

APSEZL/EnvCell/2015-16/045

Date: 26.05.2016

To

The Director (S).

Ministry of Environment & Forests, E-5, Kendriya Paryavaran Bhawan,

Arera Colony, Link Road No. - 3,

Bhopal - 462 016.

E-mail: rowz.bpl-mef@nic.in

Sub.

: Half yearly Compliance report for Environment Clearance for the "Township and area development project" at Survey no. 141 (part), village: Mundra, Dist. Kutch, by M/s. Adani Mundra SEZ Infrastructure Pvt. Ltd."

Ref.

: Environment clearance granted to Adani Mundra SEZ Infrastructure Pvt. Ltd. vide letter dated 20th February, 2010 bearing SEIAA letter no. SEIAA/GUJ/EC/8(b)/44 /2010.

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 Clearance for the period of October'15 to March'16 is enclosed here for your records. The stated information is also provided in form of a CD (soft copy).

Thanking you, Yours Faithfully,

For Adani Mundra SEZ Infrastructure Pvt, Ltd.

Authorized Signatory

Encl.: As above

Copy to:

Gujarat, India

1. Zonal Officer, Regional Office, CPCB - Western Region, Parivesh Bhawan, Opp. VMC Ward Office No. 10, Subhanpura, Vadodara – 390 023.

2. Member Secretary, GPCB - Head Office, Paryavaran Bhavan, Sector 10 A, Gandhi Nagar - 382 010

3. Member Secretary, SEIAA, Gujarat, Paryavaran Bhavan, GPCB, Sector 10 A, Gandhi Nagar - 382 010

4. Regional Officer, Regional Office, GPCB - Katira Complex-1, Mangalam Char Rasta, Sanskar Nagar, Bhuj (Kutch) – 370 001



Environmental Clearance Compliance Report of



Township and Area Development Project, Village: Mundra, Dist. Kutch, Gujarat

of

Adani Mundra SEZ Infrastructure Pvt. Limited for Period:

October-2015 to March-2016



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

<u>Index</u>

Sr. No.			Page Nos.
1	Compliance Report		
2	Annexures		
	Annexure – 1 Details on Water Consumption & Sewage Generation		16
	Annexure – 2 Summary of Environmental Monitoring Reports		17-22
	Annexure - 3 GPCB Sample Analysis Report		23-24
	Annexure - 4 Photographs of signage's provided for emergency		25
	Annexure - 5	Details of First Aid and Fire Fighting training	26

Compliance Report of Environment Clearance



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

	101 y 2010.	
Sr.	Specific Conditions	Compliance Status as on
No.		31.03.2016
A. S	pecific Conditions	
A.1	Construction Phase:	Part of the project work has been completed. No construction activity carried out by AMSIPL during October'15 to March'16 period, once the construction work will resume the compliance to condition related to construction phase will be submitted. Whereas at commercial plot given to Ms. High Rise Hospitality Pvt. Ltd. construction work is under progress.
1.	Minimum Aerial distance of 100 m shall be kept between processing & non – processing areas of SEZ, as proposed.	
2.	Height of the buildings in the project shall be restricted to 42 meter (in view of the height restriction specified by the aviation authority) or the height permissible under the bylaws prescribed the SEZ authority, whichever is more stringent. This, however, shall not increase the total population envisaged under the EIA report prepared and submitted to SEAC and SEIAA and shall not increase in the resource consumption like total water usage or wastes generated.	PI. refer reply mentioned against condition A.1.
2(a)	The requirement for fire prevention, line safety in relation to fire and fire protection of the building shall be fulfilled in the project, as per the National Building Code of India so as to minimize danger to life and property from fire.	
2(b)	All high rise buildings shall have at least two staircases with a condition that the nearest staircases shall be available at every 30 meter from all places in a given building.	



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

	Jary 2010.			
Sr.	Specific Conditions	Compliance Status as on		
No.		31.03.2016		
3.	The project proponent shall not obstruct the flow of river Bhukhi passing through the social infrastructure area and shall not do any encroachment on the said river, as per their undertaking dated 21/07/2009. All necessary precautions and measures shall be taken in order to ensure that natural drainage of river Bhukhi passing through the project site is not altered / affected.			
4.	Additional bridge / walkthrough over the Bhukhi river passing through the site shall be provided between the two bridges planned to be provided so as to reduce distance to be travelled during the emergency situations.			
5.	If SEZ authority permits, adequate parapet / fencing shall be provided along the banks of river Bhukhi passing through the site for preventing fall of animals / humans.			
6.	All required sanitary and hygienic measures shall be provided before starting the construction activities and to be maintained throughout the construction phase.			
7.	The construction site shall be provided with adequately barricades of at least 3 m height on its periphery with adequate signage			
8.	Adequate first aid facilities shall be provided in the project both during construction and operation of the project.			
9.	Adequate drinking water, sanitation and other amenities shall be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.			



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

	reuludiy 2010.			
Sr.	Specific Conditions	Compliance Status as on 31.03.2016		
No.				
10.	Provision should be made for the supply of fuel (Kerosene or cooking gas), utensils such as pressure cookers etc. to the laborers during construction phase.			
11.	The project proponent shall ensure that the construction labours are provided with adequate amenities for lighting, drinking water, sanitation etc. to ensure that do not ruin the existing environmental condition.			
12.	Adequate personal protective equipments shall be provided to the construction workers to ensure their safety and the project proponent shall ensure its usage by the labours.			
13.	All topsoil excavated during construction activities should be stored separately for use in horticultural / landscape development within the project site.	PI. refer reply mentioned against condition A.1.		
14.	Disposal of debris including the excavated material during construction phase shall not create adverse effect on neighbouring communities and shall be disposed of only at the approved sites with the approval of the competent authority after taking the necessary precautions for general safety and health aspects.			
15.	Use of diesel generator sets during construction phase should be enclosed type and confirm to EPA rules for air and noise emission standards.			
16.	Ready-made mix concrete should be used so far as possible			
17.	Water demand during construction should be reduced by use of curing agents, plasticizers and other best practices.			



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

		Τ	
Sr.	Specific Conditions	Compliance Status as on	
No.	·	31.03.2016	
18.	Vehicles hired for bringing construction material at site should be in good conditions and confirm to applicable air and noise emission standards and should be operated only during non-pick hours.		
19.	Ambient noise levels shall conform to residential standards both during day and night. Incremental pollution load on the ambient air and noise quality should be closely monitored during construction phase.		
20.	Fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerator or pressure reducing devices or sensor based control.		
21.	Fly ash should be used as building material in the construction as per provision of Fly Ash Notification under EPA	Pl. refer reply mentioned against	
22.	Structural design aspects in accordance to the seismic zone shall be strictly adhered to.	condition A.1.	
23.	No ground water shall be used and the water required during construction phase shall be sourced from Gujarat Water Infrastructure Ltd.		
24.	The construction materials and debris shall be properly stored and handled to avoid negative impacts such as air pollution and public nuisances by blocking the roads and public passages. Appropriate barricading shall be done and signboards shall be put at such site.		
25.	Ambient Air Quality Monitoring / Noise monitoring shall be carried out during the construction. The location of ambient air quality monitoring stations and its frequency shall be decided in consultation with GPCB.		



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

Febru	February 2010.		
Sr. No.	Specific Conditions	Compliance Status as on 31.03.2016	
26.	The provisions of the buildings and other construction workers rules shall be met with by the project proponent in addition to other statutory requirements under different environmental pollution control and safety related acts and rules.	Pl. refer reply mentioned against	
27.	Environment Management Cell shall be formed, which will supervise and monitor the environment related aspects of the project during construction and operational phases in addition to observance of Gujarat Building and other constructions workers act and rules including registration of the project under this act.	condition A.1.	
A.2	Operation Phase:		
28.	Fresh water requirement during the operation phase shall not exceed 9 MLD and it shall be sourced from Gujarat Water Infrastructure Ltd. Metering of the water shall be done and its records shall be maintained. No ground water shall be extracted.		
29.	The total sewage generation from the	Complied.	
23.	proposed social infrastructure project shall not exceed 7.2 MLD.	Details of sewage generated, is attached as Annexure – 1 .	



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

	2010.	
Sr.	Specific Conditions	Compliance Status as on
No.	Specific conditions	31.03.2016
30.	The project proponent shall install and operate adequate sewage treatment plants (STP) comprising of 3 modules of STP (each of 2.5 MLD) to achieve ultimate capacity of 7.5 MLD, for treatment of sewage. These STP modules shall be	Complied. STP having capacity of 2.5 MLD is constructed and operated in township area. Treated sewage is utilized on land after achieving discharge norms of GPCB.
	operated regularly and effectively to achieve the GPCB norms.	One STP having capacity of 30 KLD is constructed and operated in Hospital. Treated sewage is utilized for horticulture purposes.
		Monitoring for air, water and noise is being carried out by NABL and MoEF accredited agency.
		Monitoring reports for the period from October'15 to March'16 are enclosed as Annexure – 2.
		Analysis report of treated water carried out by GPCB is enclosed as Annexure – 3 .
31.	Two modules of STP of 2.5 MLD (i.e. total 5 MLD) shall be installed on one side of the	Complied.
	Bhukhi River and one module of STP of 2.5 MLD shall be installed on the other side of the Bhukhi River passing through the social infrastructure project. Hence no any cross drainage civil work shall be carried out.	At present one STP of 2.5 MLD is installed on one side of Bhukhi river and one STP of 30 KLD is installed on other side of Bhukhi river for hospital.
32.	Out of total 7.2 MLD of treated sewage conforming the GPCB norms, 2 MLD treated sewage shall be utilized within the project area for plantation / gardening whereas balance 5.2 MLD of treated sewage shall be utilized in the identified area of MPSEZL for plantation / gardening.	Complied. During October'15 to March'16 approx. 107.0 Million Litre treated water is used for gardening / plantation purpose within township area / APSEZ area.



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

		T
Sr. No.	Specific Conditions	Compliance Status as on 31.03.2016
33.	In no case, the wastewater / treated sewage shall be discharged into the river Bhukhi passing through the social infrastructure project.	Complied. During October'15 to March'16 approx. 107.0 Million Litre treated water is used for gardening / plantation purpose within township area / APSEZ area.
34.	Best available technology shall be used for disinfection of treated sewage before reuse / discharge.	Complied. Chlorination treatment is provided for disinfection before reuse.
35.	Rain water harvesting of roof top run off of the building to be constructed as a part of social infrastructure as per the plan submitted shall be implemented. Before recharging the rain water, pre-treatment must be done to remove suspended matter.	Specific study to estimate potential of Rain Water Harvesting is under progress.
36.	The Municipal Solid Waste (MSW) shall be properly collected and segregated at source and it shall be disposed as per the guidelines of the MSW Rules 2000, as may be amended time to time. The dried biomass from the STP will be used as manure in gardening / plantation.	Complied. Dry waste collection drive is being organised on regularly basis for collection municipal solid waste collection from residential township area. Collected dry waste is being sent for recycling. AMSIPL is also in process of installing Organic Waste Converter within premises for converting food waste in to reach manure and generated manure will be utilized in own horticulture / green belt area.
37.	The Bio-medical Waste (BMW) shall be disposed as per guidelines of BMW rules 1998 as may be amended from time to time.	Complied. Multispecialty hospital has taken the necessary approvals from GPCB for the disposal of Bio Medical Waste.



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

	Jany 2010.	
Sr.	Specific Conditions	Compliance Status as on
No.	Specific Conditions	31.03.2016
38.	Hazardous wastes, if any generated during the operation phase shall be handled as per the Hazardous Waste (Management, Handling & Transboundary Movement) Rules 2008, as may be amended from time to time.	Complied. During Oct'15 to March'16 there is no hazardous waste generation. If any hazardous waste generation in future, it will be dispose through authorised agency.
39.	54,600 sq.m. area shall be earmarked for the parking purpose as proposed. The area earmarked for the parking shall be used for parking only. No other activity shall be permitted in this area.	Complied. Information has been already submitted to MoEF&CC. There is no further change.
40.	Necessary signage including continuous display of status of parking availability at entry, exit and all other appropriate places shall be provided which should have appropriate size of letters and shall be visible from the at least 50 meter distance from the adjacent road.	Project is under development and area is earmarked for parking area as per National Building Code requirement. Trained security guards are available round the clock to guide/help for parking.
	Trom the dejacent root.	Continuous display regarding status of parking availability will be installed once project is in full-fledged operation.
41.	No public space shall be used or blocked for the parking and the trained staff shall be deployed to guide the visitors for parking and helping the senior citizens and physically challenged people	Complied. Adequate parking area has been provided as per National Building Code. Trained security guards are available round
	projection, enterenged people	the clock to guide/help for parking.
42.	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided.	Complied. Separate entry and exits have been provided at main gate with architectural divider for proper traffic management. Third gate has been provided for emergency purposes.
43.	Common utilities like drinking water facility, toilets etc shall be provided on each floor with adequate signage thereof. Adequate distance shall be maintained between the drinking water and toilet blocks	Complied.



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

1 0010	July 2010.	
Sr.	Specific Conditions	Compliance Status as on
No.		31.03.2016
44.	The green belt shall be developed in 50 Hectares area in terms of peripheral green belt around the project site, road side plantation and green belt on either side of	Complied. A dedicated horticulture department is responsible for greenbelt development for
	the Bhukhi river. The project proponent shall plant at least 20,000 trees in green belt, as proposed. The open spaces inside the social infrastructure project shall be suitably landscape and covered with	entire Adani group. For that purpose, APSEZL has developed its own "Dept. of Horticulture" and is taking better measures/steps to improving
	vegetation of indigenous variety.	environment. So, far APSEZL have developed total 341.45 ha area as green belt with plantation of 613334 saplings in SEZ premises.
		Photographs of Green Belt Area developed within AMSIPL submitted to the Ministry of Environment, Forests & Climate Change along with half yearly compliance dated 29.05.2014.
45.	The area earmarked as green area shall be used only for green belt and shall not be	Noted and complied.
	altered for any other purpose. The fund earmarked for green belt development shall not be diverted for any other purpose.	Separate budget for the horticulture department is earmarked every year. All environmental and horticulture activities are considered at group level and budget allocation is also done accordingly.
		The spent budget for Horticulture Cell for the period F.Y. 2015-16 is 434.72 lacs.
		Photographs of Green Belt Area developed within AMSIPL submitted to the Ministry of Environment, Forests & Climate Change along with half yearly compliance dated 29.05.2014.



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

rebit	-eordary 2010.		
Sr. No.	Specific Conditions	Compliance Status as on 31.03.2016	
46.	The project proponent shall explore the application of solar energy and shall be incorporated for the illumination of common areas, lighting of internal roads and passages in addition to solar water heating, if any.	completed. Remaining construction work is under progress and application of system is	
47.	The acoustic enclosures shall be installed at all noise generating equipments and the noise level shall be maintained as per the MoEF / CPCB guidelines / norms both during day and night time.	Complied. D.G. Sets having acoustic enclosures are provided as stand-by and used in case of main power failure only. However, regular noise monitoring is being carried out. Monitoring report for the period from October'15 to March'16 is attached as Annexure – 2.	
48.	The project proponent shall install the electric appliances, which are energy efficient and meeting with the Bureau of Energy Efficiency norms, wherever applicable.	Point noted and being complied.	



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

	Jary 2010.	
Sr.	Specific Conditions	Compliance Status as on
No.		31.03.2016
49.	The energy audit shall be conducted at regular interval for the project and the recommendations of the audit report shall be implemented with spirit.	Energy audit report submitted to the Ministry of Environment, Forests & Climate Change along with half yearly compliance dated 29.05.2014.
		Following recommendation have been implemented: Recommendation for improvement of power factor has been implemented. Which is resulting in improving power factor from 95% to 93%. All the distribution transformer in the township were under load and losses in these transformer were found high. We have shifted the load from two transformer to maintain optimum loading and losses. The lighting at the unnecessary area have been manually switched off, which is resulted in reduced connected load of street light by 39%.
50.	The roof should meet regulatory requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfil requirements.	Point noted and being complied.
51.	Use of glass shall be minimal to reduce the electricity consumption and load on airconditioning.	Glass is not used as building envelope.
52.	Risk estimation shall be carried out for the project and disaster management plan shall be prepared and its recommendations shall be implemented in the time bound manner.	Risk Estimation is carried out for AMSIPL. Detail submitted to the Ministry of Environment, Forests & Climate Change along with half yearly compliance dated 24.11.2015.



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

Half yearly Compliance report for Environment Clearance for the project "Township and area development project at Mundra, Dist. Kachchh, Gujarat of M/s. Adani Mundra SEZ Infrastructure Pvt. Ltd." issued vide letter no. SEIAA/GUJ/EC/8(b)/44/2010 dated 20th February 2010.

	501 y 2010.	
Sr.	Specific Conditions	Compliance Status as on
No.	·	31.03.2016
53.	The raw water sumps will be equipped with suction differential head / partition so as to insure that minimum 500 KL water shall remain reserved as fire water as proposed.	Information has been already submitted to the MoEF&CC and there is no further change.
54.	Necessary emergency lighting system along with emergency power back up system shall be provided. In addition, emergency public address system arrangement and signage for emergency exit route shall be provided on each floor.	For emergency power back up DG sets are provided. Adequate signage's for emergency is provided at each floor. Pl. find attached detail as Annexure - 4
55.	Necessary auto glow, signage at all appropriate places shall be provided to guide the people towards exits and assembly points during the unforeseen emergency and eventuality conditions.	Auto glow signages are provided at all appropriate places. Pl. find attached detail as Annexure - 4
56.	Training to the staff for the First Aid and Fire Fighting Alarm with regular mock drill shall be conducted regularly and shall be made in integral part of the disaster management plan of the project.	Details of First Aid and Fire Fighting training is being regularly conducted for preparedness against any disaster. Detail of the same is attached as Annexure - 5
57.	Ozone Depleting Substance (Regulation and Control) rules shall be followed while designing the air conditioning system of the project.	Air conditions used at the project site are using only CFC / HCFC free refrigerant gas.
58.	Environment Management Cell shall be formed by the project proponent during operation phase which will supervise and monitor the environment related aspects of the project including incremental pollution loads on the ambient air quality, noise and water quality periodically till the management of the project remains with the project proponent.	APSEZL as group has a well structured Environment Cell, staffed with qualified manpower for implementation of the Environmental Monitoring and Management Plan. Monitoring is being carried out by NABL and MoEF accredited agency. Monitoring report for the period from October'15 to March'16 are enclosed as Annexure – 1.
		Annexure – 1.

B. General Conditions



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

1 6010	Jary 2010.				
Sr. No.	Specific Conditions	Compliance Status as on 31.03.2016			
59.	The project proponent shall permit the outside people to use the social infrastructures like hospital, schools, colleges etc. coming up in the proposed project, as per their undertaking dated 21/07/2009.	During October'15 to March'16 4,114 (OPD as well IPD) patients have been treated in the Hospital. Approx Rs. 25,82,302 worth of free medical services given to nearby villagers during October'15 to March'16. Outside people are allowed access to use the social infrastructures like hospital and			
60.	Various provisions of the Environment (Protection) Act, 1986 and the Rules / Notifications issued there under by the Ministry of Environment and Forest, Govt. of India, from time to time shall be strictly complied with.	school. Point noted.			
61.	No further expansion or modification in the plant shall be carried out without prior approval of the MoEF/SEIAA as the case may be. In case of deviations or alterations in the project proposal from those submitted to MoEF / SEIAA / SEAC for clearance, a fresh reference shall be made to the SEIAA / SEAC to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Point noted.			



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

Sr.	Specific Conditions	Compliance Status as on		
No.		31.03.2016		
62.	The project authorities shall earmark adequate funds to implement the conditions stipulated by SEIAA as well as GPCB along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be	Separate budget for the Environment cell is earmarked every year. All environmental and horticulture activities are considered at group level and budget allocation is also done accordingly.		
	diverted for any other purpose.	The spent budget for Environment Cell for the period F.Y. 2015-16 is 328.07 lacs.		
		Operation & Maintenance cost of Sewage Treatment Plant for the period F.Y. 2015-16 is 31.31 lacs.		
		The spent budget for Horticulture Cell for the period F.Y. 2015-16 is 434.72 lacs.		
63.	The applicant shall inform the public that the project has been accorded Environmental Clearance by the SEIAA and i.e. copies of the clearance letter are available with the GPCB and may also be seen at the website of SEIAA / SEAC / GPCB. This shall be advertised within seven days from the date of the clearance letter, in at least two local newspaper that are widely circulated in the region, one of which shall be in the Gujarati language and the other in English. A copy each of the same shall be forwarded to the concerned regional office of the Ministry.	Information has been already submitted to Ministry of Environment, Forests & Climate Change along with half yearly compliance report dated 24.11.2015.		
64.	It shall be mandatory for the project management to submit half yearly compliance report in respect of the stipulated prior Environmental Clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.	Ministry of Environment, Forests & Climate		



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

Febru	uary 2010.	
Sr. No.	Specific Conditions	Compliance Status as on 31.03.2016
65.	The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.	Point noted.
66.	The project authorities shall inform the GPCB, regional office of MoEF and SEIAA about the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Complied.
67.	The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.	Point noted.
68.	The company in a time bound manner shall implement these conditions. The SEIAA reserves the right to stipulate additional conditions, if the same is found necessary. The above conditions will be enforced inter-alia under the provisions of the water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981, the environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Point noted.
69.	This environmental clearance is valid for five years from the date of issue.	Point noted.
	SEIAA/GUJ/EC/8(b)/44/2010 dated 20 Febr	•
	The applicant shall carry out comparative carbon footprint study of low rise building with large ground coverage v/s high rise building with low ground coverage through reputed institute like CEPT or GIDR and submitted to SEIAA within one year from the issuance of EC.	Comparative carbon footprint study report submitted to the Ministry of Environment, Forests & Climate Change along with half yearly compliance dated 01.06.2015.



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

ANNEXURE 1 Details on Water Consumption & Sewage Generation



Water Consumption and Wastewater Generation Details for AMSIPL (October'15 - March'16)

Month	Water Consumption, KL	STP Water Inlet, KL	STP Water Outlet, KL
Oct-15	31,728	19,361	18,595
Nov-15	36,182	16,989	16,684
Dec-15	28,697	20,266	20,017
Jan-16	29,533	17,694	16,791
Feb-16	26,000	16,254	15,840
March-16	32,028	35,015	19,368
Total	1,84,168	1,25,579	1,07,295

Note:

Treated sewage water is completely used for gardening purpose



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

ANNEXURE 2 Summary of Environmental Monitoring Reports



"HALF YEARLY ENVIRONMENTAL MONITORING REPORT"

FOR



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

MONITORING PERIOD:

OCTOBER 2015 TO MARCH 2016

PREPARED BY:



POLLUCON LABORATORIES PVT.LTD. 544, BELGIUM TOWERS, RING ROAD, SURAT - 395 003 PHONE/FAX - (+91 261) 2455 751, 2601 106, 2601 224. E-mail: pollucon@gmail.com Web: www.polluconlab.com

T 0820 - 821

ISO 9001:2008

ISO 14001:2004

OHSAS 18001:2007

H. T. Shah **Lab Manager**





RESULTS OF STP WATER OUTLET

SR.	TEST DADAMETERS	11.25	AMSIPL SAMUNDRA TOWNSHIP STP OUTLET						
NO.	TEST PARAMETERS	Unit	October 2015	November 2015	December 2015	January 2016	February 2016	March 2016	TEST METHOD
1	рН		7.3	7.4	7.16	7.2	7.86	7.22	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	20	16	14	24	14	22	IS3025(P17)84Re.02
3	BOD (3 Days @ 27 °C)	mg/L	15	12	BDL*	14	BDL*	18	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	0.7	0.7	0.6	0.6	0.6	0.6	APHA(22 nd Edi)4500 Cl

SR.									
NO.	TEST PARAMETERS	Unit	October 2015	November 2015	December 2015	January 2016	February 2016	March 2016	TEST METHOD
1	рН		7.8	7.14	7.2	7.5	7.27	7.22	IS3025(P11)83Re.02
2	Total Suspended Solids	mg/L	28	24	28	24	24	26	IS3025(P17)84Re.02
3	BOD (3 Days @ 27 oC)	mg/L	18	17	18	14	18.4	19.5	IS 3025 (P44)1993Re.03Edition2.1
4	Residual Chlorine	mg/L	0.6	0.6	0.5	0.7	0.8	0.7	APHA(22ndEdi)4500 Cl

*Below Detection limit

Minimum Detection limit: BOD mg/L: 10



H. T. Shah Lab Manager



RESULTS OF AMBIENT AIR QUALITY MONITORING

Location & Parameter	Unit	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	March 2016	Test Method
Samudra Township -STP								
Respirable Particulate Matter(PM ₁₀)	μg/m³	71.34	76.60	69.72	63.69	67.99	72.00	IS:5182(P23):Gravimetric CPCB - Method (Vol.I,May-2011)
Particulate Matter (PM _{2.5})	μg/m³	35.08	37.65	36.26	32.58	33.94	33.28	Gravimetric- CPCB - Method (Vol.I,May-2011)
Sulphur Dioxide as SO ₂	μg/m³	14.08	12.65	12.94	15.00	17.69	14.60	IS:5182(PII):Improved West and Gaeke
Oxides of Nitrogen as NO ₂	μg/m³	29.91	27.31	28.63	28.13	30.47	26.83	IS:5182(PVI): Jacob & Hochheiser modified (NaOH-NaAsO2) Method
Samudra Township — Customer Care								
Respirable Particulate Matter(PM ₁₀)	μg/m³	72.25	74.44	72.65	71.51	70.29	71.71	IS:5182(P23):Gravimetric CPCB - Method (Vol.I,May-2011)
Particulate Matter (PM _{2.5})	μg/m³	33.30	32.99	32.75	36.06	34.76	35.25	Gravimetric- CPCB - Method (Vol.I,May-2011)
Sulphur Dioxide as SO ₂	μg/m³	12.15	12.24	12.55	14.01	14.14	12.67	IS:5182(PII):Improved West and Gaeke
Oxides of Nitrogen as NO ₂	μg/m³	28.43	26.01	30.51	32.21	29.73	27.76	IS:5182(PVI): Jacob & Hochheiser modified (NaOH-NaAsO2) Method

Note: Monthly average is calculated based on 24 hourly & twice a week monitoring results.

H T Shah

Lab Manager





RESULT NOISE LEVEL MONITORING

RESULT OF NOISE LEVEL MONITORING [DAY TIME]

	Noise in dB (A) Leq - Average							
Sr. No.	Location Name	October 2015	November 2015	December 2015	January 2016	February 2016	March 2016	Limits in dB(A) Leq
1	Samundra Township STP	55.4	52.9	65.0	53.5	53.1	53.3	75 dP (A) Log
2	Samundra Township Customer Care	61.7	49.1	62.3	50.8	53.2	54.0	— 75 dB (A) Leq

RESULT OF NOISE LEVEL MONITORING [NIGHT TIME]

	Noise in dB (A) Leq - Average							
Sr. No.	Location Name	October 2015	November 2015	December 2015	January 2016	February 2016	March 2016	Limits in dB(A) Leq
1	Samundra Township STP	47.9	45.2	48.1	49.3	50.3	51.5	70dP (A) Log
2	Samundra Township Customer Care	56.9	46.4	51.0	49.2	50.4	51.2	— 70dB (A) Leq

H T Shah

Lab Manager



RESULT OF DG STACK MONITORING

Adani Hospital		D.G. Set (500 KVA)	D.G. Set (500 KVA)	
TEST PARAMETER	UNIT	28/10/15	13/01/16	METHOD OF MEASUREMENT
Particulate Matter	mg/Nm3	36.91	29.76	IS:11255 (Part-I):1985
Sulphur Dioxide	ppm	8.56	6.43	IS:11255 (Part-II):1985
Oxide of Nitrogen	ppm	29.78	35.65	IS:11255 (Part-VII):2005

^{*}DG sets are used as standby ,so stack monitoring is done on quarterly basis.Results on 11 % O2 Correction when Oxygen is greater than 11 %,

H. T. Shah Lab Manager





MINIMUM DETECTION LIMIT [MDL]

	Ambient Air Parameter								
Sr. No.	Test parameter	MDL							
1	Particulate Matter (PM10)	10							
2	Particulate Matter (PM 2.5)	10							
3	Sulphur Dioxide (SO2) (μg/m3)	5							
4	Nitrogen Dioxide (NO2) (μg/m3)	5							

Stack parameter							
Sr. No.	Test parameter	MDL					
1	Particulate Matter (mg/Nm3)	10					
2	Sulphur Dioxide(ppm)	1.52					
3	Oxides of Nitrogen (ppm)	2.65					

H. T. Shah Lab Manager





From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

ANNEXURE 3 GPCB Sample Analysis Report



ANALYSIS REPORT FOR WATER / WASTE WATER SAMPLE

Gujarat Pollution Control Board, Gj Ins. Desert Ecology

Mundra Road

BHUJ-370001

Gj Ins. Desert Ecology

Sample ID:169625 - Analysis Completion:06/11/2015

Industrial estates/ parks/ complexes/ areas/ export processing zones/ SEZs/ Biotech parks/ leather complex / LAB Inward : 12647

TEST REPORT

Test Report No.: 12647 Date: 10/11/2015

1. Name of the Customer : Adani Mundra Sez Infrastructure Pvt. Ltd - 10602

2. Address : SURVEY NO. 141 (PART), SURVEY NO. 141 (PART), VILL MUNDRA, SURVEY NO.

MUNDRA

3. Nature of Sample : REP-Representative/Grab, (Insp Type : ROU-Routine Visit)

4. Sample Collected By : K. B. Chaudhary, DEE

: 5000 5. Quantity of Sample Received 6. Code No. of the Sample : 169625

7. Date & Time of Collection & Inwarding : 04/09/2015, (1035 to 1035) & 09/09/2015

8. Date of Start & Completion of Analysis : 09/09/2015 & 06/11/2015

: Treated W/w. Sample collected From Final outlet of Samudra Township STP \sim 9. Sampling Point

10. Flow Details (Remarks)

11. Mode of Disposal : Onland for Gardening/Plantation

12. Ultimate Receiving Body : on land

13. Temperature on Collection : 30 & pH Range on pH Strip :@7-8 on pH Strip

14. Carboys Nos for : W-2 & Color & Appearance : Colourless

15. Water Consumption & W.W.G (KLPD) : Ind:100.000, Dom:1500.000 & Ind:0.000, Dom:1200.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	6
2	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	6.8
3	RESIDUAL CHLORINE	PPM	APHA 21st edi : 4500 Cl G - DPD Colorimetric metho	0.2-5mg/l	0.5

Laboratory Remarks: ------ By:439-r.o_439 Dt.: 10/11/2015

G.M. Sadhu, R.O Head

Field Observation:

Note:

- 1. * These parameters are covered under the scope of NABL.
- 2. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
- 3. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
- 4. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
- 5. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
- 6. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
- 7. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
- 8. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 22nd Edition by APHA.
- 9. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

23



ANALYSIS REPORT FOR WATER / WASTE WATER SAMPLE

Gujarat Pollution Control Board, Gj Ins. Desert Ecology

Gj Ins. Desert Ecology **Mundra Road**

BHUJ-370001

Sample ID:169622 - Analysis Completion:06/11/2015

Industrial estates/ parks/ complexes/ areas/ export processing zones/ SEZs/ Biotech parks/ leather complex / LAB Inward : 12646

TEST REPORT

Test Report No.: 12646 Date: 10/11/2015

1. Name of the Customer : Adani Mundra Sez Infrastructure Pvt. Ltd - 10602

2. Address : SURVEY NO. 141 (PART), SURVEY NO. 141 (PART), VILL MUNDRA, SURVEY NO.

MUNDRA

3. Nature of Sample : REP-Representative/Grab, (Insp Type : ROU-Routine Visit)

4. Sample Collected By : K. B. Chaudhary, DEE

: 5000 5. Quantity of Sample Received 6. Code No. of the Sample : 169622

7. Date & Time of Collection & Inwarding : 04/09/2015, (1010 to 1010) & 09/09/2015

8. Date of Start & Completion of Analysis : 09/09/2015 & 06/11/2015

: Treated W/w. sample collected from Final outlet of STP(30KLPD)-Hospital's ~ 9. Sampling Point

10. Flow Details (Remarks)

11. Mode of Disposal : Onland for Gardening/Plantation within premises

12. Ultimate Receiving Body

13. Temperature on Collection : 31 & pH Range on pH Strip :@7-8 on pH Strip

14. Carboys Nos for : W-1 & Color & Appearance : Colourless

15. Water Consumption & W.W.G (KLPD) : Ind:100.000, Dom:1500.000 & Ind:0.000, Dom:1200.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	6
2	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	7.2
3	RESIDUAL CHLORINE	PPM	APHA 21st edi : 4500 CI G - DPD Colorimetric metho	0.2-5mg/l	0.3

Laboratory Remarks: ----- By:439-r.o_439 Dt.: 10/11/2015

G.M. Sadhu, R.O Head

Field Observation:

Note:

- 1. * These parameters are covered under the scope of NABL.
- 2. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
- 3. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
- 4. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
- 5. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
- 6. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
- 7. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
- 8. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 22nd Edition by APHA.
- 9. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.



From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

ANNEXURE 4 Photographs of signage's provided for Emergency





From : October,15 To : March,16

Status of the conditions stipulated in Environment Clearance

ANNEXURE 5 Details of First Aid and Fire Fighting Training

Fire fighting training provided at Township





