberous herb and helpful in water purification with control on sewage smell.
Dominant by sedges	<i>Cyperus scariosus</i> , <i>C. rotundens</i> and others	Soil binder and saline tolerant species and also preferable by many insects and butterflies.
Dominant by <i>Phragmites</i> sp. and other vegetation	Seed sowing of mix grasses collected from Banni grassland as part of gap filling along the boundary	Soil binder and saline tolerant-high nutritive species and also preferable by many insects and butterflies.
Dominant by <i>Sesbania bisponosa</i> and <i>Cyperus scariosus</i>	Seed sowing of mix grasses collected from Banni grassland as part of gap filling along the boundary; and also planted seeds of native thorny species available at sites for providing more shelter trees for birds	Soil binder and saline tolerant-high nutritive species and also preferable by many insects and butterflies.  Native seed sowing of <i>Zizyphus mauritiana</i> (Bor), <i>Cassia auriculata</i> (Aavar), <i>Pongamia pinnata</i> (Karanj), <i>Acacia nilotica</i> (Deshi Bavar), <i>Salvadora oleiode</i> (Mithi Jar) etc.
Complete Dry area	<i>Caesalpinia crista</i> (Kachka)	Spiny straggling shrub, provide green and wild protection/live fencing; medicinal species

# Development of Thorn Forest Habitat

Species Name	Local Name
<i>Cordia gharaf</i>	Liyar
<i>Acacia nilotica</i>	Desi Bavar
<i>Grewia tanax</i>	Gangani
<i>Commiphora wightii</i>	Gugal
<i>Prosopis cineraria</i>	Khijdo, Kandhi
<i>Pithecellobium dulce</i>	Goras Ambli
<i>Zizyphus mauritiana</i>	Bor
<i>Azadiractha indica</i>	Limdo
<i>Salvadora persica</i>	Khari Jar, Pilu

- Drought resistant, thorny and deep-rooted plants.

- Less requirement of water during summer season compared to other evergreen plant species.





# Development of Medicinal Plants PLOTS

- **Increased density:** *Salvadora persica* (Khari Jar), *Moringa concensis* (Kadvo Sargavo), *Pithecellobium dulce* (Goras Amali), *Prosopis cineraria* (Kandhi), *Tecomella undulata* (Ragat Rohido), *Zizyphus mauritiana* (Bor), *Cordia dichotoma* (Gunda), *Salvadora oleoides* (Mithi Jar), *Holoptelea integrifolia* (Kanaji), *Punica granatum* (Dadam), *Acacia nilotica* (Desi Bavar), *Cordia gharaf* (Liyar).

- Between two small plots, we planted almost **12 medicinal plant species in block**



# Development of Climbers and Live Hedges



- Wild climber species are planted i.e. *Tinospora cordifolia* (Garó), *Abrus precatorius* (Chanothi), *Argyreia nervosa* (Samudra Sosh) and *Asparagus racemosus* (Satavari).

- Mainly FOUR species, i.e. *Acacia nilotica* (Deshi Bavar), *Pithecellobium dulce* (Goras Amali), *Grewia tenax* (Gangani) and *Euphorbia cuducifolia* (Tuar) for plantation are planted as LIVE FENCED





# Diversity of Butterflies



Painted Lady



Plain Tiger



Pioneer



The plains Cupid



The lesser grass blue



Pioneer

# Common Faunal Species



Dragon Fly



Red-wattled Lapwing



Garden lizard



Blue Bull- *Nilgai*



Beetle



Spider



Fan Throated Lizard



# Celebration of Special Days...

Environment Day on 5<sup>th</sup> June 2020 and Van-Mahotsav on 6<sup>th</sup> July 2020

## નંદી સરોવરમાં પાર્ક બનાવવાનું આયોજન પ્રાગપર ગામે પાંચ એકરમાં બાયોડાયવર્સિટી પાર્ક બનશે અહિંસાધામ અને અદાણી ફાઉન્ડેશન દ્વારા આયોજન



1 જુલાઈ (સંદેશ પ્રતિનિધિ)

મુન્દા તાલુકાના પ્રાગપર ખાતે અદાણી ફાઉન્ડેશન દ્વારા એનફરવાલા અહિંસાધામ સંચાલિત નંદી સરોવર ખાતે આવેલા પાંચ એકર પ્લોટને બાયોડાયવર્સિટી (જીવ વિવિધતા) પાર્ક તરીકે વિકસાવવામાં આવશે.

૧લી જુલાઈથી ૬ જુલાઈ સુધી યોજાયેલા વન મહોત્સવ અઠવારિયા દરમિયાન પાંચ એકર પ્લોટમાં ૧૨૫૦ જેટલા ઓપીધ વનસ્પતિના રોપોઆનું વાવેતર કરવામાં આવ્યું હતું. આ કામ માટે ડીપ પદ્ધતિ અપનાવવામાં આવી છે. આ વન મહોત્સવમાં અહિંસા ધામના સીડી.ઓ. ત્રિરીસભાઈ નાંગડા, અદાણી ફાઉન્ડેશનનાં હોડા પેકિંગબેન

સાથ તથા માવજીભાઈ ભારેલા, કરસનભાઈ ગઢવી, સહજીવન સંસ્થાના કાર્યકર ડી.પંકજભાઈ જોશીનાં હસ્તે વાવેતર કરવામાં આવ્યું હતું. મુન્દા તાલુકાના પ્રાગપર ગામની સરકારી હાઈસ્કૂલ અને સમસાનામુમિ ખાતે પણ વૃક્ષરોપણ કરવામાં આવ્યું હતું. આ ઉપરાંત નખગણા તાલુકાના ઉનેડી ગામે વન મહોત્સવ દરમિયાન વિવિધ રોપાંનું સરપંચ મીટુભાઈનાં સહકારથી અદાણી ફાઉન્ડેશન દ્વારા કરવામાં આવ્યું હતું. સમગ્ર કાર્યક્રમનું આયોજન અને અમલીકરણ પ્રોજેક્ટ ઓફિસર કરસનભાઈ ગઢવી તથા તેમની ટીમ દ્વારા કરવામાં આવ્યું હતું.



# Future Planning...

## *for discussion*

- Landscaping, designing and seating arrangement at 2-3 Locations;
- Preparation of Signboards for Medicinal plants and selected Faunal Species;
- GAP Plantation of medicinal plants- MAKING DENSE PLOTS; and
- Compilation of Biodiversity Data: FLORA & FAUNA





# Budget For Next Six Months

ACTIVITY	Proposed Budget Rs.	Accumulated Expenses	Available Balance Rs.
Layout and Designing of BD Park	40,000	0	40,000
Saplings , Seeds Purchasing	1,06,230	65,578	40,652
Travel Cost Including TEDE	1,25,200	54,097	71,103
H.R.Cost Including Support Team	2,76,000	1,38,000	1,38,000
Overhead Cost	46,600	23,296	23,304
Total	5,94,030	2,80,971	3,13,059



THANK YOU...

# **Annexure – 8**

olc

**adani**

Ports and  
Logistics

**PCB ID: 31463**

**Ref No. APSEZL/EnvCell/2020-21/057**

**29.08.2020**

To,  
**Member Secretary**  
**Gujarat Pollution Control Board**  
Paryavaran Bhavan,  
Sector-10-A, Gandhinagar-382010

Dear Sir,

**Sub:** Environmental Statement for the financial year ending 31<sup>st</sup> March, 2020 for **Adani Ports and SEZ Limited (Multi Product SEZ)**.

**Ref:** PCB ID:- 31463, CC&A Order No. AWH - 88998, Valid till 21.08.2022

With reference to the above mentioned subject and reference, please find enclosed Environmental Statement in Form V prescribed under Rule 14 of the Environment (Protection) Rules 1986, for **M/s Adani Ports and SEZ Limited (Multi Product SEZ), Village & Taluka: Mundra, Dist. Kutch - 370421** for the financial year ending 31<sup>st</sup> March 2020.

Thank you.

Yours faithfully,  
For **Adani Ports and Special Economic Zone Limited**



Authorized Signatory

Encl: As above.

Copy to:

The Regional Officer, Gujarat Pollution Control Board, Gandhidham

Adani Ports and Special Economic Zone Ltd.  
Adani House,  
PO Box No. 1  
Mundra, Kutch 370 421  
Gujarat, India

Tel: +91 2838 25 5000  
Fax: +91 2838 25 51110  
info@adani.com  
www.adani.com

*Handwritten:* 07-09-2020  
**Received**  
Gujarat Pollution Control Board  
Regional Office  
Kutch (Gujarat)

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



Ref No. APSEZL/EnvCell/2020-21/057

29.08.2020

To,  
**Member Secretary**  
**Gujarat Pollution Control Board**  
Paryavaran Bhavan,  
Sector-10-A, Gandhinagar-382010

Dear Sir,

**Sub:** Environmental Statement for the financial year ending 31<sup>st</sup> March, 2020 for Adani Ports and SEZ Limited (Multi Product SEZ).

**Ref:** PCB ID:- 31463, CC&A Order No. AWH - 88998, Valid till 21.08.2022

With reference to the above mentioned subject and reference, please find enclosed Environmental Statement in Form V prescribed under Rule 14 of the Environment (Protection) Rules 1986, for M/s Adani Ports and SEZ Limited (Multi Product SEZ), Village & Taluka: Mundra, Dist. Kutch - 370421 for the financial year ending 31<sup>st</sup> March 2020.

Thank you.

Yours faithfully,  
For Adani Ports and Special Economic Zone Limited



Authorized Signatory

Encl: As above.

Copy to:

The Regional Officer, Gujarat Pollution Control Board, Gandhidham

Adani Ports and Special Economic Zone Ltd  
Adani House,  
PO Box No. 1  
Mundra, Kutch 370 421  
Gujarat, India

Tel: +91 2838 25 5000  
Fax: +91 2838 25 5110  
info@adani.com  
www.adani.com

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

  
Gujarat Pollution Control Board  
Head Office  
Sector No. 10-A,  
Gandhinagar-382010

**FORM V**  
(See Rule 14)

**Environmental Statement for the Financial Year ending 31<sup>st</sup> March 2020**

**PART – A**

- |       |  |   |   |
|-------|--|---|---|
| (i)   | Name and address of the Owner/<br>Occupier of the Industry Operation<br>or Process | : | Mr. Avinash Rai<br>CEO – Mundra & Tuna Port<br>Adani Ports and SEZ Limited<br>4 <sup>th</sup> Floor, Adani House,<br>Mundra, Kutch – 370421.<br>Ph No. (02838) 255000 |
|       |  |   |   |
| (ii)  | Industry Category<br>Primary (STC Code)<br>Secondary (STC Code)                    | : | Red-Large<br>NA<br>NA   |
|       |  |   |   |
| (iii) | Production Capacity  | : | Multi Product SEZ for 8481.27 Hacters Area:<br>(Phase-I)  |
|       |  |   |   |
| (iv)  | Year of Establishment  | : | 2012  |
|       |  |   |   |
| (v)   | Date of last Environment<br>Statement submitted                                    | : | 30/08/2019  |

# Environment Statement for 2019-20 for M/s Adani Ports and SEZ Limited (Multi Product SEZ)

(PCB ID: 31463)

## PART – B

### Water and Raw Material Consumption

#### (i) Water Consumption

Water Consumption Cu. Mtr./Day	Average
Process	Nil
*Domestic	192.42 m <sup>3</sup> /Day

\*Domestic included horticulture/gardening used water

Name of Products	Process Water Consumption per unit of Product Output	
	During the previous financial year (2018-19)	During the current financial year (2019-20)
Multi Product SEZ	Nil	Nil

**\*\* Unit does not go under any manufacturing process, hence there is no any water consumption for industrial purpose. The unit involve for Processing-Non Processing Zones, Ware Housing Zones, Road & Rail Network (trunk as well as internal), Bridges and Culverts, IT Communications, electric network, effluent collection network, utilities and supporting infrastructure, Sewage Treatment Plant (150 KL/Day), two D.G. Sets (750 & 500 KVA) airstrip, etc. within Multi Product SEZ. Individual member industries developed within SEZ area has been already been granted their individual Consent to Establish and Consent to Operate from SPCB as applicable.**

#### (ii) Raw Material Consumption

Name of Raw Material*	Name of Products	Consumption of Raw Material per Unit of output	
		During the previous financial year (2018-19)	During the current financial year (2019-20)
--	Multi Product SEZ	--	--

\* Unit does not go under any manufacturing process. Hence there is no any raw material consumption.

# Environment Statement for 2019-20 for M/s Adani Ports and SEZ Limited (Multi Product SEZ)

(PCB ID: 31463)

## PART – C

### Pollutants discharged to Environment/Unit of Output (Parameters as specified in consent issued)

Pollutants	Quantity of pollutants discharged (Mass/day)		Concentrations of pollutants in discharges (mass/volume)		Percentage of variation from prescribed standards with reasons
(a) Waste Water	Parameters	Avg. Mass Kg/Day	Parameters	Avg.	<p>There is no variation from prescribed standards in terms of quality of wastewater discharge.</p> <p>1. STP having 150 KLD capacity generated 22163 KL treated water during April 2019 – March 2020. was utilized for horticulture / greenbelt purpose within premises.</p> <p>2. Analysis reports of treated water are enclosed as Annexure – 2.</p>
	pH	--	pH	7.44	
	TSS	1.18	TSS (mg/l)	19.5	
	BOD	0.90	BOD (mg/l)	14.9	
	Fecal coliform	--	Fecal coliform (MPN INDEX/100 mL)	321.25	
(b) Air (DG Stack 750 KVA )	Parameters	Avg. Mass Kg/Day	Parameters	Total	<p>There is no variation from prescribed standards in terms of quality of wastewater discharge.</p> <p>1. DG sets having capacities 750 &amp; 500 KVA is provided as a standby power source and used during power failure. Analysis reports of stack monitoring are enclosed as Annexure – 2.</p> <p>2. The ambient air quality monitoring is being done regularly (twice a week) through NABL and MoEF&amp;CC recognized laboratory namely M/s. Pollucon Laboratories, Surat.</p> <p>3. Analysis reports of ambient air quality monitoring are enclosed as Annexure – 2</p>
	Particulate Matter (PM)	Negligible	Particulate Matter (mg/Nm <sup>3</sup> )	18.35	
	Sulphur Dioxide (SO <sub>2</sub> )	Negligible	Sulphur Dioxide (PPM)	4.17	
	Nitrogen Oxide (NO <sub>x</sub> )	Negligible	Nitrogen Oxide (NO <sub>x</sub> ) (PPM)	28.64	

**Unit does not go under any manufacturing process.**

Details of treated water outlet quantity for the year 2019-20 are enclosed as **Annexure – 1**.



**Environment Statement for 2019-20 for M/s Adani Ports and SEZ Limited**  
**(Multi Product SEZ)**

(PCB ID: 31463)

**PART – D**

**Hazardous Wastes**

**(As specified under Hazardous Wastes Management and Handling Rules 1989)**

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year (2018-19)	During the current financial year (2019-20)
(a) From Process	Nil	Nil
(b) From Pollution Control facilities	Nil	Nil

**\*Note: Quantity shown in Annexure – 3 is waste (hazardous as well as non-hazardous) generated as well as disposed from entire Adani Ports and SEZ Limited.**

**PART – E**

**Solid Waste**

Solid Waste	Total Quantity Generated (MT/Annum)	
	During the previous financial year (2018-19)	During the current financial year (2019-20)
(a) From Process (Ash)	Nil	Nil
(b) From Pollution Control facilities	-	-
(C-1) Quantity recycled or reutilized within the unit	1066 MT (Food waste converted in to manure/biogas)	Details is Attached as annexure-3
(C-2) Sold	3615 MT (Recyclable waste)	
(C-3) Disposed	286.9 (RDF –sent for co-processing)	

*Note: Above Quantity shown is waste generated as well as disposed from entire Adani Ports & SEZ Limited.*

## **Environment Statement for 2019-20 for M/s Adani Ports and SEZ Limited** **(Multi Product SEZ)**

**(PCB ID: 31463)**

### **PART - F**

**Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes:**

- "Zero Waste company" initiative by APSEZ i.e. No waste is being sent to landfill or incineration facility @ Adani Ports & SEZ, rather being managed through 5 R principal of waste Management.
- APSEZ has eminent material recovery facility (MRF), having appropriate facility to proper segregate & recover the materials as per set process. Mixed Waste is being segregated via specialized mix waste segregation machine in two forms –Bio and Non bio without manual segregation, where risk to health hazards is minimized. Further waste is segregated in to 16 streams at MRF, which is sent to different end users following 5 R principal. To manage all operation of MRF, APSEZ developed local vendor through his past learnings and employed local women staff mainly to segregate waste.
- Wet Waste is being managed through Organic Waste Composting Facility and Biogas generation.
- Installed large scale bio gas plant at Central Kitchen location. This plant is sufficient to manage the food Waste generated from APSEZ area i.e. 700 Kg per day.
- Dry waste and e-waste collection drive is being organized every month within townships to collect municipal solid waste as well as e-waste from households.
- Plastic Free APSEZ Drive-which demonstrate commitment towards elimination of single use plastic
- Plastic free APSEZ Drive:
  - APSEZ pasted stickers spreading awareness among their zone as plastic are prohibited now.
  - Awareness sessions organized among department and contract workers.
  - Made shop keepers and canteen owners to stop providing plastic carry bags to carry the material.
  - Confirms to stop usage of plastic cups to serve tea and water pouches within the premises of APSEZ.
  - Regular supervision by Team Members at Port Canteens and Shops townships for verification of prohibition of plastic.
  - Defined 3 Levels to achieve plastic free APSEZ.
- Hazardous waste is being disposed by either co-processing or sent to govt. approved recyclers.
- Sludge generated from STP is being utilized as manure for horticulture purpose.

# **Environment Statement for 2019-20 for M/s Adani Ports and SEZ Limited** **(Multi Product SEZ)**

(PCB ID: 31463)

## **PART – G**

**Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.**

### **Energy Savings**

- Installed 7.8 MW roof top solar generating plant at various locations and 12 MW wind generating plant in SEZ in Mundra which is generating nearly 5.77 and 50.35 million units annually respectively as utilization of renewable source of energy for captive use which reduce the emission of CO<sub>2</sub> by nearly 45961 tco<sub>2</sub>/MWh. The conventional lights have been replaced with LED lights in SEZ area which has reduced the connected load of 1069 KW. The replacement of lights will be reduced the consumption of energy by 4.2 million units per annum which reduce the emission of CO<sub>2</sub> by nearly 3444 tco<sub>2</sub>/MWh.
- Replacement of Diesel operated Reach Stacker with Electricity operated RMGCs for Rail Operation
- Use of Regenerative (Reverse Power Generation) Crane at Container Terminal E- RTG Technology for cranes
- Switching over from Conventional lighting (HPSV) to Energy Efficient LED lighting
- Installation of Motion Sensor (Occu switch) & AC Temp. Control in Port Office Buildings
- AC Temp. Control in Port Office Buildings at Port office Buildings.
- Tug Speed Reduction Program
- Switched off the supply of Boom back reach 4 nos. 1000W

### **Water Conservation:**

- There are 8558 nos of water aerator have been installed in Residence Area and various offices.
- Water less urinal have been placed in various offices.
- Modifications of flush tank have been added in water system of toilet area in Port User Buildings.
- Use of Sea Water for Hydro testing instead of Fresh Water.
- Optimization of water during testing of Fixed Fire Fighting system
- Recollection of water provided for hydro testing through water
- Treated Water utilization
- Following safeguard measures are taken for abatement of dust and noise emissions
  - ✓ Regular sprinkling on road and other open area
  - ✓ Regular cleaning of roads
  - ✓ D.G. Set having acoustic enclosures
  - ✓ Adequate greenbelt and plantation area

**Environment Statement for 2019-20 for M/s Adani Ports and SEZ Limited**  
**(Multi Product SEZ)**

(PCB ID: 31463)

**PART – H**

**Additional measures /investment/ proposal for environmental protection including abatement of pollution, prevention of pollution.**

- Treated water from STP is used for gardening and horticulture activity within APSEZ premises to conserve the fresh water consumption.
- Unit has formed dedicated Horticulture department & developing green belt within port premises.
- More than 464 ha. area is developed as greenbelt with plantation of more than 8.7 Lacs trees within the entire APSEZ area.
- Following safeguard measures are taken for abatement of dust and noise emissions
  - ✓ Regular sprinkling on road and other open area
  - ✓ Regular cleaning of roads
  - ✓ Development of greenbelt along the periphery of the storage yards/back up area
  - ✓ D.G. Sets having acoustic enclosures

**PART – I**

**Any other particulars for improving the quality of environment:**

- Monitoring of environmental parameters such as Air, Noise, and wastewater quality being done regular basis through MoEF & NABL recognized laboratory (Pollucon Laboratories, Surat).
- Budget for environmental management measures (including horticulture) for the FY 2019-20 was to the tune of INR 1145.83 lakh out of which INR 1083.95 lakh was spent. Environment protection expenditure spent during the year 2019-20 is enclosed as **Annexure – 4**.
- APSEZ is driving paperless office and plastic free drive to eliminate the use of papers and plastic materials to the extent possible within ports, SEZ and residential townships.



Date : 18-08-2020

(Signature of a person carrying out an industry,  
operation or process)

Designation : **Head-Environment Cell**

Address : **Adani House, P.O. Box No. 1, Adani Ports & SEZ Ltd.,  
Village & Taluka: Mundra, Kutch – 370421.**



# **Environment Statement for 2019-20 for M/s Adani Ports and SEZ Limited** **(Multi Product SEZ)**

(PCB ID: 31463)

## **ANNEXURE – 1** **Water details (2019-20)**

Month	Water Consumption		Treated Water
	Industrial, KL	Domestic (Included horticulture used water), KL	Treated Sewage, KL
Apr-18	0	3567	1480
May-18	0	5315	1446
Jun-18	0	4123.4	1161
Jul-18	0	3890.6	1578
Aug-18	0	3373	1711
Sep-18	0	3530	2323
Oct-18	0	3762	2544
Nov-18	0	5678	2364
Dec-18	0	8562	1897
Jan-19	0	5980	1230
Feb-19	0	10563	2827
Mar-19	0	11888	1602
<b>Total</b>	<b>0</b>	<b>70232</b>	<b>22163</b>
<b>Per Month</b>	<b>0</b>	<b>5853</b>	<b>1847</b>
<b>Per Day</b>	<b>0.00</b>	<b>192.42</b>	<b>60.72</b>

## **ANNEXURE – 3** **Details of Waste Management of APSEZ, Mundra** **(2019-20)**

Sr. No.	Waste Description	Disposal Method	Unit	Quantity
<b>Non Hazardous</b>				
1.	Scrap (Recyclable waste-Metal, Wood, paper, plastic etc.)	Recycle (send to recycler)/ Reuse (Used by Org.)	MT	899.30
2.	RDF (Non-Recyclable)	Co-processing to cement plant)	MT	398.72
3.	STP Sludge	Reprocess (Manure)	MT	36
4.	Organic Waste	Manure/biogas	MT	888.85
5.	E-Waste	Recycle (send to recycler)	MT	2.07
<b>Hazardous</b>				
1.	Used Oil	Recycle (send to recycler)	MT	119.03

**Environment Statement for 2019-20 for M/s Adani Ports and SEZ Limited**  
**(Multi Product SEZ)**

(PCB ID: 31463)

**ANNEXURE – 4**

**Cost of Environmental Protection Measures of APSEZ, Mundra**

**F.Y. 2019-20**

<b>Sr. No.</b>	<b>Activity</b>	<b>Cost incurred (INR in Lacs)</b>	<b>Budgeted Cost (INR in Lacs)</b>
1.	Environmental Study / Audit and Consultancy	0.33	6.0
2.	Legal & Statutory Expenses	0.84	3.0
3.	Environmental Monitoring Services	21.74	24.0
4.	Hazardous / Non Hazardous Waste Management & Disposal	108.43	120.57
5.	Environment Days Celebration and Advertisement / Business development	1.5	10.0
6.	Treatment and Disposal of Bio-Medical Waste	1.62	1.56
7.	Mangrove Plantation, Monitoring & Conservation	Nil	Nil
8.	Other Horticulture Expenses	734.18	727.80
9.	O&M of Sewage Treatment Plant and Effluent Treatment Plant (including STP, ETP of Port & SEZ & Common Effluent Treatment Plant)	110.18	128.52
10.	Expenditure of Environment Dept. (Apart from above head)	105.13	124.38
	Total	1083.95	1145.83

# Annexure-2

## "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,  
OLD SHANTINATH SILK MILL LANE, NEAR GAYTRI FARSAN MART,  
NAVJIVAN CIRCLE, UDHANA MAGDALLA ROAD, SURAT-395007.  
PHONE/FAX – (+91 261) 2455 751, 2601 106, 2601 224.  
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 & Analytical  
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/m3	Particulate Matter (PM <sub>2.5</sub> ) µg/m3	Sulphur Dioxide (SO <sub>2</sub> ) µg/m3	Oxides of Nitrogen (NO <sub>2</sub> ) µg/m3
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

Continue ...

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)



**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analytical  
Cleaner Production / Waste Minimisation Practitioner

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

WTP- NEAR CETP					
Sr.No.	Date of Sampling	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM2.5) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (SO2) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO2) $\mu\text{g}/\text{m}^3$
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)

**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analytical  
Cleaner Production / Waste Minimisation Practitioners

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

**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*

Continue ...

H. T. Shah

Lab Manager

Dr. Arun Bajpai

Lab Manager (Q)

**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analytical  
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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

\*Below detection limit

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)

**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analytical  
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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

Continue..

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)



**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analytical  
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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)

**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analytical  
Cleaner Production / Waste Minimisation / Pollution

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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

Continue...

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)

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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>	<b>IS:5182(Part 23):Gravimetric CPCB - Method (Vol.I,May-2011)</b>	<b>Gravimetric- CPCB - Method (Vol.I,May-2011)</b>	<b>IS:5182(Part II):Improved West and Gaeke</b>	<b>IS:5182(Part VI):Modified Jacob &amp;Hochheiser (NaOH-NaAsO<sub>2</sub>)</b>

\*Below detection limit

H. T. Shah

Lab Manager

Dr. ArunBajpai

Lab Manager (Q)

**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analytical  
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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. ArunBajpai

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)

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

SR. NO.	Name of Location	CETP					
		Result [dB(A) Leq]					
	Sampling Date & Time	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]					
	Sampling Date & Time	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)

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

SR. NO.	Name of Location	AIR STRIP					
		Result [dB(A) Leq]					
	Sampling Date & Time	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]					
	Sampling Date & Time	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					

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	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. Arun Bajpai

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)]					
	Sampling Date & Time	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)]					
	Sampling Date & Time	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)

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**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

H. T. Shah

Lab Manager

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Lab Manager (Q)

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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 Permissibl e 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	<b>30</b>	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	8	16	10	12	19	13	<b>20</b>	IS 3025 (P44)1993Re.03Edition 2.1
4	Residual Chlorine	mg/L	0.5	0.6	0.6	0.8	0.4	0.5	<b>Min 0.5</b>	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/ 100 ml	150	170	170	130	150	150	<b>&lt; 1000</b>	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.03Edition2.1
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

**H. T. Shah****Lab Manager****Dr. ArunBajpai****Lab Manager (Q)**



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

**FOR**



**ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED  
TAL: MUNDRA, KUTCH, MUNDRA – 370 421**

**MONITORING PERIOD:  
OCTOBER 2019 TO MARCH 2020**

**PREPARED BY:**



**POLLUCON LABORATORIES PVT.LTD.**

**PLOT NO.5/6 "POLLUCON HOUSE", OPP. BALAJI INDUSTRIAL SOCIETY,  
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**TC - 5945**

**ISO 9001:2015**

**ISO 14001:2015**

**OHSAS 18001:2007**

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### 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	02/10/2019	78.54	39.40	18.72	33.23
2	07/10/2019	73.76	30.42	23.70	40.23
3	09/10/2019	87.50	36.57	11.24	30.57
4	14/10/2019	65.36	29.38	14.53	38.26
5	16/10/2019	76.28	44.26	22.31	28.44
6	21/10/2019	68.37	37.57	24.69	39.52
7	23/10/2019	88.62	42.47	16.57	36.55
8	30/10/2019	79.61	38.44	19.51	31.54
9	31/10/2019	90.23	46.67	21.59	41.26
10	04/11/2019	72.35	32.53	24.22	30.25
11	06/11/2019	82.51	43.52	15.65	35.51
12	11/11/2019	78.68	35.69	22.57	45.54
13	13/11/2019	84.38	47.52	26.35	42.39
14	18/11/2019	73.6	39.65	18.48	39.57
15	20/11/2019	90.24	52.6	23.33	36.54
16	25/11/2019	85.32	32.49	21.56	33.57
17	27/11/2019	94.54	49.27	17.76	40.22
18	02/12/2019	70.55	38.23	20.38	33.43
19	04/12/2019	68.62	27.41	27.67	41.59
20	09/12/2019	82.61	37.28	17.58	30.56
21	11/12/2019	94.28	53.44	19.51	34.57
22	16/12/2019	82.44	45.32	24.53	28.6
23	18/12/2019	92.34	49.23	26.45	31.52
24	23/12/2019	74.56	42.44	25.62	39.57
25	25/12/2019	80.25	46.56	29.44	35.51
26	30/12/2019	71.51	34.28	23.48	40.53
27	01/01/2020	73.59	36.53	21.55	36.56
28	06/01/2020	66.85	30.24	25.50	33.45
29	08/01/2020	92.60	53.48	23.34	42.31
30	13/01/2020	81.27	47.48	20.51	39.52

Continue ...



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

Recognized by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986

WTP- NEAR CETP					
Sr.No.	Date of Sampling	Particulate Matter (PM10) µg/m <sup>3</sup>	Particulate Matter (PM2.5) 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	15/01/2020	70.64	43.65	18.21	29.56
32	20/01/2020	84.20	48.23	16.24	30.26
33	22/01/2020	77.20	38.57	27.60	34.51
34	27/01/2020	93.23	52.31	14.23	28.63
35	29/01/2020	74.65	35.44	24.59	37.29
36	03/02/2020	84.30	41.36	17.52	34.23
37	05/02/2020	64.24	37.24	19.41	37.57
38	10/02/2020	79.37	44.57	20.35	30.21
39	12/02/2020	89.36	50.23	22.34	33.51
40	17/02/2020	77.53	34.53	15.42	26.32
41	19/02/2020	62.57	26.36	24.66	29.41
42	24/02/2020	85.33	46.27	13.55	27.55
43	26/02/2020	75.66	41.53	21.56	35.68
44	02/03/2020	79.55	46.52	18.23	29.42
45	04/03/2020	88.23	49.56	21.66	35.37
46	09/03/2020	66.51	38.57	25.43	27.24
47	11/03/2020	82.67	43.32	20.55	37.56
48	16/03/2020	78.24	35.65	26.39	40.24
49	18/03/2020	86.52	50.27	22.83	43.53
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-NaAsO <sub>2</sub> )

\*Below detection limit



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

Recognized by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986

### RESULT OF AMBIENT AIR QUALITY MONITORING

AIR STRIP								
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 (SO2) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO2) $\mu\text{g}/\text{m}^3$	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	02/10/2019	62.64	35.39	14.25	28.66	0.14	BDL*	BDL*
2	07/10/2019	49.39	27.63	11.37	20.44	0.22	BDL*	BDL*
3	09/10/2019	67.45	40.20	9.51	15.62	0.11	BDL*	BDL*
4	14/10/2019	60.42	34.29	19.55	24.30	0.32	BDL*	BDL*
5	16/10/2019	57.53	22.38	12.45	23.55	0.24	BDL*	BDL*
6	21/10/2019	72.45	36.27	6.34	19.61	0.37	BDL*	BDL*
7	23/10/2019	48.32	18.69	13.25	21.23	0.48	BDL*	BDL*
8	30/10/2019	66.46	29.70	7.79	25.33	0.27	BDL*	BDL*
9	31/10/2019	83.69	26.59	16.58	29.22	0.41	BDL*	BDL*
10	04/11/2019	66.34	36.29	13.84	23.42	0.34	BDL*	BDL*
11	06/11/2019	75.68	39.38	9.57	26.7	0.4	BDL*	BDL*
12	11/11/2019	52.3	30.44	17.53	31.5	0.24	BDL*	BDL*
13	13/11/2019	79.62	42.64	12.61	22.46	0.15	BDL*	BDL*
14	18/11/2019	58.44	32.45	7.16	19.65	0.18	BDL*	BDL*
15	20/11/2019	71.65	44.22	16.18	32.44	0.23	BDL*	BDL*
16	25/11/2019	68.58	31.53	10.55	28.64	0.3	BDL*	BDL*
17	27/11/2019	53.79	24.51	15.64	24.58	0.52	BDL*	BDL*
18	02/12/2019	54.51	27.69	7.91	17.59	0.23	BDL*	BDL*
19	04/12/2019	77.52	38.54	15.66	21.5	0.16	BDL*	BDL*
20	09/12/2019	69.49	34.62	10.23	24.54	0.32	BDL*	BDL*
21	11/12/2019	70.68	31.57	17.36	31.55	0.57	BDL*	BDL*
22	16/12/2019	88.22	42.51	11.23	23.38	0.26	BDL*	BDL*
23	18/12/2019	65.32	36.5	18.55	26.54	0.38	BDL*	BDL*
24	23/12/2019	58.48	20.25	21.3	22.55	0.44	BDL*	BDL*
25	25/12/2019	71.56	37.54	13.61	19.22	0.19	BDL*	BDL*
26	30/12/2019	52.65	25.47	8.53	15.65	0.48	BDL*	BDL*
27	01/01/2020	57.55	25.31	6.81	28.6	0.42	BDL*	BDL*
28	06/01/2020	74.23	40.26	13.57	20.31	0.54	BDL*	BDL*
29	08/01/2020	84.27	42.59	16.60	29.38	0.25	BDL*	BDL*
30	13/01/2020	79.45	45.31	10.49	19.49	0.49	BDL*	BDL*

Continue ...



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)



Recognized by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986

AIR STRIP								
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 (SO2) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO2) $\mu\text{g}/\text{m}^3$	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	15/01/2020	52.62	30.19	7.47	15.68	0.18	BDL*	BDL*
32	20/01/2020	64.33	38.46	9.65	18.67	0.64	BDL*	BDL*
33	22/01/2020	70.29	35.29	11.49	23.36	0.22	BDL*	BDL*
34	27/01/2020	66.26	29.44	8.63	21.58	0.30	BDL*	BDL*
35	29/01/2020	59.60	26.39	19.28	25.34	0.36	BDL*	BDL*
36	03/02/2020	62.36	22.38	8.65	17.19	0.53	BDL*	BDL*
37	05/02/2020	70.22	34.58	14.22	26.29	0.34	BDL*	BDL*
38	10/02/2020	58.66	20.59	9.64	20.22	0.41	BDL*	BDL*
39	12/02/2020	68.65	36.25	15.63	23.47	0.22	BDL*	BDL*
40	17/02/2020	55.33	28.48	6.54	16.28	0.48	BDL*	BDL*
41	19/02/2020	69.33	32.4	19.6	24.68	0.31	BDL*	BDL*
42	24/02/2020	78.59	37.67	7.53	13.54	0.15	BDL*	BDL*
43	26/02/2020	65.65	39.46	16.31	22.61	0.4	BDL*	BDL*
44	02/03/2020	73.52	38.67	15.64	18.66	0.49	BDL*	BDL*
45	04/03/2020	66.27	22.34	10.31	22.69	0.26	BDL*	BDL*
46	09/03/2020	55.32	36.37	14.32	30.21	0.39	BDL*	BDL*
47	11/03/2020	67.55	41.26	6.6	25.46	0.46	BDL*	BDL*
48	16/03/2020	57.62	30.32	11.55	27.88	0.22	BDL*	BDL*
49	18/03/2020	65.33	37.33	16.21	23.61	0.25	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-NaAsO2)	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. Arun Bajpai

Lab Manager (Q)

Recognized by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986

### 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	02/10/2019	52.69	18.42	12.49	16.51
2	07/10/2019	77.31	40.24	15.60	25.34
3	09/10/2019	82.13	45.21	14.54	22.54
4	14/10/2019	55.69	26.52	9.35	34.56
5	16/10/2019	49.69	23.54	6.59	20.40
6	21/10/2019	64.41	28.55	8.65	31.26
7	23/10/2019	79.25	35.68	10.68	18.61
8	30/10/2019	61.92	31.62	15.37	28.57
9	31/10/2019	72.75	25.48	18.46	32.90
10	04/11/2019	58.68	27.59	22.29	26.54
11	06/11/2019	66.72	30.59	10.25	29.69
12	11/11/2019	72.67	42.58	20.20	35.66
13	13/11/2019	60.33	33.42	15.63	27.62
14	18/11/2019	53.40	25.47	9.71	32.55
15	20/11/2019	83.41	48.82	13.88	17.59
16	25/11/2019	63.75	28.34	19.50	30.45
17	27/11/2019	81.62	38.29	21.65	34.53
18	02/12/2019	59.60	24.26	10.51	27.21
19	04/12/2019	60.23	21.52	25.53	33.55
20	09/12/2019	71.52	27.64	11.69	23.48
21	11/12/2019	82.42	43.54	24.31	28.59
22	16/12/2019	66.32	29.59	22.51	24.57
23	18/12/2019	76.64	42.7	16.26	19.4
24	23/12/2019	67.5	38.5	23.61	31.51
25	25/12/2019	53.47	28.34	18.37	22.52
26	30/12/2019	78.55	39.41	21.56	35.55
27	01/01/2020	77.47	42.49	19.61	31.69
28	06/01/2020	61.62	26.35	22.27	29.32
29	08/01/2020	74.64	38.62	14.61	26.32
30	13/01/2020	66.31	34.59	18.50	33.87

Continue..



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

Recognized by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986

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	15/01/2020	57.54	25.47	9.45	18.50
32	20/01/2020	68.39	32.46	11.57	22.36
33	22/01/2020	55.35	28.39	16.55	19.46
34	27/01/2020	79.31	44.53	17.55	25.47
35	29/01/2020	65.34	30.47	20.37	30.42
36	03/02/2020	78.65	26.33	11.80	24.49
37	05/02/2020	58.33	31.67	8.54	16.36
38	10/02/2020	63.26	24.28	17.57	25.46
39	12/02/2020	55.3	28.33	19.19	29.43
40	17/02/2020	70.22	18.32	10.32	21.59
41	19/02/2020	51.56	22.24	13.55	30.55
42	24/02/2020	62.37	25.33	16.21	22.23
43	26/02/2020	53.26	19.24	12.37	18.4
44	02/03/2020	69.57	28.76	7.55	20.71
45	04/03/2020	74.33	37.5	15.33	31.55
46	09/03/2020	50.21	23.64	21.54	35.71
47	11/03/2020	60.53	29.26	11.54	29.63
48	16/03/2020	71.55	38.54	22.65	36.53
49	18/03/2020	80.24	44.24	18.53	30.6
	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-NaAsO <sub>2</sub> )

\*Below detection limit



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

Recognized by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986

### 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	02/10/2019	46.29	21.52	9.49	24.52
2	07/10/2019	64.51	35.24	17.52	29.50
3	09/10/2019	70.32	27.72	7.64	20.43
4	14/10/2019	47.31	20.57	11.55	30.23
5	16/10/2019	63.84	36.44	8.33	17.55
6	21/10/2019	56.42	22.73	16.22	28.39
7	23/10/2019	65.43	38.52	12.42	25.36
8	30/10/2019	55.79	26.64	10.44	18.69
9	31/10/2019	77.60	37.69	14.56	36.71
10	04/11/2019	50.60	19.49	16.54	19.55
11	06/11/2019	61.33	24.33	12.34	32.58
12	11/11/2019	55.66	28.25	15.34	40.24
13	13/11/2019	49.52	23.62	19.50	33.45
14	18/11/2019	68.21	22.62	14.35	29.52
15	20/11/2019	76.25	29.46	10.31	26.39
16	25/11/2019	58.46	26.45	8.65	20.39
17	27/11/2019	71.65	41.56	13.55	27.62
18	02/12/2019	63.61	33.42	15.69	20.49
19	04/12/2019	48.69	19.4	18.25	24.26
20	09/12/2019	58.84	24.24	14.55	27.66
21	11/12/2019	78.52	35.47	23.48	37.56
22	16/12/2019	61.24	20.57	19.56	30.44
23	18/12/2019	71.46	26.33	11.53	22.67
24	23/12/2019	50.23	23.49	13.57	34.5
25	25/12/2019	62.34	20.36	20.31	29.58
26	30/12/2019	57.58	30.21	17.58	26.59
27	01/01/2020	64.5	32.3	16.27	22.47
28	06/01/2020	52.59	24.53	19.58	25.47
29	08/01/2020	69.38	28.41	9.59	15.69
30	13/01/2020	58.45	25.33	14.49	28.51

Continue...



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)



Recognized 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	15/01/2020	63.48	34.59	12.57	20.31
32	20/01/2020	59.41	27.29	17.61	26.37
33	22/01/2020	65.37	20.86	15.27	29.51
34	27/01/2020	72.43	38.26	11.70	32.46
35	29/01/2020	55.32	22.45	22.32	19.54
36	03/02/2020	72.52	35.67	10.21	29.59
37	05/02/2020	53.63	22.64	12.49	23.41
38	10/02/2020	68.37	27.39	15.23	16.57
39	12/02/2020	75.32	38.25	17.47	26.7
40	17/02/2020	65.35	24.31	7.99	17.59
41	19/02/2020	57.32	29.43	20.33	27.24
42	24/02/2020	69.46	32.46	9.46	24.21
43	26/02/2020	59.32	26.22	19.55	31.28
44	02/03/2020	63.58	25.33	10.26	23.36
45	04/03/2020	82.65	30.5	19.55	27.26
46	09/03/2020	60.28	33.46	16.51	22.73
47	11/03/2020	71.21	26.33	14.5	34.29
48	16/03/2020	65.52	17.65	15.33	24.55
49	18/03/2020	73.56	29.46	12.67	20.35
	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-NaAsO <sub>2</sub> )

\*Below detection limit



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

Recognized by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986

### 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 (SO2) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO2) $\mu\text{g}/\text{m}^3$	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	02/10/2019	70.65	51.38	16.51	30.48	0.48	BDL*	BDL*
2	07/10/2019	51.32	18.68	13.59	17.51	0.45	BDL*	BDL*
3	09/10/2019	62.61	24.52	15.37	27.52	0.52	BDL*	BDL*
4	14/10/2019	58.72	30.28	10.69	21.54	0.27	BDL*	BDL*
5	16/10/2019	71.38	32.43	17.40	33.42	0.40	BDL*	BDL*
6	21/10/2019	67.70	26.42	7.65	26.37	0.22	BDL*	BDL*
7	23/10/2019	74.41	37.65	19.34	32.46	0.34	BDL*	BDL*
8	30/10/2019	59.47	33.48	8.61	24.60	0.39	BDL*	BDL*
9	31/10/2019	68.58	23.68	11.23	31.55	0.37	BDL*	BDL*
10	04/11/2019	60.78	33.61	19.22	37.54	0.32	BDL*	BDL*
11	06/11/2019	71.22	29.95	11.27	23.58	0.23	BDL*	BDL*
12	11/11/2019	54.61	25.66	13.39	32.47	0.49	BDL*	BDL*
13	13/11/2019	75.36	31.57	16.27	20.22	0.61	BDL*	BDL*
14	18/11/2019	86.32	35.44	8.59	16.65	0.37	BDL*	BDL*
15	20/11/2019	65.61	30.24	18.43	34.3	0.58	BDL*	BDL*
16	25/11/2019	70.67	34.57	9.6	26.5	0.42	BDL*	BDL*
17	27/11/2019	82.6	40.23	20.54	36.35	0.71	BDL*	BDL*
18	02/12/2019	81.66	42.61	21.29	38.32	0.63	BDL*	BDL*
19	04/12/2019	78.2	39.61	19.44	22.4	0.71	BDL*	BDL*
20	09/12/2019	68.46	29.32	12.69	28.43	0.57	BDL*	BDL*
21	11/12/2019	77.36	34.57	7.87	24.37	0.8	BDL*	BDL*
22	16/12/2019	64.51	26.41	15.69	35.45	0.54	BDL*	BDL*
23	18/12/2019	55.78	32.53	22.57	41.51	0.37	BDL*	BDL*
24	23/12/2019	62.47	28.49	14.52	23.54	0.25	BDL*	BDL*
25	25/12/2019	83.41	38.48	9.64	18.62	0.41	BDL*	BDL*
26	30/12/2019	70.69	31.57	11.52	30.45	0.5	BDL*	BDL*
27	02/10/2019	70.65	51.38	16.51	30.48	0.48	BDL*	BDL*
28	01/01/2020	58.22	35.61	20.22	35.67	0.41	BDL*	BDL*
29	06/01/2020	60.54	38.53	10.66	31.69	0.57	BDL*	BDL*
30	08/01/2020	77.53	45.32	18.48	33.51	0.71	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 (PM10) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM 2.5) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (SO2) $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen (NO2) $\mu\text{g}/\text{m}^3$	Carbon Monoxide as CO $\text{mg}/\text{m}^3$	Hydrocarbon as CH4 $\text{mg}/\text{m}^3$	Benzene as C6H6 $\mu\text{g}/\text{m}^3$
31	13/01/2020	61.55	27.66	13.58	20.55	0.27	BDL*	BDL*
32	15/01/2020	53.46	31.53	16.63	19.60	0.81	BDL*	BDL*
33	20/01/2020	72.61	34.53	7.61	23.42	0.88	BDL*	BDL*
34	22/01/2020	69.35	37.49	9.58	15.30	0.46	BDL*	BDL*
35	27/01/2020	56.40	28.53	15.65	30.36	0.60	BDL*	BDL*
36	29/01/2020	64.20	32.53	12.41	21.55	0.64	BDL*	BDL*
37	03/02/2020	57.64	25.41	15.67	25.3	0.33	BDL*	BDL*
38	05/02/2020	71.68	24.53	18.22	30.39	0.48	BDL*	BDL*
39	10/02/2020	64.31	30.28	8.68	15.62	0.24	BDL*	BDL*
40	12/02/2020	56.27	26.41	10.36	18.32	0.61	BDL*	BDL*
41	17/02/2020	61.57	33.57	14.16	23.41	0.4	BDL*	BDL*
42	19/02/2020	58.48	35.36	11.61	31.6	0.55	BDL*	BDL*
43	24/02/2020	70.27	31.53	6.86	20.43	0.71	BDL*	BDL*
44	26/02/2020	52.65	22.57	9.49	28.36	0.42	BDL*	BDL*
45	02/03/2020	70.22	32.2	21.22	26.44	0.47	BDL*	BDL*
46	04/03/2020	57.63	26.82	8.64	17.47	0.39	BDL*	BDL*
47	09/03/2020	77	35.69	19.32	38.32	0.56	BDL*	BDL*
48	11/03/2020	54.24	24.16	17.48	31.64	0.5	BDL*	BDL*
49	16/03/2020	66.18	31.53	12.67	35.63	0.34	BDL*	BDL*
50	18/03/2020	59.37	27.57	10.3	28.73	0.62	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-NaAsO2)	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. Arun Bajpai

Lab Manager (Q)

## RESULTS OF NOISE LEVEL MONITORING

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

SR. NO.	Name of Location	WTP- NEAR CETP					
		Result [dB(A) Leq]					
	Sampling Date & Time	04/10/2019	01/11/2019	09/12/2019	02/01/2020	26/02/2020	11/03/2020
1	6:00-7:00	67.3	63.2	65.2	63.2	65.3	65.2
2	7:00-8:00	62.1	67.3	68.8	64.8	68.5	68.3
3	8:00-9:00	69.4	69.4	63.2	65.5	62.3	63.4
4	9:00-10:00	71.3	72.2	62.1	69.6	60.3	66.8
5	10:00-11:00	67.7	66.5	66.8	68.9	63.1	69.4
6	11:00-12:00	65.3	64.3	68.5	66.9	64.8	65.3
7	12:00-13:00	63.8	67.4	66.3	64.8	68.4	61.2
8	13:00-14:00	69.4	68.4	63.2	62.1	65.8	64.2
9	14:00-15:00	63.2	64.2	70.3	60.3	69.5	63.6
10	15:00-16:00	69.5	66.8	69.3	65.3	70.9	68.3
11	16:00-17:00	65.1	68.3	54.2	62.5	67.5	63.2
12	17:00-18:00	63.3	70.8	62.3	68.7	69.4	67.4
13	18:00-19:00	69.7	64.2	65.4	65.3	63.9	69.9
14	19:00-20:00	67.4	63.1	64.8	63.5	66.5	65.3
15	20:00-21:00	64.4	65	67.4	67.8	62.8	62.1
16	21:00-22:00	63.1	65.8	65.3	66.9	60.2	65.9
Day Time Limit*		75 dB(A) Leq					

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

	Name of Location	WTP- NEAR CETP					
		Result [dB(A) Leq]					
	Sampling Date & Time	04/10/2019	01/11/2019	09/12/2019	02/01/2020	26/02/2020	11/03/2020
1	22:00-23:00	69.5	65.3	60.4	63.4	64.3	67.3
2	23:00-00:00	65.2	60.2	52.1	62.7	67.9	64.3
3	00:00-01:00	62.3	63.1	57.1	68.4	60.3	62.3
4	01:00-02:00	62.8	59.3	53.4	61.4	62.7	66.3
5	02:00-03:00	68.4	63.2	60.4	60.8	65.1	67.3
6	03:00-04:00	65.9	62.1	62.4	65.3	67.4	62.2
7	04:00-05:00	60.2	60.3	61.4	62.4	62.1	60.3
8	05:00-06:00	63.2	61.5	67.4	62.4	60.3	62.2
Night Time Limit*		70 dB(A) Leq					



H. T. Shah

Lab Manager




Dr. Arun Bajpai

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]					
	Sampling Date & Time	23/10/2019	15/11/2019	25/12/2019	13/01/2020	27/02/2020	--
1	6:00-7:00	52.4	54.6	57.3	54.2	56.3	--
2	7:00-8:00	57.5	59.7	60.2	59.4	61.3	--
3	8:00-9:00	60.4	62.4	62.1	60.3	65.8	--
4	9:00-10:00	68.5	60.4	65.4	63.4	62.1	--
5	10:00-11:00	61.3	67.4	62.1	65.3	60.4	--
6	11:00-12:00	64.4	66.3	68.2	69.5	66.4	--
7	12:00-13:00	66.4	63.6	66.3	63.3	68.3	--
8	13:00-14:00	68.4	60.4	62.4	61.6	65.3	--
9	14:00-15:00	63.1	64.1	66.9	62.9	63.8	--
10	15:00-16:00	60.3	61.4	65.5	60.2	68	--
11	16:00-17:00	65.3	65.2	62.1	62.3	64.2	--
12	17:00-18:00	63.1	66.6	61.2	65.3	60.2	--
13	18:00-19:00	67.4	62.3	63.2	61.2	58.3	--
14	19:00-20:00	63.3	62.8	60.3	63.5	62.5	--
15	20:00-21:00	62.2	60.5	64.3	65.4	60.9	--
16	21:00-22:00	65.2	66.7	67.4	63.3	57.9	--
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]					
	Sampling Date & Time	23/10/2019	15/11/2019	25/12/2019	13/01/2020	27/02/2020	--
1	22:00-23:00	64.2	62.3	60.3	53.4	59.8	--
2	23:00-00:00	60.2	59.4	60.5	56.1	64.3	--
3	00:00-01:00	53.2	60.3	57.3	49.8	56.3	--
4	01:00-02:00	50.3	52.1	52.6	52.7	62.1	--
5	02:00-03:00	48.3	58.3	54.7	57.4	56.3	--
6	03:00-04:00	53.7	55.2	50.4	60.4	53.4	--
7	04:00-05:00	58.1	54.9	59.4	60.8	56.8	--
8	05:00-06:00	55.2	60.3	62.5	61.8	60.4	--
Night Time Limit*		70 dB(A) Leq					



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

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

SR. NO.	Name of Location	SAMUNDRA TOWNSHIP STP					
		Result [Leq dB(A)]					
	Sampling Date & Time	11/10/2019	18/11/2019	13/12/2019	03/01/2020	02/02/2020	16/03/2020
1	6:00-7:00	66.4	57.3	65.3	58.3	63.2	67.3
2	7:00-8:00	69.2	64.2	70.3	60.4	60.3	68.3
3	8:00-9:00	64.2	62.5	69.3	63.2	65.3	65.2
4	9:00-10:00	71.4	69.4	71.3	62.7	63.1	61.2
5	10:00-11:00	64.2	64.2	66.3	67.4	68.5	66.2
6	11:00-12:00	63.1	69.8	63.2	69.5	66.3	68.4
7	12:00-13:00	69.4	65.3	62.1	64.4	62.4	70.3
8	13:00-14:00	66.1	68.2	68.8	62.4	68.4	69.4
9	14:00-15:00	68.2	62.1	66.3	68.4	62.5	65.3
10	15:00-16:00	62.7	68.5	64.3	64.2	69.6	63.2
11	16:00-17:00	67.8	65.3	63.4	66.8	66.3	66.7
12	17:00-18:00	69.4	64.9	65.5	68.3	63.2	69.4
13	18:00-19:00	66.3	70.4	67.3	65.3	67.4	70.3
14	19:00-20:00	62.5	67.4	63.2	63.4	64.2	68.4
15	20:00-21:00	66.1	61.3	62.3	67.7	60.4	65.1
16	21:00-22:00	68.3	63.2	65.3	64.1	63.6	62.2
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	11/10/2019	04/11/2019	13/12/2019	03/01/2020	02/02/2020	16/03/2020
1	22:00-23:00	64.3	67.3	56.1	62.4	67.1	62.2
2	23:00-00:00	68.4	63.2	62.9	58.2	64.3	60.3
3	00:00-01:00	66.3	66.2	52.1	62.5	60.3	65.2
4	01:00-02:00	62.1	62.8	51.8	62.3	60.6	61.3
5	02:00-03:00	67.3	61.6	58.4	65.2	57.3	60.2
6	03:00-04:00	63.1	64.2	53.1	61.2	61.3	63.1
7	04:00-05:00	61.2	62.7	52.8	63.8	62.5	61.4
8	05:00-06:00	64.3	66.6	56.8	60.9	60.7	64.3
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	SAMUNDRA TOWNSHIP CUSTOMER CARE					
		Result [Leq dB(A)]					
	Sampling Date & Time	07/10/2019	04/11/2019	08/12/2019	24/01/2020	20/02/2020	06/03/2020
1	6:00-7:00	55.3	60.7	60.3	56.2	57.4	63.2
2	7:00-8:00	63.2	67.4	65.2	59.4	63.9	67.3
3	8:00-9:00	68.3	65.2	67.6	64.2	67.4	69.3
4	9:00-10:00	66.9	62.1	69.4	60.3	64.2	65.3
5	10:00-11:00	69.4	63.8	65.3	62.5	62.4	67.5
6	11:00-12:00	62.1	68.9	70.3	65.3	68.5	69.5
7	12:00-13:00	65.4	65.4	67.6	63.4	66.3	67.9
8	13:00-14:00	68.4	69.6	65.3	67.4	63.1	64.2
9	14:00-15:00	63.2	67.5	62.4	64.2	61.7	62.1
10	15:00-16:00	61.7	72.5	68.8	62.1	63.2	60.3
11	16:00-17:00	60.3	67.4	71.3	64.3	65.5	65.3
12	17:00-18:00	67.4	66.6	67.3	54.2	60.6	63.8
13	18:00-19:00	63.2	60.3	64.2	62.1	64.6	68.4
14	19:00-20:00	62.6	63.9	65.3	65.7	63.2	65.5
15	20:00-21:00	65.5	67.3	63.1	63.2	66.3	63.2
16	21:00-22:00	61.3	62.4	61.5	64.8	62.8	66.4
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)]					
	Sampling Date & Time	07/10/2019	06/11/2019	08/12/2019	24/01/2020	20/02/2020	06/03/2020
1	22:00-23:00	68.4	65.3	67.3	58.4	64.2	64.2
2	23:00-00:00	65.5	67.3	64.2	60.4	60.2	60.3
3	00:00-01:00	60.3	60.2	60.4	59.6	56.3	63.2
4	01:00-02:00	55.3	57.3	62.4	63.4	60.3	58.3
5	02:00-03:00	59.3	53.1	61.3	61.4	54.3	55.3
6	03:00-04:00	56.3	55.7	60.3	63.2	50.3	60.3
7	04:00-05:00	51.3	62.1	60.1	61.7	57.3	57.4
8	05:00-06:00	58.5	65.3	62.6	60.3	63.2	58.3
Night Time Limit*		70 Leq dB(A)					



H. T. Shah

Lab Manager




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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	02/10/2019	22/11/2019	02/12/2019	22/01/2020	05/02/2020	04/03/2020
1	6:00-7:00	64.2	64.2	65.3	66.3	65.3	64.8
2	7:00-8:00	68.4	67.9	64.8	68.3	67.8	67.4
3	8:00-9:00	74.2	70.3	68.2	69.2	62.1	70.2
4	9:00-10:00	67.3	64.1	70.2	65.2	68.3	68.2
5	10:00-11:00	70.2	66.8	69.5	63.6	65.3	65.2
6	11:00-12:00	71.3	69.4	67.3	66.2	68.3	62.3
7	12:00-13:00	65.3	71.3	63.2	61.3	67.6	67.4
8	13:00-14:00	68.2	65.3	66.7	67.4	70.4	63.2
9	14:00-15:00	63.1	63.8	67.2	64.6	65.3	61.3
10	15:00-16:00	61.4	68.5	71.2	70.3	64.1	67.3
11	16:00-17:00	64.2	68.8	69.2	65.3	62.9	69.4
12	17:00-18:00	68.4	64.3	64.2	63.5	66.3	72.2
13	18:00-19:00	68.1	63.2	62.4	68.3	64.2	67.3
14	19:00-20:00	66.4	62.7	65.3	70.2	67.4	65.3
15	20:00-21:00	69.8	65.5	68.3	67.5	64.3	63.1
16	21:00-22:00	63.2	67.5	64.2	66.9	65.7	65.3
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	02/10/2019	22/11/2019	02/12/2019	22/01/2020	05/02/2020	04/03/2020
1	22:00-23:00	69.4	67.4	65.3	66.2	68.3	67.4
2	23:00-00:00	64.2	64.3	68.3	63.4	65.3	64.2
3	00:00-01:00	62.1	65.4	63.9	63.2	67.2	60.3
4	01:00-02:00	60.4	64.1	68.5	62.2	60.3	65.3
5	02:00-03:00	65.5	61.6	64.3	65.3	62.6	66.1
6	03:00-04:00	68.5	66.9	62.1	60.3	58.4	63.2
7	04:00-05:00	67.4	64.7	64.3	58.3	60.3	61.5
8	05:00-06:00	63.2	65.1	62.6	60.2	63.1	64.3
Night Time Limit*		70Leq dB(A)					



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)



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### RESULTS OF STP WATER OUTLET

SR. NO	TEST PARAMETERS	Unit	ADANI HOUSESTP OUTLET							
			October-19		November-19		December-19		GPCB Permissible Limit	TEST METHOD
			05/10/2019	14/10/2019	05/11/2019	20/11/2019	06/12/2019	16/12/2019		
1	pH	--	7.30	7.38	7.41	7.56	7.10	7.54	--	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	21	15	19	18	15	13	<b>30</b>	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	14	19	16	17	14	19	<b>20</b>	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	0.6	0.6	0.6	0.8	0.8	0.6	<b>Min 0.5</b>	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	350	220	540	280	430	350	<b>&lt; 1000</b>	APHA (22ndEdi) 9221 C&E

SR. NO	TEST PARAMETERS	Unit	ADANI HOUSESTP OUTLET							
			January-20		February-20		March-20		GPCB Permissible Limit	TEST METHOD
			03/01/2020	17/01/2020	04/02/2020	17/02/2020	03/03/2020	18/03/2020		
1	pH	--	7.35	7.02	7.48	7.69	8.10	7.92	--	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	26	19	22	15	28	25	<b>30</b>	IS3025(P17)84Re.02
3	BOD (3 days @ 270 C)	mg/L	17	15	19	14	14	17	<b>20</b>	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	0.8	0.5	0.6	0.6	0.8	0.8	<b>Min 0.5</b>	APHA(22ndEdi)4500 Cl
5	Fecal Coliform	MPN/100 ml	540	430	350	540	240	50	<b>&lt; 1000</b>	APHA (22ndEdi) 9221 C&E



H. T. Shah

Lab Manager




Dr. Arun Bajpai

Lab Manager (Q)

# **Annexure – 9**

Expense Details for Fisherfolk Amenities work in different core areas								
Sr.	Details	2016-17	2017-18	2018-19	2019-20	April to Sep-20	TOTAL	AMT IN LACS
Expenditure Details (Amount in Rs.)								
1	Vidya Deep Yojana	2069300	193000	2087000	1771000	0	6120300	61.20
2	Vidya Sahay Yojana	552580	495000	691000	708000	95046	2541626	25.42
3	Adani Vidya Mandir – Shaping Lives	4200000	4030000	3472000	6434020	1593805	19729825	197.30
4	SENIOR CITIZEN HEALTH CARD	0	8430000	1750000	2975000	42000	13197000	131.97
5	FINANCIAL SUPPORT TO POOR PATIENTS	4439507	1275000	813000	1296063	518785	8342355	83.42
6	Machhimar Kaushalya Vardhan Yojana	188708	200000	397000	73000	0	858708	8.59
7	Machhimar Sadhan Sahay Yojana	0	0	315000	522000	0	837000	8.37
8	Machhimar Awas Yojana	4592106	1165000	0	2311000	0	8068106	80.68
9	Machhimar Shudhh Jal Yojana	2236050	2700000	2038000	1773000	714625	9461675	94.62
10	Sughad Yojana	1367300	170000	0	192000	0	1729300	17.29
11	Machhimar Akshay kiran Yojana	860850	100000	68000	0	0	1028850	10.29
12	Machhimar Suraksha Yojana			0	0	0	0	0.00
13	Machhimar Ajivika Uparjan Yojana-Mangroves plantation	1558800	500000	1382000	1400000	1900272	6741072	67.41
14	Bandar Svachhata Yojana	106400	50000	0	0	0	156400	1.56
15	Cricket league and Cycle Marathon	432000	657119	638000	610800	0	2337919	23.38
16	Sports Material For Children & Youth at Vasahats	197797	0	0	0	0	197797	1.98
17	New Pilot Initiative for Polyculture	398240	160000	0	0	0	558240	5.58
18	New Pilot Initiative for Cage farming Asian Seabass & Lobster	864000	660000	0	0	0	1524000	15.24
19	Sea Weed Culture Project	0	0	0	200000	0	200000	2.00
20	Mangrove Biodiversity Project	0	0	1890000	684000	0	2574000	25.74
		24063638	20785119	15541000	20949883	4864533	86204173	862.04

# **Annexure – 10**



## Compliance Report of CIA Study Environment Management Plan

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude 1	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
1	<b>Land Use Change</b>						
1.1	<p>It is predicted that the built up land in the rural areas would increase by an order 50% from the baseline 2015.</p> <p>New settlements near the SEZ area might create slums.</p> <p>Unorganized urban development leading to poor sanitation and proliferation of vectors and disease.</p>	Level - 1	<p>APSEZ has developed two townships (Shantivan and Samudra) presently accommodating 1668 households. Necessary permissions from concerned authorities were already obtained for the development of townships and Associated infrastructure facilities.</p>	<p>The existing townships will be expanded to accommodate about 4 lakh people when the APSEZ is fully developed.</p>	APSEZ	As and when Required	<p>APSEZ has developed two townships (Shantivan and Samudra) accommodating 2180 households and associated infrastructure facilities. Accommodation is made available for all interested employees working within Adani group &amp; SEZ industries. Out of which 89% Occupancies are accommodated within the townships and rest are available for employees working within APSEZ.</p> <p>At present 45 nos. of industries (processing &amp; non-processing) are operating within the SEZ. Township facilities are also made by some of SEZ industries within Mundra town for their employees with basic infrastructure facilities and requirements.</p> <p>Most of the employees working in SEZ industries are residing in Mundra township having all basic requirements and associated facilities.</p> <p>The existing social infrastructure facilities are adequate for present development at APSEZ. The existing townships with associated</p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude 1	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
							<p>facilities will be expanded as per requirement.</p> <p>APSEZ has also been granted permission for receiving domestic sewage @ 2.5 MLD from Mundra village (which was earlier discharged in to open area within Mundra region) in to wastewater treatment plant for treatment and disposal. APSEZ has already started receiving of domestic sewage from Mundra, which will abate the poor sanitation and unhygienic condition within Mundra region. Total project cost for laying domestic sewage underground pipeline with other associated facilities from Mundra to APSEZ is <b>362 Lacs</b>.</p>
1.2	Once the project is fully developed, due to increase in built up land in the APSEZ area, there will be an increase in the storm water runoff from the facility.	Level-1	The study area experiences scanty rainfall less than 400 mm/year. Considering the natural gradient, ASPEZ have designed and implemented storm water drains in the existing facility to meet the peak daily rainfall of 440	Technical feasibility study can be carried out to explore the possibility of developing storm water collection ponds to utilize maximum possible storm water runoff for dust suppression in the coal yard areas during non-rainy days.	APSEZ	Technical Study - one time, Implementation - Continual process	<p>Presently, 42% of the total SEZ area (8434.5890 Ha) is developed. Based on technical studies, APSEZ has developed adequate storm water facilities that meets with daily demand as per recorded highest rainfall.</p> <p>At present all existing coal yards are designed with drain, for collection of water during water sprinkling and rainfall, which is carried away to dump pond. Supernatant water from dump pond is being collected and used for dust suppression activities or after sedimentation, discharged to sea. Photographs of showing the drain and dump pond has been submitted in along with last EC compliance report (Sept 19 to March 20).</p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude 1	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
			mm/hr. Hence flooding of water in the neighboring areas is not envisaged.				During the compliance period (April 2020 to Sept 2020) the maximum recorded rain fall was <b>46 mm/hr.</b> , which was much less than the design capacity of existing storm water drainage system. So our existing storm water management facility is adequate to handle the storm water runoff from the area. Hence flooding of water in the neighboring areas is not envisaged.
			As per the directions given in the environmental clearance issued for the proposed Multi-Product SEZ and CRZ clearance for Desalination, sea water intake, outfall facility and pipeline project, the master plan of the project was designed and being implemented without	The channel depth in all the natural streams shall be maintained to accommodate peak flood flow during the monsoon and periodical de-silting activities in the natural streams passing through the APSEZ area	APSEZ, District Administration* and Irrigation department	As and When Required	Presently there is no Desalination plant, sea water intake and outfall facility developed as part of EC & CRZ clearance of Multiproduct SEZ. The project will be designed and implemented without disturbing the natural flow of rainwater in all the seasonal streams.

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude <sup>1</sup>	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
			disturbing the natural flow of rainwater in all the seasonal streams.				
1.3	Due to conservation and protection of mangroves in the designated conservation area, it has been predicted that the current mangrove footprint area would marginally increase in next 15 years due to natural growth. This will enhance the overall biodiversity in the local coastal eco-system.	Positive Impact with ecological benefits	In addition to conservation of the identified 1254 ha mangrove areas around Mundra port and SEZ, APSEZ has taken up large scale mangrove afforestation activities in an area of more than 2800 ha at various locations across the coast of Gujarat state in consultation with various organizations	APSEZ will continue mangrove afforestation as per the commitment made with concerned regulatory authority	APSEZ	Short Term	<p>APSEZ has carried out mangrove afforestation in 2890 ha. area across the coast of Gujarat till date.</p> <p>No further mangrove afforestation is pending w.r.t. commitment made with concerned regulatory authority for APSEZ, Mundra project.</p> <p>As per study conducted by NCSCM in 2017, mangrove cover in and around APSEZ, Mundra has increased from 2094 Ha to 2340 ha (as compared between 2011 to 2017). The analysis has shown an overall growth of 246 ha. The cost for said study was INR 3.15 Cr.</p> <p>Further work has been assigned to NCSCM in March 2020 as part of compliance for the action plan "Monitoring of mangrove cover". The cost of the said work is INR 23.56 Lacs.</p>
1.4	Development		Detailed hydro-	It is recommended to	APSEZ	Continual	



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	activities along the coast might cause certain changes in hydro-dynamic characteristics along the shoreline. Shoreline of any area also can be influenced by storm surges and other natural processes.		dynamic modelling and shoreline change prediction for a fully developed APSEZ facility has been studied. The study reveals that the erosion and accretion in the study area at the end of 15th year will be within the designated criteria of $\pm 0.5$ m/year, which reconfirms that the waterfront development activities of APSEZ would pose insignificant impact on the Mundra shoreline.	map the coastal morphology (Shoreline) at least once in three years		Process	Shoreline assessment study will be conducted in FY 2020-21.
2	Regional Traffic Management Plan						

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude 1	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
2.1	<p>The projected traffic data as per the EIA Report of Multi-Product Special Economic Zone, the peak vehicular traffic from the port and SEZ operations (including supporting facilities and colony) could be in the order of 18,300 and 10,400 vehicles per day respectively.</p> <p>There could be a possible increase in traffic congestions on village-</p>	Level-1	As per the master plan of APSEZ, eight artillery roads will be connected to either state highway or national highway for evacuating the goods from APSEZ. None of these roads are passing through settlements, thereby avoiding traffic Congestions in the respective villages. The carrying capacity of the eight artillery roads connecting APSEZ is estimated to be about 16,000	Additional road as per master plan will be built in future based on the overall progress of the project. Currently about 25% of cargo from APSEZ is transported by Rail and the same will be enhanced to 40% when the facility is fully developed in future. This will further reduce the traffic volumes on the regional road network.	APSEZ	As and When Required	<p>Presently 42% of the total SEZ area (8434.5890 Ha) is developed.</p> <p>Existing road/rail/conveyer infrastructure facilities are adequate to evacuate the existing cargo. Further, APSEZ's cargo evacuation through rail / conveyer has increased to 56 %, thereby reducing the usage of road.</p> <p>Additional road facilities will be built as per master plan considering future development.</p> <p>The facilities for transportation of cargo other than road will be enhanced considering future development, which will reduce the traffic volumes on the regional road Network.</p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude 1	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
	highway intersections and road accidents.		<p>PCU/hr as against the envisaged peak traffic volume of 4,500 PCU/hr.</p> <p>Out of eight artillery roads considered in APSEZ master plan, seven roads were already developed and functional.</p>				
			APSEZ has been imparting Driver Training Programs to all their contractors to enhance awareness on road safety.	APSEZ can undertake technical feasibility of implementing Intelligent Transport System (ITS) for the freight carriers associated with their development activities.	APSEZ & GSRDC*	Long Term	<p>APSEZ is being imparting the regular in-house classroom and on-job training to the all drivers and employees on below topics:</p> <ul style="list-style-type: none"> <li>• Basic induction Training for drivers</li> <li>• ITV Driver Training</li> <li>• ITV Driver Induction for Supervisor</li> <li>• Defensive Driving</li> <li>• Defensive Driving &amp; BBS</li> <li>• Traffic Management &amp; Road Signage</li> <li>• Driving safety training</li> <li>• RORO Driver training</li> <li>• Defensive Driving &amp; Emergency Action Plan</li> <li>• Drivers Responsibilities &amp; Safe driving</li> </ul>

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							<ul style="list-style-type: none"> <li>Emergency Rescue (Vehicle) Training</li> </ul> <p>Approx. 1282 Participants (On roll and contractual manpower) were benefitted from above trainings in FY 2020-21 (till the sept 2020). The same will be continued in future also.</p> <p>APSEZ has also implemented the Remote traffic management system (RTMS) to manage the traffic movements and capturing the violations to further improve the system.</p> <p>Following steps were taken by APSEZ to reduce the accidents.</p> <ul style="list-style-type: none"> <li>✓ Installation of approx. 100 Nos. of cameras which is being operated at ISCR (Integrated security control room) to monitor &amp; manage the traffic system in APSEZ on real time basis.</li> <li>✓ Installation of 02 Nos. RTMS - Remote traffic management system (having combination of Radar + OCR camera + LED display board - showing speed limit) to recognize the over speeded vehicles, so that timely capture the same and avoid any road accidents.</li> </ul>
<b>3</b>	<b>Water resources Management and sewage treatment &amp; disposal Plan</b>						
3.1	For a fully developed APSEZ facility,	No-Impact	APSEZ is meeting the current water	As per the master plan and permissions granted under EC,	APSEZ	As and When Required	Currently there are two fresh water sources available with APSEZ. <b>Desalination Plant – 47 MLD</b>



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	water demand will be in the order of 4,30,000 m3/day (430 MLD). APSEZ will be sourcing majority of the water from the captive desalination plants, which will be developed in progressive manner.		demand through Narmada water supply scheme and 47 MLD captive desalination plant at site. Necessary water allocation from concerned authorities was obtained and the same will be renewed from time to time as per the directions of state government.	APSEZ will be developing progressively 4,50,000 m3/day (450 MLD) of desalination plants to meet the future demand. Hence stress on regional water resources due to these developmental projects will be less significant.			<p><b>Narmada water through GWIL – 11 MLD</b> (sanctioned capacity).</p> <p>Current water demand for APSEZ along with SEZ industries including Adani Power Plant is around 30 MLD.</p> <p>So presently, these sources are adequate to fulfill the current fresh water requirement of APSEZ.</p> <p>The desalination plant of additional capacities will be installed on modular basis considering future requirement of APSEZ.</p>
3.2	Existing water demand in the Mundra taluk is estimated as 8500 m3/day (@55 lpcd) and the potable and sanitation water needs	Level-2	Adani Foundation has been contributing to various watershed development projects in the Mundra region to enhance	Adani Foundation is planning to implement the various water resource conservation programs in next ten years under various schemes.	APSEZ and CGWB*	Long Term	<p>Water needs of APSEZ is being met through existing Desalination Plant of APSEZ and Narmada canal supplied by the GWIL which may be further enhanced on modular basis, At present Ground water is not utilized for any activities of APSEZ.</p> <p>However various works are being carried out by Adani Foundation continuously under Water Conservation Work to achieve water security in</p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude 1	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
	would increase to 37,000 m <sup>3</sup> /day (@125 lpcd) in future when the area is fully grown into larger municipality due to induced economic growth. Water demand of the local communities is met through Narmada water supply system to some extent, but largely depending on the ground water in the study area. Mundra block is reported to be a safe ground block		ground water resources in the area. Adani Foundation has contributed about Rs. 300 Lakhs so far for the development of 18 check dams.				<p>Mundra region by Adani Foundation. Following works are carried out as a part of water conservation work since April – 2018.</p> <ul style="list-style-type: none"> <li>• Under “<b>Sujlam Suflam Jal Abhiyan campaign</b>” AF Mundra had completed deepening work in <b>26 pond</b> works as per given target by District Collector Kutch in <b>19 villages</b>. Total excavation done <b>51723 Cum</b>. Total storage capacity created <b>51.72 million liters</b>. These works done as per government guidelines.</li> <li>• Under “<b>Participatory Ground Water Management</b>” work we have created artificial recharge borewell in Borana, Mangara &amp; Dhrub village.</li> <li>• Participatory Ground Water Management in ten villages with holistic approach for <b>Kankavati Sandstone Aquifer Programme</b>. 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.</li> <li>• Drip Irrigation 823 Farmers benefitted in coordination with Gujarat Green Revolution Company</li> <li>• Ground recharge activities (<b>pond deepening work for more than 52 ponds</b>) individually and 26 ponds under Sujlam Suflam Jal Abhiyan leading to a significant increase in water table and higher returns to the farmers</li> <li>• <b>Roof Top Rain Water Harvesting 54 Nos.</b> which is having <b>10,000 litre</b> storage which is sufficient for one year drinking water purpose for 5 people family.</li> <li>• Recharge Bore well <b>75 Nos</b> which is best ever option to conserve ground water Drip Irrigation</li> </ul>

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	as on date. Due to influx of people and rapid urbanization due to the economic development, there could be some stress on the ground water resources in future.						<p>823 Farmers benefitted in coordination with Gujrat Green Revolution Company</p> <ul style="list-style-type: none"> <li>• Participatory Ground Water Management in ten villages with holistic approach for Kankavati Sandstone Aquifer Programme</li> <li>• As per Average Calculation more than <b>450 hac. area</b> benefitted with increased in <b>109 MCFT</b> water Quantity</li> </ul> <p>Adani foundation has spent approx. INR 3853.7 lakhs from April – 2018 to Sep – 2020 for CSR activities which also includes water conservation projects as mentioned above.</p>
3.3	It is estimated that about 60,000 m3/day (60 MLD) of sewage will be generated from the APSEZ facility when the project is fully developed.	No Impact	Seven sewage treatment plants with an aggregate capacity of 3.1 MLD have already built at APSEZ. Treated sewage is utilized for greenbelt development and sewage is not discharged into either seasonal natural streams	APSEZ is permitted to develop decentralized sewage treatment plants of total 62 MLD capacities. Existing sewage treatment facilities will be augmented progressively based on the development at APSEZ in future. Similar to existing practices, treated sewage will be utilized for greenbelt development.	APSEZ	As and When Required	<p>Current installed capacity of wastewater treatment plants is 6.1 MLD (ETP, STPs &amp; CETP) for treatment of effluent &amp; sewage generated at various locations.</p> <p>Out of 45 only 4 industries within the SEZ are sending their partially treated industrial as well as domestic effluent to the CETP confirming to CETP inlet norms for further treatment and final disposal. Other SEZ industries have their own STPs / ETPs for treatment of wastewater generated from their industrial operation and discharging the treated water on land for horticulture purpose within their premises as per specific permission granted by SPCB.</p> <p>APSEZ also granted permission to treat 2.5</p>

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			or marine environment.				<p>MLD of sewage generated from Mundra village through CETP and STP.</p> <p>Presently avg. 1.8 MLD of wastewater (in to ETP, STPs &amp; CETP) is treated and being utilized on land for horticulture purpose within APSEZ premises during Apr'20 to Sep'20. Existing wastewater treatment plants are adequate to treat and handle the total effluent / sewage load considering current development.</p> <p>Existing wastewater treatment facilities will be augmented or new plants will be developed on modular basis considering future requirement.</p>
<b>4</b>	<b>Air quality management Plan</b>						
4.1	Although all the regulated activities in the study area will be adopting promulgated emission norms, total air emission mass discharge from the study area would increase.	Level-2	APSEZ and other thermal power plants have obtained valid consent to operate and have been operating the facilities as per the emission norms stipulated in respective consent orders. APSEZ and other two	All existing and new industrial establishments will obtain requisite consents from GPCB and adhere to the stipulated emission norms regulations and guidelines issued by authorities from time to time.	APSEZ And Other Industries	Continual Process	<p>APSEZ has been granted requisite permissions from the concerned authorities with stipulated norms for air emission (flue gas as well as ambient air).</p> <p>Ambient Air Quality monitoring is being carried out by NABL accredited and MoEF&amp;CC authorized agency namely M/s. Pollucon Laboratory Pvt. Ltd. as per NAAQ standards, 2009. Stack emission monitoring is also being carried out on regular basis. Reports of the same are being submitted to the concerned authorities on regular basis.</p> <p>Adani power plant has installed continuous emission and air quality monitoring</p>

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			power plants are monitoring the ambient air quality on regular intervals as per GPCB/CPCB guidelines and the data is analyzed and presented to GPCB on monthly basis. Both the thermal power plants located within the study area have installed continuous emission and air quality monitoring instruments as per CPCB directive.				<p>instruments as per CPCB Directive and submitting the reports also. Another power plant of CGPL is outside APSEZ area.</p> <p>The AAQM summary for last six months (April'20 to Sept'20) are as below. Locations: 17 Nos. (APSEZ – 12 + APL – 5 including 3 villages) Frequency: Twice in a week</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>94.51</td><td>35.34</td><td>100</td></tr><tr><td>PM<sub>2.5</sub></td><td>µg/m<sup>3</sup></td><td>53.6</td><td>12.13</td><td>60</td></tr><tr><td>SO<sub>2</sub></td><td>µg/m<sup>3</sup></td><td>32.54</td><td>6.18</td><td>80</td></tr><tr><td>NO<sub>2</sub></td><td>µg/m<sup>3</sup></td><td>42.67</td><td>12.50</td><td>80</td></tr></table> <p><sup>\$</sup> as per NAAQ standards, 2009 Values recorded confirms to the stipulated standards.</p> <p>Approx. INR 8.46 Lakh is spent for environmental monitoring activities during the FY 20120-21 (till the sept 2020) which also includes ambient air quality monitoring.</p> <p>Other industries located within the SEZ have obtained requisite permissions from the competent authorities for their respective plant and they also carried out environmental monitoring within their premises to comply with the permission granted. The same has</p>	Parameter	Unit	Max	Min	Perm. Limit <sup>\$</sup>	PM <sub>10</sub>	µg/m <sup>3</sup>	94.51	35.34	100	PM <sub>2.5</sub>	µg/m <sup>3</sup>	53.6	12.13	60	SO <sub>2</sub>	µg/m <sup>3</sup>	32.54	6.18	80	NO <sub>2</sub>	µg/m <sup>3</sup>	42.67	12.50	80
Parameter	Unit	Max	Min	Perm. Limit <sup>\$</sup>																												
PM <sub>10</sub>	µg/m <sup>3</sup>	94.51	35.34	100																												
PM <sub>2.5</sub>	µg/m <sup>3</sup>	53.6	12.13	60																												
SO <sub>2</sub>	µg/m <sup>3</sup>	32.54	6.18	80																												
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S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude 1	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
							<p>been ensured by APSEZ as well as SPCB during their regular visits. APSEZ carries out regular visits/inspections of member industries within SEZ and last visit was conducted during March &amp; April 2019 for EMS &amp; compliance verification. During compliance verification, it was verified that monitoring of air emission was well within the permissible standards based on analysis reports. Same will be continued in future also.</p> <p>The monitoring reports of industries within SEZ are also being submitted to the regulatory authorities as a part of half yearly Compliance report of EC for Multi-Product SEZ.</p>
				A common air quality management committee may be framed under the guidance of the State Pollution Control Board and district administration to manage regional level emission inventory data that can help to manage regional level air quality management goals.	APSEZ and Other Industries, Stakeholders, District Administration and GPCB*	Long Term And Continual	<p>APSEZ will co-operate and comply with the directions from concerned regulatory authorities for air quality management within APSEZ area. However at present, APSEZ has formed Internal Environment Monitoring Committee, involving officials from APSEZ, Adani Power Limited and other member units with following role and responsibilities:.</p> <ul style="list-style-type: none"> <li>• Identification of sources of air &amp; noise emission and its dispersion in surrounding villages</li> <li>• Remedial measures to eliminate, control, reduce or capture air &amp; noise emission</li> <li>• Identify available resource to abate the air and noise emission</li> </ul>

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							<ul style="list-style-type: none"> <li>• Required additional resources for control of air and noise emission</li> <li>• Drinking water and its testing of all the available fresh water sources in surrounding villages</li> <li>• Identify any surrounding villages affected by organization's improper waste disposal mechanism.</li> </ul> <p>Last committee meeting was conducted on dated 29<sup>th</sup> Sept 2020, and below were the point of discussion for way forward.</p> <ul style="list-style-type: none"> <li>• Maintain the existing practice to control the emission in terms of Air, Water and Noise.</li> <li>• Ensure for proper covering of trucks / vehicles carrying coal / cargo to reduce spillages on road</li> <li>• Carry out study about impact on ground water quality due to continuous extraction or any other factors.</li> <li>• Inclusion of Ambient Air Quality and Noise Monitoring station covering surrounding villages by APSEZ considering further development and statutory clearances.</li> </ul> <p>Minutes of meeting is attached as <b>Annexure-A</b>.</p> <p>APSEZ and all the industries within SEZ are in compliance to NAAQS and same is being ensured by APSEZ. The monitoring reports of industries within SEZ are being submitted to</p>

S. No.	Identified environmental and social impacts for the fully developed scenario (year 2030)	Type of Impact & Magnitude 1	Environment management plans adopted or being adopted by APSEZ as per permits, clearances, applicable regulations and guidelines etc.	Additional Risk Mitigation Measures/ESMP	Responsible agency	Timeframe for implementation	Compliance
							the regulatory authorities as part of half yearly Compliance report of EC for Multi-Product SEZ.
4.2	Release of particulate emissions from handling and storage of coal at the port and power plants would influence PM10 and PM2.5 concentration in the background air. This could pose some health impacts such as asthma and COPD etc. among the local communities.	Health Impact	APSEZ has been implementing the following management plan to control emissions as per the applicable regulations and similar practices will be adopted in future: Entire bulk material handling facilities are mechanized. Regular water sprinkling on road and other open areas, regular cleaning of roads, dry fog dust suppression systems (DSS)	All industries located in the APSEZ shall adhere to the emissions norms and minimum stack height guidelines issued by CPCB and consent to operate issued by Gujarat Pollution Control Board from time to time.	APSEZ and Other Industries	Continual Process	<p>Following safeguard measures are taken by APSEZ for abatement of dust emissions.</p> <ul style="list-style-type: none"> <li>• Adequate stack heights to the Boilers, D.G. Sets, TFHs &amp; HWGs for proper dispersion of pollutants within APSEZ</li> <li>• Using of liquid &amp; Gaseous fuels instead of solid fuels in Boilers, Thermic fluid heaters and hot water generators.</li> <li>• Regular sprinkling on road and other open area</li> <li>• Regular cleaning of roads</li> <li>• Dry fog Dust Suppression System (DSS) in hopper, transfer towers and conveyor belts</li> <li>• Use of water mist canon</li> <li>• Closed type conveyor belts</li> <li>• Regular sprinkling on coal heaps</li> <li>• Covering other types of dry bulk cargo heaps</li> <li>• Installation of wind breaking wall</li> <li>• Development of greenbelt along the periphery of the storage yards/back up area</li> <li>• Mechanized handling system for coal and other dry bulk cargo</li> <li>• Wagon loading and truck loading through closed silo</li> </ul>

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			in hoppers, transfer towers and conveyor belts, use of water mist canon, covered conveyor belts, regular sprinkling on coal heaps,				<p>Adequate air pollution control measures like ESPs, FGDs, Bag Filters, etc. and adequate stack heights provisions are implemented within the thermal power plant.</p> <p>The stack monitoring summary for last six months (April'20 to Sept'20) are as below. Total Nos. of Stacks: 22 Nos. Frequency: Monthly / Half Yearly</p> <table><tr><th>Parameter</th><th>Unit</th><th>GPCB Limit</th><th>Min</th><th>Max</th></tr><tr><td>PM</td><td>mg/nm<sup>3</sup></td><td>150</td><td>13.8</td><td>34.5</td></tr><tr><td>SO<sub>2</sub></td><td>Ppm</td><td>100</td><td>3.3</td><td>8.7</td></tr><tr><td>NO<sub>x</sub></td><td>ppm</td><td>50</td><td>26.7</td><td>39.8</td></tr></table> <p>Values recorded confirms to the stipulated standards.</p> <p>Approx. INR 8.46 Lakh is spent for environmental monitoring activities during the FY 2020-21 (till the sept 2020) which also includes stack monitoring.</p> <p>All other industries located within SEZ are adhere to provide adequate stack height and pollution control measures for proper dispersion of pollutants as per respective permissions granted by the board. The same is being inspected and ensured by APSEZ as well as SPCB officials on regular basis.</p>	Parameter	Unit	GPCB Limit	Min	Max	PM	mg/nm <sup>3</sup>	150	13.8	34.5	SO <sub>2</sub>	Ppm	100	3.3	8.7	NO <sub>x</sub>	ppm	50	26.7	39.8
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			covering of other types of				As mentioned above, presently, APSEZ has formed Internal Environment Monitoring																				

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			dry bulk cargo heaps by protective materials, installation of wind breaking wall, development of greenbelt along the periphery of the storage yards/back up area and mechanized handling system for coal and other dry bulk cargo and Wagon loading and truck loading through closed silo. Both thermal power plants in the study area have installed electrostatic precipitators on the boilers and are meeting the emission norms	An internal Coal Dust Management Working Group shall be formed by APSEZ to effectively co-ordinate the approach to coal dust management and monitoring	APSEZ and Other Industries, Concerned Stake holders, District Administration*	Long Term	<p>Committee, involving Officials of APSEZ, Adani Power Limited &amp; other member units, with specific role and responsibilities as defined above.</p> <p>The dry cargo is being handled by mechanized system and transported by covered conveyer system, trucks and rail wagons.</p> <p>Wind breaking wall is provided around the coal storage yards of APSEZ as well as Adani Power Plant.</p> <p>Adequate air pollution control measures like ESPs, FGDs, Bag Filters, etc. and adequate stack heights provisions within the thermal power plant for proper dispersion of pollutants.</p> <p>Green belt / plantation is provided around the periphery of dry cargo storage area and regular water sprinkling is also being done to abate the dust emission from coal hips.</p> <p>Last committee meeting was conducted on dated 29<sup>th</sup> Sept 2020, and below were the point of discussion for way forward.</p> <ul style="list-style-type: none"> <li>• Maintain the existing practice to control the emission in terms of Air, Water and Noise.</li> <li>• Ensure for proper covering of trucks / vehicles carrying coal / cargo to reduce spillages on road</li> </ul>



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			as per the respective ECs granted. Due to installation of tall stacks as per CPCB guidelines and EC conditions, the relative air pollution impacts due to release of emissions from two power plants is insignificant.				<ul style="list-style-type: none"> <li>Carry out study about impact on ground water quality due to continuous extraction or any other factors.</li> <li>Inclusion of Ambient Air Quality and Noise Monitoring station covering surrounding villages by APSEZ considering further development and statutory clearances.</li> </ul> <p>Minutes of meeting is attached as <b>Annexure-A</b>.</p>
4.3	Ships are one of the significant sources of SO <sub>2</sub> and NO <sub>x</sub> emissions in the study area. Marine diesel engines on the ships often utilize fuel oils that might contain higher sulphur content. As	Level-2	A Standard Operating Procedure (SOP) has been developed to be included as a part of APSEZ environment management plan that all ships	The current global limit for Sulphur content of ships fuel oil is 3.5 % m/m (mass by mass). According to MARPOL, the new global cap on sulphur in the marine vessel fuels will be 0.50% m/m by the 1st January 2025. APSEZ should explore the possibility of providing shore power	APSEZ and Ship Owners	Long Term	<p>The ships coming to the APSEZ is complying with MARPOL and other shipping rules and regulations.</p> <p>APSEZ has already started providing shore power supply to the tugs (11 Nos.), dredgers (2 Nos.) and barges (1 No.). The feasibility of shore power will be explored and implemented on large scale for the visiting vessels to reduce idling stage ship emissions.</p>

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	per the international best practices, these marine diesel engines are designed to meet MARPOL regulations with NOX emissions less than 14.4 gram/Kwhr of engine. Due to lower stack heights of the marine diesel engine, ship emissions often gets dispersed in the local environment and might pose risk of fumigation during the early morning and evening hours due to		anchored at the port are adopting the MARPOL4 regulations.	to the ships at the port to reduce idling stage ship emissions.			

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	atmospheric inversion break-up periods.						
4.4	Road vehicle emissions will be other major contributors to the air pollution in the region when the facility is fully developed.	Level-2	Not Applicable	Due to implementation of Bharat VI fuels (MoEF&CC)6 in near future the vehicular and diesel engine emissions will be reduced by about 50% from the current national levels. APSEZ should develop a robust contractor environmental policy to ensure that Bharat Stage VI emission norms are adopted by all their contractors and sub-contractors.	APSEZ and All Industries	Short Term	<p>Presently, cargo evacuation through rail &amp; conveyer has increased to 56 %, thereby reducing the usage of road.</p> <p>Vehicles having valid PUC certificate are only being allowed to enter within APSEZ area.</p> <p>In future, APSEZ will also explore the feasibility of using Electric Vehicles for internal cargo movement.</p>
5	Noise emissions						
	Noise emissions are envisaged from port operations,		Due to adoption of various mechanized operations at the waterfront development,	APSEZ, all the tenant industries and facilities within APSEZ are required to undertake noise monitoring at their facilities to	APSEZ	Continual	<p>Below Safeguard measures are already taken for abatement of noise emissions.</p> <ul style="list-style-type: none"> <li>• Development of greenbelt along the periphery of the operational area.</li> <li>• D.G. Sets having Acoustic enclosures.</li> <li>• Maintenance of plant machineries and equipments on regular frequency.</li> </ul>

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5.1	industrial operations and power plants in the study area. Any increase in noise levels beyond three decibels from the background levels would be perceived as noise nuisance (USEPA)7.	Level-1	the noise emissions from the port cargo handling will be minimal. An adequate greenbelt is being developed by APSEZ to further reduce any residual impacts due to noise emissions from the facility. Periodic noise level monitoring programs were adopted by APSEZ. Predicted noise levels were found to be well within the designated noise standards for Industrial facilities.	demonstrate the compliance with the Noise level standards. Continuous noise recording units can be installed by APSEZ at facility boundary to address the community grievances, when ever required. To assess the overall site wide compliance and also to address any community grievances related to noise issues due to operation of APSEZ facilities.		Process	<p>Noise monitoring is being carried out by NABL accredited and MoEF&amp;CC authorized agency namely M/s. Pollucon Laboratory Pvt. Ltd. as per permission granted and reports are being submitted to the concerned authorities on regular basis.</p> <p>The noise monitoring summary for last six months (April'20 to Sept'20) are as below.</p> <p>Locations: 12 Nos. Frequency: Once in a month (24 hourly)</p> <table><tr><th>Noise</th><th>Unit</th><th>Max</th><th>Min</th><th>Perm. Limit<sup>\$</sup></th></tr><tr><td>Day Time</td><td>dB(A)</td><td>74.1</td><td>54.3</td><td>75</td></tr><tr><td>Night Time</td><td>dB(A)</td><td>69.8</td><td>50.4</td><td>70</td></tr></table> <p><sup>\$</sup> as per GPCB standards</p> <p>Approx. INR 8.46 Lakh is spent for environmental monitoring activities during the FY 2020-21 (till the sept 2020) which includes noise monitoring.</p> <p>All the results are well within the standards. From this it can be inferred that there no impacts on the surrounding community.</p> <p>All other industries located in the APSEZ are adhere to monitor and control the ambient</p>	Noise	Unit	Max	Min	Perm. Limit <sup>\$</sup>	Day Time	dB(A)	74.1	54.3	75	Night Time	dB(A)	69.8	50.4	70
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							<p>noise level as per permission granted by SPCB and same is being confirmed by APSEZ as well as SPCB on regular basis.</p> <p>Further, till date APSEZ has not received any grievances/notice for noise issues from any of the stakeholders.</p>
				In order to address the public grievances related to noise from the facility, an internal Noise Management Committee can be formed by APSEZ to investigate the root cause and to develop and implement noise mitigation plans in the specific zones.	APSEZ	Continual Process	<p>As mentioned above, presently, APSEZ has formed Internal Environment Monitoring Committee, involving Officials of APSEZ, Adani Power Limited &amp; other member units, having role and responsibilities as defined above.</p> <p>Last committee meeting was conducted on dated 29<sup>th</sup> Sept 2020, and below were the point of discussion for way forward.</p> <ul style="list-style-type: none"> <li>• Maintain the existing practice to control the emission in terms of Air, Water and Noise.</li> <li>• Ensure for proper covering of trucks / vehicles carrying coal / cargo to reduce spillages on road</li> <li>• Carry out study about impact on ground water quality due to continuous extraction or any other factors.</li> <li>• Inclusion of Ambient Air Quality and Noise Monitoring station covering surrounding villages by APSEZ considering further development and statutory clearances.</li> </ul> <p>Minutes of meeting is attached as <b>Annexure-A</b>.</p>



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							No grievance received for noise related issues and it is observed that ambient noise level are well within the permissible standards.
<b>6</b>	<b>Surface water quality (Terrestrial and Marine )</b>						
6.1	In general, release of untreated wastewater from industrial facilities would pose threat to water quality of streams, estuaries and marine water bodies.	Level -1	As per the master plan of APSEZ, 67 MLD of wastewater is expected to be generated from the fully developed project scenario, for which necessary permissions to set up decentralized CETPs of various capacities are already obtained. Presently a CETP capacity of 2.5 MLD is in place. Presently member units treat their effluents to	As per the master plan of APSEZ, the existing CETP shall be augmented to 67 MLD in progressive manner based on the future demand. The facility should limit the marine discharge of treated industrial wastewater to 16 MLD as per the permits. Remaining treated wastewater shall be utilized for horticulture purpose.	APSEZ	As and When Required	<p>APSEZ has installed Common Effluent Treatment Plant (CETP) having 2.5 MLD capacities for treatment of partially treated effluent and sewage generated from industries within SEZ.</p> <p>Currently, CETP receives 571 KLD hydraulic load and considering the current development scenario, existing CETP is adequate to treat and handle the total effluent load coming from industries within SEZ.</p> <p>Out of 45 only 4 industries within SEZ are sending their partially treated industrial as well as domestic effluent to the CETP confirming CETP inlet norms for further treatment and final disposal. Other industries within SEZ have their own STPs / ETPs for treatment of wastewater generated from their industrial operation and discharging the treated water on land for horticulture purpose within their premises as per permission granted by SPCB.</p> <p>The capacities of CETP will be enhanced on modular basis as per future requirement.</p> <p>Presently avg. 1.8 MLD (from CETP, ETP &amp;</p>

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			meet the CETP inlet norms and then send it to CETP. Treated wastewater from CETP meets the stipulated discharge norms for utilization for greenbelt development within the APSEZ areas.				STPs) of treated water is being utilized on land for horticulture purpose within APSEZ premises and no discharge is made to any other source.
			Online wastewater quality monitoring systems are installed at CETP to ensure quality of treated effluent meets the requisite discharge norms. No wastewater from CETP is discharged into	Efforts shall be made to recycle complete treated wastewater for port operations and industrial operations of APSEZ in future based on a detailed techno-economic feasibility study.	APSEZ	Based on outcome Techno-feasibility Study	Online continuous effluent monitoring system installed at the discharge point of CETP to track any deviation from discharge norms.  Presently entire quantity of treated water from CETP is used for gardening / horticulture purpose within APSEZ premises.

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			natural bodies as on date..				
			Runoff during monsoon from coal storage yards is collected in sedimentation ponds (dump pond) to remove any residual dust particulates for further disposal into sea	Storm water runoff from the facility during the first rain shall be sampled and analyzed for the presence of heavy metals or other criteria pollutants to adopt corrective and preventive actions to protect the marine water quality. All red and hazard category industry within APSEZ shall adopt spill prevention and control program and no effluents shall be discharged into storm water-drains.	APSEZ	Continual	<p>There are provision of drains around coal stack yard to carry to runoff water to dump ponds. This water is either used for dust suppression or after sedimentation (to remove residual dust), is allowed disposal to sea.</p> <p>Presently Marine monitoring is being carried out once in a month by NABL and MoEF&amp;CC accredited agency namely M/s. Pollucon Laboratory Pvt. Ltd. The analysis reports of the same are being submitted to the concerned authorities on regular basis.</p> <p>The marine water quality monitoring summary for last six months (April'20 to Sept'20) is as per below.</p> <p>Locations: 14 Nos. (APSEZ – 9 + APL – 5) Frequency: Once in a Month</p>

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							<table><tr><th rowspan="2">Parameter</th><th rowspan="2">Unit</th><th colspan="2">Surface</th><th colspan="2">Bottom</th></tr><tr><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr><tr><td>pH</td><td>--</td><td>8.29</td><td>7.74</td><td>8.25</td><td>7.73</td></tr><tr><td>TSS</td><td>mg/L</td><td>245</td><td>16</td><td>270</td><td>6.2</td></tr><tr><td>BOD (3 Days @ 27 °C)</td><td>mg/L</td><td>5.6</td><td>3.2</td><td>6.2</td><td>4.2</td></tr><tr><td>DO</td><td>mg/L</td><td>6.2</td><td>5.4</td><td>5.9</td><td>4.9</td></tr><tr><td>Salinity</td><td>ppt</td><td>36.8</td><td>34.2</td><td>37.1</td><td>34.1</td></tr><tr><td>TDS</td><td>mg/L</td><td>38280</td><td>36570</td><td>38554</td><td>36724</td></tr></table> <p style="text-align: right;">*ND = Not Detectable</p> <p>Approx. INR 8.46 Lakh is spent for environmental monitoring activities during the FY 2020-21 (till the sept 2020) which includes marine water monitoring.</p>	Parameter	Unit	Surface		Bottom		Max	Min	Max	Min	pH	--	8.29	7.74	8.25	7.73	TSS	mg/L	245	16	270	6.2	BOD (3 Days @ 27 °C)	mg/L	5.6	3.2	6.2	4.2	DO	mg/L	6.2	5.4	5.9	4.9	Salinity	ppt	36.8	34.2	37.1	34.1	TDS	mg/L	38280	36570	38554	36724
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			Detailed marine hydrodynamic modelling studies revealed that the current and proposed dredged soil disposal practices, sea water intake and outfall facilities and desalination plant outfall etc have shown insignificant	Good dredging practices shall be adopted by APSEZ: (i).Improving the dredging accuracy (ii).Improving onboard automation and monitoring, (iii). Reduce spill and loss, (iv). evaluating the need for installing silt screens near mangrove areas during the dredging phase operations, (v). Environment friendly dredging activities can	APSEZ	Long Term	<p>No capital dredging has been done, since Apr 2015. Dredged material generated during maintenance dredging is being disposed at designated locations within deep sea as identified by NIO.</p> <p>Dredging Management plan is adopted for carrying out dredging and management of dredge material. Presently there are 3 nos. (2 Nos. Cutter suction + 1 No. Trailer suction) of dredgers are in operation for dredging.</p> <p>Marine monitoring is being carried out once in a month by NABL and MoEF&amp;CC accredited agency namely M/s. Pollucon Laboratory Pvt. Ltd. The analysis reports of the same are being submitted to the concerned authorities on</p>																																														

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			impact on the marine eco-system. As part of the comprehensive environmental monitoring program, APSEZ has been adopting marine water and sediment quality monitoring on monthly basis.	be undertaken in such a way that the overall turbidity levels near the mangrove and ecologically sensitive zones shall not exceed 100 NTU or 200 mg/l of TSS (10% lethal level of fish) Existing marine monitoring program shall be continued as per the directions of MoEF&CC and GPCB.			regular basis. Summary of marine water for the last six months is as mentioned above.  The same practice will be continued in future also as per direction by MoEF&CC as well as GPCB.  Monitoring will be focused near ecological sensitive area in case of need to carryout capital dragging near such areas.
<b>7</b>	<b>Groundwater quality and salinity ingress</b>						
7.1	While Mundra block is enjoying safe ground water status as on date (based on the data published by CGWB), due to induced economic and population growth, use of ground	Level-2	APSEZ is not utilizing ground water for any type of use. APSEZ is meeting the current water demand through Narmada water supply scheme and 47 MLD captive desalination plant at site.	A dedicated desalination plant of capacity 4,50,000 m3/day (450 MLD) will be developed in progressive manner to meet the APSEZ requirements.	APSEZ	As and When Required	Present source of water for various project activities is desalination plant of APSEZ and/or Narmada water through Gujarat Water Infrastructure Limited and same is sufficient to meet the present water demand.  APSEZ does not draw any ground water.  The desalination plant of additional capacities will be installed on modular basis considering future development and requirement.



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	water resources by the local people might increase in Mundra region. This might increase the TDS and chloride levels in the ground water in future.						
7.2	Due to induced growth in the region, pressure on the available ground water source would increase and this could pose some threat to salinity ingress.	Level-2	Ground water is not drawn by APSEZ for its operations. Natural streams (seasonal rivers) passing through the APSEZ area will not be disturbed, the micro-watershed in the area will not be disturbed. Due to the above reasons,	The Govt. of Gujarat, Narmada, Water Resources, Water Supply & Kalpsar Dept.,(WRD)12 has been implementing various salinity ingress prevention projects	District Administration*	Long Term	APSEZ will co-operate and comply with the directions from concerned regulatory authorities.  APSEZ does not draw any ground water for the fresh water requirement.

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			the possibility of salinity ingress due to APSEZ development is not envisaged. Mundra and Anjar blocks fall under fresh water to medium salinity zones. It can be observed that little variation was observed in the ground water salinity levels from year 2013 to 2016 across the Mundra and Anjar blocks. This aspect confirms that the overall salinity ingress from the shore into the land due to existing APSEZ facilities and power				

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			plant outfalls are less significant.																																																																										
				While the individual industries in the study area will continue to undertake ground water quality monitoring as per the environmental clearances issued for the respective projects, a regional level ground water conservation action committee can be formed under the guidance of state ground water board and district Administration.	All Concerned Stakeholders, District Administration and CGWB*	Continual Process	<p>APSEZ (8 Locations – half yearly) &amp; Adani Power Ltd. (5 Locations – quarterly) is carrying out is carrying out ground water sampling and reports of the same are being submitted to the regulatory authorities on regular basis.</p> <p>The summary of APSEZ ground water quality monitoring for last six months (April'20 to Sept'20) are as below.</p> <table><tr><th>Sr. No.</th><th>Parameter</th><th>Unit</th><th>Min</th><th>Max</th></tr><tr><td>1</td><td>pH</td><td>--</td><td>7.10</td><td>8.31</td></tr><tr><td>2</td><td>Salinity</td><td>ppt</td><td>2.10</td><td>21.00</td></tr><tr><td>3</td><td>Oil &amp; Grease</td><td>mg/L</td><td>0.00</td><td>0.00</td></tr><tr><td>4</td><td>Hydrocarbon</td><td>mg/L</td><td>0.00</td><td>0.00</td></tr><tr><td>5</td><td>Lead as Pb</td><td>mg/L</td><td>0.03</td><td>0.36</td></tr><tr><td>6</td><td>Arsenic as As</td><td>mg/L</td><td>0.00</td><td>0.00</td></tr><tr><td>7</td><td>Nickel as Ni</td><td>mg/L</td><td>0.00</td><td>0.00</td></tr><tr><td>8</td><td>Total Chromium as Cr</td><td>mg/L</td><td>0.02</td><td>0.06</td></tr><tr><td>9</td><td>Cadmium as Cd</td><td>mg/L</td><td>0.03</td><td>0.03</td></tr><tr><td>10</td><td>Mercury as Hg</td><td>mg/L</td><td>0.00</td><td>0.00</td></tr><tr><td>11</td><td>Zinc as Zn</td><td>mg/L</td><td>0.09</td><td>0.65</td></tr><tr><td>12</td><td>Copper as Cu</td><td>mg/L</td><td>0.00</td><td>0.00</td></tr><tr><td>13</td><td>Iron as Fe</td><td>mg/L</td><td>0.11</td><td>4.85</td></tr></table>	Sr. No.	Parameter	Unit	Min	Max	1	pH	--	7.10	8.31	2	Salinity	ppt	2.10	21.00	3	Oil & Grease	mg/L	0.00	0.00	4	Hydrocarbon	mg/L	0.00	0.00	5	Lead as Pb	mg/L	0.03	0.36	6	Arsenic as As	mg/L	0.00	0.00	7	Nickel as Ni	mg/L	0.00	0.00	8	Total Chromium as Cr	mg/L	0.02	0.06	9	Cadmium as Cd	mg/L	0.03	0.03	10	Mercury as Hg	mg/L	0.00	0.00	11	Zinc as Zn	mg/L	0.09	0.65	12	Copper as Cu	mg/L	0.00	0.00	13	Iron as Fe	mg/L	0.11	4.85
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							<table><tr><td>14</td><td>Insecticides/Pesticides</td><td>mg/L</td><td>0.00</td><td>0.00</td></tr><tr><td>15</td><td>Depth of Water Level from Ground Level</td><td>meter</td><td>1.75</td><td>2.50</td></tr></table> <p>* ND – Not Detectable</p> <p>Approx. INR 8.46 Lakh is spent for environmental monitoring activities during the FY 2020-21 (till the sept 2020), which includes ground water monitoring.</p> <p>The fresh water requirement of all the industries within SEZ are being satisfied through APSEZ. All the industries are encouraged to monitor ground water quality as per the permissions granted by competent authorities.</p> <p>As mentioned above, presently, APSEZ has formed Internal Environment Monitoring Committee, involving Officials of APSEZ, Adani Power Limited and other member units, having role and responsibilities as defined above.</p> <p>APSEZ will co-operate and comply with the directions from concerned regulatory authorities for ground water management.</p>	14	Insecticides/Pesticides	mg/L	0.00	0.00	15	Depth of Water Level from Ground Level	meter	1.75	2.50
14	Insecticides/Pesticides	mg/L	0.00	0.00													
15	Depth of Water Level from Ground Level	meter	1.75	2.50													
8	Waste Management																
	Solid waste will be generated		APSEZ has been adopting Zero waste	APSEZ will continue to adopt Zero Waste Initiative and wastes			Presently APSEZ has implemented Zero waste Initiatives as per 5R (Reduce, Reuse, Recycle, Recover & Reprocess) principles of waste										

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8.1	from industrial activities of APSEZ and other permitted facilities in the study area including Mundra town. These wastes would contain recyclable material, construction debris, organic waste, inert material and e-waste etc. In the absence of any organized source segregation programs and material recycling strategies and infrastructure facilities, these wastes	Level-2	Initiatives and the entire waste generated from existing operations is segregated and disposed to recycling vendors, thereby APSEZ has achieved zero landfill status as on date.	will be segregated at source and disposed to various recycling vendors, co-processing in cement plants. This initiative helps not only to reduce the waste to landfill significantly, but also to recycle the materials there by avoiding ecological impacts.	APSEZ	Continual Process	<p>management. At present, APSEZ has developed material recovery facility for 6.0 TPD capacities. 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 plants for Co-processing as RDF (Refused Derived Fuel). The same practice will be continued in future also. APSEZ has also been recognized for Zero Waste to Landfill certification from reputed organization. Copy of certificate has been submitted in earlier EC compliance report (Oct 19 to March 20).</p> <p>APSEZ will continue proper solid waste management in his operational area.</p>



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	will enter into environment and would pose long term health impacts.						
8.2	Considering an average solid waste generation of 0.25 Kg/person/day, the estimated solid waste from facilities within APSEZ will be in the order of 100 TPD (36,500 TPA).	Level-2	APSEZ has made a provision for central waste management facilities within the existing site based on the future needs. As part of the Zero Waste Initiatives, no landfill facilities will be installed at APSEZ.	The existing waste segregation and material recycling facilities will be augmented to dispose safely the wastes generated from APSEZ areas. Solid Waste Management Program shall be adopted and implemented as per Municipal Solid Waste Management Rules 2016 and Construction Waste Management Rules 2016	APSEZ	Continual Process	
8.3	About 35 TPD (13,000 TPA) of solid waste would be generated from the proposed	Level-2	As per the MSW Rules 2016 all the industrial facilities and SEZs are required to adopt waste	Solid Waste Management Program shall be adopted and implemented as per Municipal Solid Waste Management Rules 2016 and Construction Waste	All Industries	Continual Process	

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	industrial areas located outside the APSEZ area.		segregation facilities at the respective properties and non-recyclable waste shall be disposed to landfill sites.	Management Rules 2016			Industries located within the SEZ area are also complying with the waste management rules stipulated by statutory authorities and same is also being confirmed by APSEZ as well SPCB on regular basis.
9	Ecological aspects (terrestrial and marine)						
9.1	About 1576 ha of shrub forest land contiguous to APSEZ area is applied for land diversion for various developmental activities. This might have certain level of changes in the biodiversity in	Level -1	It is noted that the designated forest land is free from any native vegetation and comprises of Prosopis juliflora. It is also noted that no endangered species are present at the shrub forests that are applied for land diversion.	APSEZ has approached concerned authorities for diversion of designated forest land. Suitable compensatory afforestation plan shall be adopted based on the recommendations and directions of the concerned authorities. Due to adoption of compensatory afforestation program through a scientific manner, the overall ecological footprint in the district will be	APSEZ/State Forest Department*	Long Term	Stage – 1 forest Clearance for about 1576.81 Ha Forest land has been obtained. Presently APSEZ is in the process of compliance to the stage – 1 Forest Clearance conditions, for further submitting to Govt. authorities for issuance of Stage-2 Forest Clearance.

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	the study area.		It is also noted that no forest produce is reported from this designated forest land parcel due to lack of economic importance of plant species reported in the shrub forest. It is also noted that no tribal lands are located in the designated forest land parcel. Hence there will not be any change in biodiversity due to the proposed diversion.	increased. Due to plantation of native tree species as part of greenbelt development, the overall biodiversity of the region will increase considerably when the project is fully developed.			
	Mangrove conservation		No development activities will be undertaken	Mangrove footprint			As per study conducted by NCSCM in 2017, mangrove cover in and around APSEZ, Mundra has increased from 2094 Ha to 2340 ha (as compared between 2011 to 2017). The analysis

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9.2	areas are located adjacent to the APSEZ area. Accidental discharges of industrial effluents into the marine environment would pose certain ecological risk.	Level -1	within mangrove conservation areas. APSEZ has taken up large scale mangrove afforestation activities in an area of more than 2800 ha at various locations across the coast of Gujarat state in consultation with various organizations. The Adani Foundation introduced 'Mangrove Nursery Development and Plantation' scheme in the area as an alternative income generating	and health status shall be monitored annually	APSEZ	Continual Process	<p>has shown an overall growth of 246 ha. The cost for said study was INR 3.15 Cr</p> <p>Further work has been assigned to NCSCM in March 2020 as part of compliance for the action plan "Monitoring of mangrove cover". The cost of the said work is INR 23.56 Lacs.</p> <p>Other than this, Bio diversity Project has been developed by Adani Foundation with three species Rhizophora Mucronata ,Ceripos Tagal, Ceriops Decandra with good growth at Luni Bandar. Mangrove plantation done at Luni sea coast with fisher folk community during World Environment Day Celebration.</p> <p>Web talk show was organized on the occasion of "World Mangrove days On Multi species Mangrove bio diversity with Joint effort of GUIDE and Adani Foundation, Mundra.</p>

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			activity for the people of the region.																				
9.3	Outfall from the thermal power plants desalination and CETP would pose certain level of impact on the marine environment.	Level-1	A detailed marine hydro-dynamic and dispersion modelling of the study area indicates that the background temperature and salinity at mangrove conservation area will not increase from the prevailing background levels as the outfalls are located far away. APSEZ and respective power plants in the study area have been monitoring the marine water quality status	All approved marine outfalls shall be monitored for salinity, temperature and other designated parameters as per consent to establish issued by GPCB. Existing marine environmental monitoring program shall be continued.	APSEZ and Concerned Industry	Continual Process	<p>Presently marine monitoring is being carried out by the Adani power plant at the marine outfall locations and reports are being submitted to the concerned authorities on regular basis.</p> <p>APSEZ is carrying out Marine monitoring once in a month at 9 locations in deep sea by NABL and MoEF&amp;CC accredited agency namely M/s. Pollucon Laboratory Pvt. Ltd. The analysis reports of the same are being submitted to the concerned authorities on regular basis.</p> <p>Adani power plant is also doing marine water quality at 5 locations (2 locations at outfall location) in deep sea by NABL and MoEF&amp;CC accredited agency namely M/s. Unistar Environment &amp; Research Labs Pvt. Ltd. The analysis reports of the same are being submitted to the concerned authorities on regular basis. The summary of marine water quality is shown above.</p> <p>The comparison of marine water results between CIA and current monitoring data are as below.</p> <table><tr><th rowspan="2">Parameter</th><th rowspan="2">Unit</th><th colspan="2">Max</th><th colspan="2">Min</th></tr><tr><th>CIA</th><th>Present</th><th>CIA</th><th>Present</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Parameter	Unit	Max		Min		CIA	Present	CIA	Present						
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			on monthly basis for the stipulated environmental and ecological parameters.				<table><tr><td>Temp.</td><td>°C</td><td>30.2</td><td>31.8</td><td>28</td><td>29</td></tr><tr><td>Salinity</td><td>ppt</td><td>41.8</td><td>36.8</td><td>34.9</td><td>34.2</td></tr></table> <p>As per above results, it can be seen that there is no major deviation in the concentration of parameters and thus indicates that impacts are insignificant.</p>	Temp.	°C	30.2	31.8	28	29	Salinity	ppt	41.8	36.8	34.9	34.2
Temp.	°C	30.2	31.8	28	29														
Salinity	ppt	41.8	36.8	34.9	34.2														
9.4	<b>Terrestrial Ecology:</b> Study area doesn't have any notified national parks or ecological sanctuaries. Since the area falls under dry deciduous shrubs. Due to scanty rains in the area, the overall natural green-cover/vegetation in the area is very small.	Level-1	APSEZ has developed greenbelt in an area of 550ha as against the committed area of 430ha. A dedicated nursery is set up to promote plantation. APSEZ have undertaken a plantation with about 9.6 Lakh fully grown trees.	The compensatory afforestation area to be monitored annually to check the survival rate of the plantation.	APSEZ	Continual Process	<p>APSEZ has developed its own "Dept. of Horticulture" which is taking measures/ steps for terrestrial plantation/greenbelt development. APSEZ, Individual SEZ Industries and Adani Power Plant has developed total 628 ha. area as greenbelt with plantation more than 9 Lacs saplings within the APSEZ area including SEZ industries &amp; Adani Power Plant.</p> <p>Dedicated horticulture department is maintaining and monitoring the terrestrial green belt development on regular basis to check the survival rate of plantation.</p> <p>Total expenditures of the horticulture dept. during the FY 2020-21 (till sept 2020) within APSEZ is INR 490 lakh.</p>												

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10	Socio-economic aspects						
10.1	Population growth in the Mundra region was reported to be in the order of 85% during the past decade (2001-2011). Further expansion of the urban area could be possible due to induced economic growth in the region. Increase in population will have a additional need for public infrastructure in the region.	Level-1	Dedicated townships are developed within APSEZ area with necessary community infrastructures such as hospital, school, recreational facilities, sewage treatment and waste collection facilities. Adani Foundation has been undertaking various CSR programs under the principal themes such as education, community health, sustainable livelihood and rural infrastructure. About Rs. 97 Cr	The existing townships will be expanded to accommodate about 4lakh people when the project activity is fully developed.	APSEZ	As and When Required	<p>APSEZ has developed two townships (Shantivan and Samudra) accommodating 2180 households and associated infrastructure facilities. Accommodation is made available for all interested employees working within Adani group &amp; SEZ industries. Out of which 89% Occupancies are accommodated within the townships and rest are available for employees working within APSEZ.</p> <p>At present 45 nos. of industries (processing &amp; non-processing) are operating within the SEZ. Township facilities are also made by SEZ industries within Mundra town for their employees having basic infrastructure facilities and requirements. Most of the employees working in SEZ industries are residing in Mundra township having all basic requirements and associated facilities.</p> <p>The existing social infrastructure facilities are adequate to accommodate the people considering present APSEZ development. The existing townships with associated facilities will be expanded as per requirement. Other infrastructure facilities have been developed for people are as follows.</p> <ul style="list-style-type: none"> <li>Multi-Specialty Hospital</li> </ul>

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			has been spent on various CSR activities in the Mundra region since 2010. Similar community development programs (based on need based assessment) will be continued in future as well with allocation of appropriate budget.				<ul style="list-style-type: none"> <li>• School</li> <li>• Commercial complex</li> <li>• Religious place</li> </ul> <p>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 in the main five persuasions is mentioned below.</p> <ul style="list-style-type: none"> <li>• Community Health</li> <li>• Sustainability Livelihood – Fisher Folk</li> <li>• Education</li> <li>• Rural Infrastructures</li> <li>• Skill Development</li> </ul> <p>Adani foundation has spent approx. INR 3853.7 lakhs from April – 2018 to Sep – 2020 for CSR activities including cost of rural infrastructure projects development.</p> <p>Major works carried out since April 2018 as a part of CSR activities are as below.</p> <ul style="list-style-type: none"> <li>• Pond Deepening work at Vadala &amp; Mota Bhadiya</li> <li>• Artificial recharge borewell in Borana, Mangara &amp; Dhrub village.</li> <li>• Under Dignity of Drivers Project, Adani Foundation has constructed Resting Shed for Drivers entering in SEZ Premises. Total</li> </ul>

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							<p>50 beds are constructed, drinking water and sanitation plus recreational – TV Facilities.</p> <ul style="list-style-type: none"> <li>• Construction of 45 Toilet block and proper bathing place for labours.</li> <li>• RO Plant – Samaghogha, Siracha village &amp; Vallabh Vidyalaya at Mundra</li> <li>• Basic sanitation facility (18 Nos) at Balvadi, medical centre and retiring places at labour settlements</li> <li>• Ground recharge activities (pond deepening work for more than 52 ponds) individually and 26 ponds under Sujlam Suflam Jal Abhiyan were built leading to a significant increase in water table and higher returns to the farmers.</li> <li>• Roof Top Rain Water Harvesting 54 Nos. and Recharge Bore well 75 Nos.</li> <li>• Drip Irrigation 823 Farmers benefitted in coordination with Gujrat Green Revolution Company</li> <li>• Participatory Ground Water Management in ten villages with holistic approach for Kankavati Sandstone Aquifer Programme.</li> <li>• Development of Prisha Park at Mundra.</li> <li>• Pond Bund strengthening at Zarpara Village</li> </ul> <p>Similar community development programs (based on need based assessment) will be continued in future as well with allocation of appropriate budget.</p>

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10.2	The overall sex ratio was found to reduce by 28% in the Mundra taluk (study area) during the period 2001 - 2011. This could be attributed to increase in influx of working men in the region due to rapid economic development. Similar trend might continue in future due to induced economic growth in the region.	Level-2	Adani foundation is taking up several girl child education programs as part of CSR activities to create awareness about girl child protection.	Suitable regional level awareness programs on the girl child protection and encouragement programs in line with state and national policies shall be adopted under Corporate Social Responsibility programs in association with district authorities.	APSEZ, Other development projects and District Administration*	Long Term	<p>Major works carried out since April 2018 as a part of CSR activities to create awareness about girl child protection are as below.</p> <ul style="list-style-type: none"> <li>The Adani Foundation provided scholarship support to motivation and encouragement of fishermen boys and girls for higher education under this program. APSEZ provide 100% fees support to girls as a scholarship. This year total 78 students are being facilitated by Adani foundation.</li> <li>Separate sanitation facilities for girl child in schools.</li> <li>Total 8770 haemoglobin screenings of RPA woman and adolescent girls was carried out in year 2017-18. Which helps in controlling anaemia in women and indirectly malnutrition.</li> <li>Beti Vadhavo Programme was organized in 32 Villages in the presence of Village Sarpanch and other leaders in year 2017-18. We explained people about the various topics i.e. importance of girl child, Sex Ratio, Gender Equality and laws regarding Child abortion. This initiative was well accepted by community and we have observed a visible change in their mindset. We have facilitated 560 daughters with Kit (Small Bed sheet, Mosquito net, Soap and Cream with nutritious food for mother) To create awareness about</li> </ul>



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							<p>health, personal hygiene, child education and nutritional diet in fishermen community, various awareness programs have been organized.</p> <ul style="list-style-type: none"> <li>• Project Suposhan is initiated with the Motive .... Curb malnutrition amongst Children, Adolescent girls and Women in our CSR villages. <ul style="list-style-type: none"> <li>✓ 100beneficiaries covered in Menstrual Hygiene Day - with slogan called "RED-ACHHA HAI"</li> <li>✓ 204 beneficiaries covered in Breastfeeding Week</li> <li>✓ 320beneficiaries covered in National Deworming Day</li> <li>✓ 20 villages covered in celebration of NATIONAL NUTRITION MONTH</li> <li>✓ 42 FAMILY COUNSELLING</li> </ul> </li> <li>• To reduce malnutrition and anemia amongst Children 95 % &amp; adolescent girls and pregnant &amp; lactating women by 70 % in three years</li> <li>• Reduction IMR and MMR</li> <li>• Support Awareness &amp; Cover 100 % Vaccination taken by Child &amp; women.</li> <li>• SuPoshan Thanksgiving program was organized. In this webinar DDO, CDPO Mundra and other dignitaries remained present and appreciated the efforts to overcome malnourishment in Mundra and Bitta.</li> </ul>

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							About Rs. 38 Cr has been spent on various CSR activities in the Mundra region since April 2018 till Sep 2020 including cost of community health and education for woman and girl child.
10.4	Due to economic growth leading to rapid urbanization, which prompts the need for healthcare facilities in the region. For an influx of 6 lakh people from APSEZ operations and additional 3 Lakh from induced growth by the year by 2030 (fully developed scenario), total hospitals facilities with about 540 beds would be required.	Level-2	Adani hospitals, Mundra is setup by Adani group near Samudra township with a goal to provide primary and secondary health care services to Adani group employees and the local populace of Mundra. The existing 100 bed Adani hospital at Mundra has been catering the services ranging from wellness and preventative care.	APSEZ will explore other possibilities to augment the primary and secondary healthcare facilities in future depending on the growth scenario at APSEZ development.	APSEZ	Long Term	<p>Adani hospitals (Multi-specialty), Mundra is having 100 bed facility and same is setup by Adani group near Samudra township.</p> <p>Primary health center and community health center are in place within the Mundra taluka.</p> <p>Other than this Adani foundation is doing various activities as part of community health. The details of last year are as below.</p> <p><b><u>Community Health – Mundra</u></b></p> <ul style="list-style-type: none"> <li>• 11 Rural Clinic – 8 from Mundra &amp; 3 from Anjar block treated; <b>8196 patients</b>.</li> <li>• <b>31 villages</b> covered, with <b>109 types</b> of general and lifesaving medicines through Mobile healthcare unit <b>6879 patients</b> benefited during six month.</li> <li>• Provided dialysis treatment to <b>6 patients</b> of kidney failure <b>236 times</b>.</li> <li>• <b>Citizen project - 8672 Card holders of 68 villages</b> get benefit under this project.</li> <li>• <b>2921 sr. citizen patients</b> benefited during six month - <b>8000 limit</b> for three year per patients</li> <li>• <b>470</b> Needy patients had been facilitated with Medical Support OPD &amp; IPD treatment with token charges during this six month.</li> <li>• <b>1150</b> health calendar were distributed to various PHC, CHC and ICDS department of Mundra,</li> </ul>

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							<p>Mandvi, Nakhtrana, Lakhpat, Abadasa, Anjar &amp; Gandhidham block.</p> <ul style="list-style-type: none"> <li>• <b>594</b> Protein Powder packet distributed to ANC woman of Utthan villages and TB patient of Mundra block.</li> <li>• Total <b>18698 &amp; 10380</b> IPD / OPD facilities provided project wise and AHMPL subsequently during six months</li> </ul> <p>Adani foundation has spent approx. INR 3853.7 lakhs from April – 2018 to Sep – 2020 for CSR activities cost including cost of community health.</p> <p>Present Hospital facilities are adequate to avail the medical treatment for Mundra region considering present development. Other Occupational Health centres, primary health centres and community health centres are also in place in Mundra to take care the people residing in Mundra. Adani group is also operating high quality health care services to the people of Kutch at G. K. General Hospital, Bhuj having 750 beds facilities on public private partnership (PPP) model, which is 60 km far from Mundra.</p> <p>APSEZ will explore other possibilities to augment the primary and secondary healthcare facilities in future depending on the future development at APSEZ.</p>
	Due to rapid economic		APSEZ has been giving				<p><b>4830 Man-days</b> work was provided over <b>236 Fishermen family</b> during this six months by Adani Hospital. The Foundation has also supported</p>

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10.5	<p>development in the region, several employment opportunities can be generated to the local people.</p> <p>When the area is fully developed by the end of 2030, the working population of the Mundra taluk would increase from current level of 55,000 to as high as 4,00,000, which will be 45% of the total envisaged population in Mundra Taluk by the end of 2030.</p>		<p>preferences to people from Gujarat for providing employment opportunities based on eligibility and skills. In Mundra, special programmes have been conducted by Adani Foundation to enhance the employability of youth from fisherfolk communities. Based on the need assessment results, several livelihood options have been introduced by the Adani Skill Development Centre, Mundra. In these centres, youth can join and get</p>	<p>APSEZ is committed to provide support for fishermen livelihood activities and has submitted a detailed 5 years plan to MoEF&amp;CC with a total budget of Rs.13.5 Cr.</p>	APSEZ	Short Term	<p>Pagadiya fishermen as painting laborers by providing them with employment and job in various fields.</p> <p>Adani Skill Development Centre (ASDC) is playing a pivotal role in implementing sustainable development in the state. The objective of this Centre is to impart different kinds of training to the students of 10<sup>th</sup>, 12<sup>th</sup>, college or ITI from surrounding areas.</p> <p>During this year Total 440 people trained in various trainings to enhance socio economic development. 324 students Enrolled in Online Training.</p> <p>APSEZ is carrying out various initiatives specific to the Fisherfolk community which includes:</p> <ul style="list-style-type: none"> <li>• Vidya Deep Yojana</li> <li>• Vidya Sahay Yojana – Scholarship Support</li> <li>• Adani Vidya Mandir</li> <li>• Fisherman Approach in SEZ</li> <li>• Machhimar Arogya Yojana</li> <li>• Machhimar Kaushalya Vardhan Yojana</li> <li>• Machhimar Sadhan Sahay Yojana</li> <li>• Machhimar Awas Yojana</li> <li>• Machhimar Shudhh Jal Yojana</li> <li>• Sughad Yojana</li> <li>• Machhimar Akshay kiran Yojana</li> </ul>

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			<p>vocational training for a number of technical and non-technical skills.</p> <p>An industrial Training Institute is set up at APSEZ, Mundra, to enhance the skill levels of the local youth to maximum possible extent.</p>				<ul style="list-style-type: none"> <li>• Machhimar Suraksha Yojana</li> <li>• Machhimar Ajivika Uparjan Yojana</li> <li>• Bandar Svachhata Yojana</li> </ul> <p>These initiatives are planned for the period 2016 – 2021 with a committed expense of INR 13.5 Cr as submitted earlier in detail in the report namely "Silent Transformation of Fisher folk at Mundra", .</p> <p>Till, Sep 2020 (Since 2016-17) approx. 8.62 Cr. INR, has already been spent in support for fishermen livelihood activities.</p>



Date: 29<sup>th</sup> Sep, 2020

### Minutes of Meeting (MoM)

**Subject:** Committee Meeting w.r.t. Environment Management Plan (EMP) suggested in Cumulative Impact Assessment Study of Mundra Region (Virtual Platform)

**Agenda of Meeting:**

1. Air Quality Management
2. Noise Level Management
3. Regional Ground Water Quality Management and Water Conservation

**Date & Time of Meeting:** 17<sup>th</sup> Sep, 2020 (4:00 to 5:30 PM)

**Details of Committee Members / Attendees:**

1. Azhar Kazi (APSEZ, Mundra)
2. Mahendrakumar Ghritlahre (APSEZ, Mundra)
3. Chiragsing Rajput (APSEZ, Mundra)
4. Ashvinkumar Patni (APSEZ, Mundra)
5. Vivek Gundraniya (APSEZ, Mundra)
6. Mukesh Patel (Adani Power Ltd., Mundra)
7. Shailesh Prajapati (Adani Power Ltd., Mundra)
8. Naimesh Kakkad (Mundra Solar PV Ltd., Mundra)

**Points Discussed:**

1. Frequency of environmental monitoring as per statutory permission granted
2. Comparison of monitored data with permissible limits, which shows all the parameters are Sharing of unit wise Ambient Air Quality, Ambient Noise and Ground water quality data
3. All the monitored data are well within the permissible limit.
4. Environmental Monitoring (AAQM) in 3 surrounding villages by Adani Power and 1 village by MSPVL, which shows all parameters are well within the standard limit.
5. Ground water quality monitoring in 3 surrounding villages by Adani Power on quarterly basis.
6. Air Pollution Control Measures provided for the flue gas emission
7. Various control measures / action taken for control the air and noise emission well within the permissible standards by individual unit.
8. High salinity is a concern for the ground water quality. Due to continuous extraction of ground water by surrounding villagers the salinity may be increased.

9. PCC done in APSEZ Outfall channel up to APL road culvert to reduce the salinity ingress in ground water.
10. Good practices implemented by unit for environment preservation and conservation.

**Action Points:**

1. Maintain the existing practice to control the emission in terms of Air, Water and Noise.
2. Ensure for proper covering of trucks / vehicles carrying coal / cargo to reduce spillages on road
3. Carry out study about impact on ground water quality due to continuous extraction or any other factors.
4. Inclusion of Ambient Air Quality and Noise Monitoring station covering surrounding villages by APSEZ considering further development and statutory clearances
5. Visit to Outfall channel for monitoring of its leakages towards sea side.
6. Involvement of Representative from individual SEZ member units to discuss the EMS provided and maintained in their particular unit.