

## Dahej SEZ Ltd. Block No.14, 3rd Floor

Udyog Bhavan, Sector-11 Gandhinagar-382017, Gujarat, India Phone: +91-79-23241590, 65721608, 65721908

Fax: (079) 23241736 e-mail: ceo@dahejsez.com website: www.dahejsez.com

CIN: U45209GJ2004PLC044779

Date: 19/05/2017

Ref.: DSL/MoEF/Reports/2017/2496

To,
Regional Officer, MoEFCC
Ministry of Environment, Forest and Climate Change,
Regional Office (WZ),
E-5, Kendriya Paryavaran Bhawan,
E-5 Arera Colony, Link Road-3,
Ravishankar Nagar, Bhopal – 462016

Subject: Submission of Six Monthly Compliance Reports (October-2016 to March-2017) of Environmental Clearance (EC) and CRZ Clearance of Dahej SEZ Ltd. At: Dahej Village, Taluka- Vagra, Dist. - Bharuch – 392140, Gujarat.

Ref.: 1) Environmental Clearance No. - 21-1084/2007-IA.III dated 17th March, 2010. 2) CRZ Clearance No. - 11-50/2011-IA.III dated 19th September, 2014.

Dear Sir,

With reference to above subject matter, we herewith submit Six Monthly (October-2016 to March-2017) Compliance Report of Environmental Clearance (EC) and CRZ Clearance in hard copy with CD for your kind perusal.

Thanking you, Yours Faithfully,

S N Patil

Chief Executive Officer

Encl: a/a

Ministry of Environment & Forests (C)

Alinistry of Environment (Mestern Region)

Name of Environment (Mestern Region)

Alinistry of Environment (Mestern Region)

Alinistry of Environment (Mestern Region)



Dahej SEZ Ltd.
Block No.14, 3rd Floor

Udyog Bhavan, Sector-11 Gandhinagar-382017, Gujarat, India Phone: +91-79-23241590, 65721608, 65721908

Fax: (079) 23241736 e-mail: ceo@dahejsez.com website: www.dahejsez.com

CIN: U45209GJ2004PLC044779

Date: 19/05/2017

Ref.: DSL/MoEF/Reports/2017/2498

To,
The Regional officer,
Gujarat Pollution Control Board,
Shed No. C - 1/119/3, Phase II,
GIDC Estate, Narmada Nagar,
Bharuch - 392 015

Subject: Submission of Six Monthly Compliance Reports (October-2016 to March-2017) of Environmental Clearance (EC) and CRZ Clearance of Dahej SEZ Ltd. At: Dahej Village, Taluka- Vagra, Dist. - Bharuch – 392140, Gujarat.

Ref.: 1) Environmental Clearance No. - 21-1084/2007-IA.III dated 17th March, 2010.

2) CRZ Clearance No. - 11-50/2011-IA.III dated 19th September, 2014.

Dear Sir,

With reference to above subject matter, we herewith submit Six Monthly (October-2016 to March-2017) Compliance Report of Environmental Clearance (EC) and CRZ Clearance in hard copy with CD for your kind perusal.

Thanking you, Yours Faithfully,

S. N. Patil

Chief Executive Officer

Encl: a/a

Gujarat Polluh valentrol Board
BHARBUCH.



## COMPLIANCE REPORT OF CRZ CLEARANCE

#### for

Conditions of Clearance under the EIA notification, 2006 for Development of SEZ.

(CRZ Clearance No. 11-50/2011-IA.III dated 19th September, 2014)

Period: October 2016 to March 2017



of



## M/S. DAHEJ SEZ LTD.

(A JOINT VENTURE OF GIDC & ONGC)

at

Village: Dahej, Taluka Vagra, District Bharuch.

## M/S. Dahej SEZ Limited

## **Compliace Report of CRZ Clearance**

© Kadam Environmental Consultants ('Kadam'), December 2016

PROJECT DETAILS								
Name of Publication	Compliance Report of CRZ Clearance from Month October 2016 to March 2017							
Project Number	1417058112	1417058112         Report No.         1         Version         1         Released         April 2017						
Prepared & Managed By		li Khuman & Sapana Amin		Released By Sangram Kadam				

#### **CONTACT DETAILS**

#### Vadodara (Head Office)

871/B/3, GIDC Makarpura, Vadodara, India – 390 010.

E: kadamenviro@kadamenviro.com; T:+91-265-3001000; F: +91-265-3001069

#### Delhi / NCR

Spaze IT Park, Unit No. 1124, 11<sup>th</sup> Floor, Tower B-3, Sector 49, Sohna Road, Gurgaon, India – 122 002 E: <a href="mailto:delhi@kadamenviro.com">delhi@kadamenviro.com</a>; T/F: 0124-424 2430-436

#### **DISCLAIMER**

Kadam has taken all reasonable precautions in the preparation of this report as per its auditable quality plan.

Kadam also believes that the facts presented in the report are accurate as on the date it was written. However, it is impossible to dismiss absolutely, the possibility of errors or omissions. Kadam therefore specifically disclaims any liability resulting from the use or application of the information contained in this report. The information is not intended to serve as legal advice related to the individual situation.

## **Point-wise Compliance Report of CRZ Clearance**

## (October 2016 to march 2017)

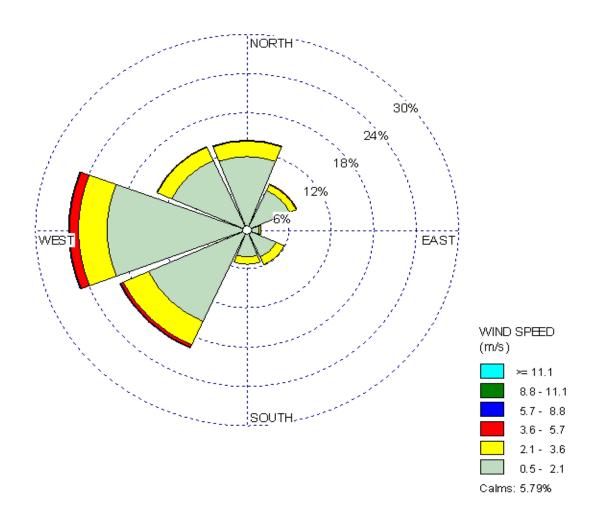
Standard Conditions related to Activity 7(c) – Category "B" projects under the Schedule of Ministry of Environment and Forests, GoI notification dated 14-09-06.

S. No.	Description	Compliance Status				
	CRZ Clearance No. 11-50/2011-IA.III dated 19 <sup>th</sup> September, 2014					
Α	SPECIFIC CONDITIONS:					
i.	There shall be no allotment of plot in 304.85 acres of CRZ area to industries except for port and harbor or any activity requiring foreshore facilities. Such port and harbor projects shall obtain prior approval under EIA Notification, 2006 and CRZ Notification, 2011, as applicable.	DSL will not allot the plot in 304.85 acres of CRZ area to industries except for port and harbor without obtaining prior approval under EAI notification, 20016 and CRZ notification, 2011 as applicable				
ii.	There shall no water logging due to the proposed roads.	There is no water logging due to the proposed roads.				
iii.	The runoff from SEZ shall be collected and taken to ETP.	The runoff from SEZ is collected and taken to ETP.				
iv.	All the conditions/recommendations stipulated in Environmental Clearance (EC) issued by Ministry of Environment and Forests for non CRZ area of SEZ vide letter no. 21-1084/2007-IA-III dated 17.03.2010, shall strictly complied with.	DSL has Agreed & Complied.				
V.	All the conditions/recommendations stipulated by Gujarat State Coastal Zone Management Authority vide their letter No. ENV-10-2010-669-E dated 15.12.2011 shall be strictly complied with.	DSL has Agreed & Complied.				
vi.	All the recommendation of the EIA/EMP and DMP shall be strictly complied with.	DSL has Complied.				
В	General Conditions:					
i.	The construction of the structures should be undertaken as per the plans approved by the concerned local authorities / local administration, meticulously conforming to the existing local and Central rules and regulations including the provisions of Coastal Regulation Zone Notification, 2011 and the approved Coastal Zone Management Plan of Gujarat.	DSL has Complied.				
ii.	In the event of any change in the project profile a fresh reference shall be made to the Ministry of Environment, Forests & Climate Change.	Agreed and shall be complied if such event occurs.				
iii.	This Ministry reserves the right to revoke this clearance, if any, of the conditions stipulated are not complied with to the satisfaction of this Ministry.	DSL has noted.				
iv.	This Ministry or any other competent authority may stipulate any additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.					

S. No.	Description	Compliance Status
v.	Full support should be extended to the officers of this Ministry's Regional Office at Bhopal and the offices of the Central and Gujarat State Pollution Control Board by the project proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.	DSL has agreed and support to all officials would be provided.
6.	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, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	All the applicable permissions from the respective competent authorities are obtained.
7.	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.	All the applicable permissions from the respective competent authorities are obtained.
8.	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 CRZ Clearance and copies of clearance letters are available with 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.	Advertisement was circulated 11/10/2014 in times of India and divya bhaskar.
9.	This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.	DSL has agreed and Noted.
10.	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.	DSL has agreed and Noted.
11.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestion / 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.	DSL has Complied.
12.	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&CC, the respective Zonal office of CPCB and the SPCB.	Monitoring data is attached as <b>Annexure 1</b> .

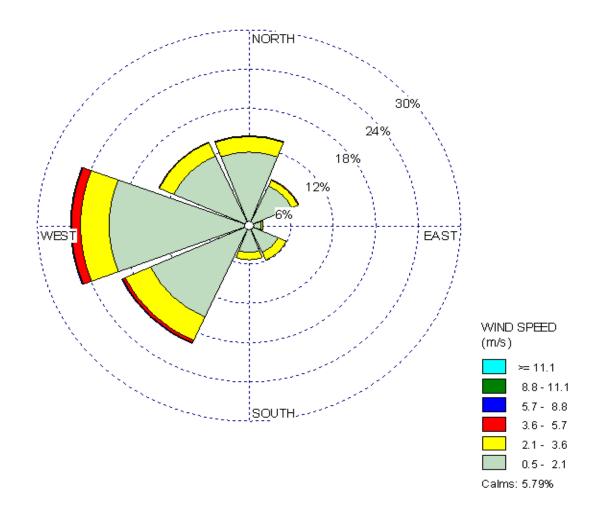
S. No.	Description	Compliance Status
	The criteria pollutant levels, namely SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	
13.	The project proponent shall also submit six monthly reports on status of compliance of stipulated EC conditions including results of monitored data (both in hard copies as well as by email) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB.	DSL has complied.
14.	The environmental statement for each financial year ending 31st March in Form –V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of Clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	DSL has complied.

## Wind rose Diagram (October 2016)



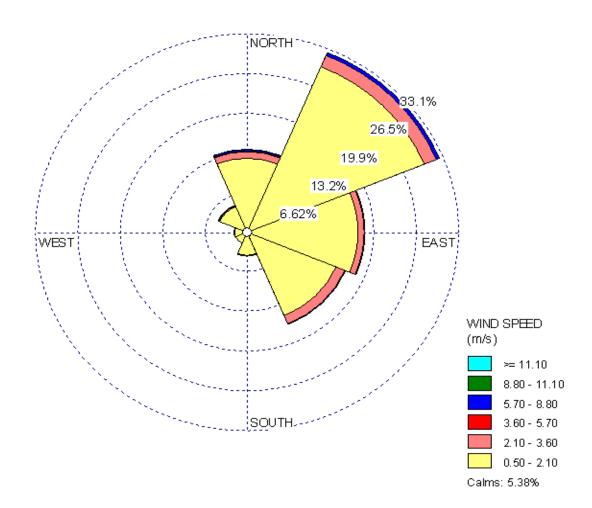
Directions	%		
N	13.91		
NE	7.81		
E	2.09		
SE	5.86		
S	5.30		
SW	19.80		
W	25.24		
NW	14.19		
CALM	5.79		

## Wind rose Diagram (November 2016)



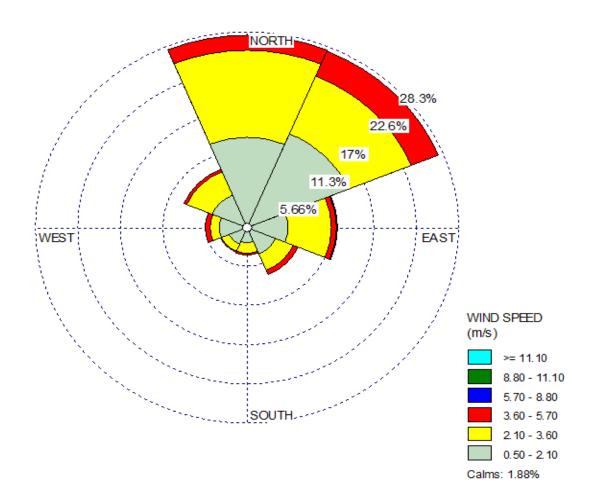
Directions	%		
N	13.91		
NE	7.81		
Е	2.09		
SE	5.86		
S	5.30		
SW	19.80		
W	25.24		
NW	14.19		
CALM	5.79		

## Wind rose Diagram (December 2016)



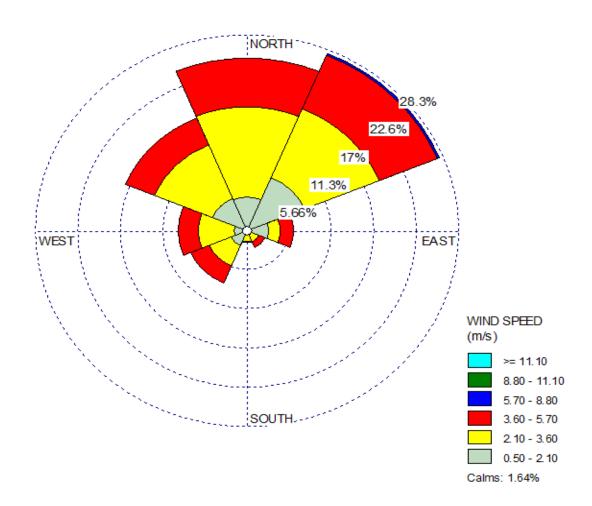
Directions	%		
N	13.83		
NE	32.46		
Е	18.44		
SE	16.70		
S	4.04		
SW	2.02		
W	2.15		
NW	4.98		
CALM	5.38		

## Wind rose Diagram (January 2017)



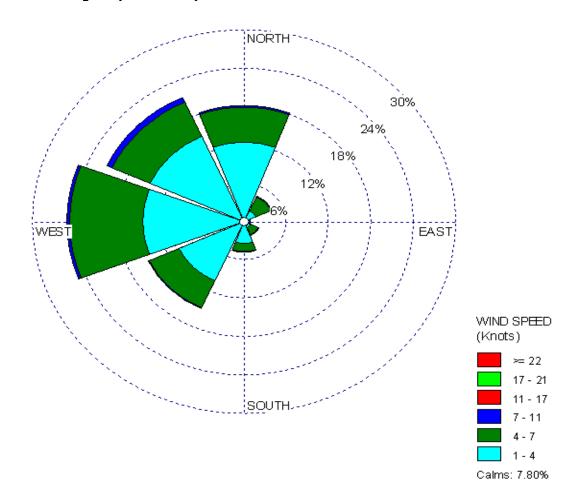
Directions	%
N	27.73
NE	27.59
Е	12.51
SE	7.40
S	4.03
SW	3.90
W	5.66
NW	9.15
CALM	1.88

### Wind rose Diagram (February 2017)



Directions	%		
N	24.88		
NE	27.72		
E	6.23		
SE	2.68		
S	1.78		
SW	8.22		
W	9.26		
NW	17.59		
CALM	1.64		

### Windrose Diagram (March 2017)



Directions	%		
N	18.15		
NE	4.48		
E	0.95		
SE	2.43		
S	4.89		
SW	14.91		
W	25.07		
NW	21.27		
CALM	7.86		

# Annexure 1: Average Ambient Air quality Results (October 2016 to March 2017) Note: Values in Brackets indicates latest CPCB Limits for NAAQM.

#### 1) October 2016

				Location and Results			
S. No	Parameter	CPCB Limit	Unit	Near. Fire Pump (Part- 1)	Near. Water Tank	Above SEZ-II Office	
1	PM10	100	μg/m3	89.5	91	91	
2	PM2.5	60	μg/m3	29.5	36	37.5	
3	SO2	80	μg/m3	13.9	12.8	11.9	
4	NOx	80	μg/m3	22.1	22.8	22.7	

## 2) November 2016

				Location and Results			
S. No	Parameter	CPCB Limit	Unit	Near. Fire Pump (Part- 1)	Near. Water Tank	Above SEZ-II Office	
1	PM10	100	μg/m3	160	153.7	196.5	
2	PM2.5	60	μg/m3	46	54.5	43	
3	SO2	80	μg/m3	11.82	12.73	12.17	
4	NOx	80	μg/m3	27.33	23.78	23.1	

## 3) <u>December 2016</u>

				Location and Results				
S. No	Parameter	CPCB Limit	Unit	Near. Fire Pump (Part- 1)	Near. Water Tank	Above SEZ-II Office		
1	PM10	100	μg/m3	172	160	187		
2	PM2.5	60	μg/m3	42.5	43.5	43.5		
3	SO2	80	μg/m3	15.02	12.72	13.08		
4	NOx	80	μg/m3	28.43	26.74	29.5		

#### 4) January 2017

				Location and Results				
S. No	Parameter	CPCB Limit	Unit	Near. Fire Pump (Part- 1)	Near. Water Tank	Above SEZ-II Office		
1	PM10	100	μg/m3	230	220	165		
2	PM2.5	60	μg/m3	35.5	45.5	37.0		
3	SO2	80	μg/m3	14.5	14.99	14.16		
4	NOx	80	μg/m3	28.08	30.33	28.09		

## 5) <u>February 2017</u>

				Location and Results			
S. No	Parameter	CPCB Limit	Unit	Near. Fire Pump (Part- 1)	Near. Water Tank	Above SEZ-II Office	
1	PM10	100	μg/m3	179.5	184.5	207.5	
2	PM2.5	60	μg/m3	37.5	43.5	47.5	
3	SO2	80	μg/m3	17.58	18.08	17.98	
4	NOx	80	μg/m3	30.36	26.82	27.78	

## 6) March 2017

				Location and Results				
S. No	Parameter	CPCB Limit	Unit	Near. Fire Pump (Part- 1)	Near. Water Tank	Above SEZ-II Office		
1	PM10	100	μg/m3	154.5	199	171		
2	PM2.5	60	μg/m3	37.5	33.0	47.5		
3	SO2	80	μg/m3	16.88	15.21	15.64		
4	NOx	80	μg/m3	28.04	28.92	29.49		

#### Annexure 2: Noise Monitoring Results

		Res	sults in dB (LEQ) ba	se on 24 hour re	ading				
Monitorin	a Month	Sampling Location							
riomeoring rioman		D Pumping Station (SEZ I)	Office Building SEZ II	Main Gate SEZ I	C Pumping Station SEZ I				
Oct 2016	Maximum	69	61	65	68				
Oct 2016	Minimum	42	43	45	45				
Nov 2016	Maximum	70	62	67	68				
NOV 2016	Minimum	41	41	40	41				
Dec 2016	Maximum	65	61	69	68				
Dec 2016	Minimum	45	43	42	45				
Jan 2017	Maximum	65	65	55	66				
Jan 2017	Minimum	41	40	39	41				
Feb 2017	Maximum	68	63	59	65				
1 CD 2017	Minimum	40	39	41	40				
Mar 2017	Maximum	64	66	59	62				
1·101 201/	Minimum	29	40	40	40				

### Annexure 3: Surface Water Characteristics

### 1) Sample 1

				Location,	Date of Sample co	llected & Monitorin	ng Results	
S. No.	Parameters	Unit	C pumping station SEZ I	M/s. Accent	C pumping Station SEZ I	C Pumping Station SEZ I	Near C Pumping SEZ I	Near C Pumping Station SEZ I
			6/10/2016	07/11/16	7/12/16	05/01/17	02/02/17	2/03/17
1	pH @ 25 ° C	Unit	8.15	7.17	7.68	7.84	7.54	8.12
2	Colour [Hazen	Hazen	20	20	10	5	5	10
3	Taste	Agreeable	N.A	N.A	N.A	N.A	N.A	N.A
4	Odour	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
5	Turbidity(NTU)	NTU	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)
6	Temperature	0C	29	28	28	28	29	29
7	Total Dissolved	mg/lit.	468	2064	3164	3536	3348	2828
8	Total Alkalinity	mg/lit.	300	320	270	300	280	390
9	Chloride (as Cl)	mg/lit.	146	1640	1551	638	553	1124
10	Sulphate (as	mg/lit.	100	165	335	1614	1536	566
11	Nitrate (as	mg/lit.	4.45	3.22	17.71	<0.2	<0.2	<0.2
12	Calcium (as Ca)	mg/lit.	36.07	36.07	93.79	92.99	91.38	80.16
13	Magnesium (as	mg/lit.	51	27	16	43	39	36
14	Fluoride (as F)	mg/lit.	1.07	0.98	0.86	1.72	1.58	0.96
15	Iron (as Fe)	mg/lit.	0.16	0.15	0.12	0.15	0.18	0.08
16	Zinc (as Zn)	mg/lit.	0.08	0.10	0.006	0.10	0.13	0.11
17	Phenolic	mg/lit.	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.02)	N.D.(MDL:0.02)	N.D.(MDL:0.02)
18	Residual	mg/lit.	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

## -<u>2) Sample 2</u>

				Location,	Date of Sample co	llected & Monitorin	g Results	
S. No.	Parameters	Unit	Near water tank storm water	Near M/s. OPAL Gate 2 storm water Drainage	Near M/s. Aries colour	M/s. Meghmani Strom water Drainage	M/s. Shiva Pharma	M/s. Aries Color
			10/10/16	14/11/16	13/12/16	13/01/17	6/02/17	14/03/17
1	pH @ 25 ° C	Unit	7.68	7.49	7.75	6.65	7.44	6.89
2	Colour [Hazen	Hazen	5	10	Purple	2000	1500	Light Blue
3	Taste	Agreeable	N.A	N.A	N.A	N.A	N.A	N.A
4	Odour	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
5	Turbidity(NTU)	NTU	2.1	N.D	N.D.	N.D.	N.D.	N.D.
6	Temperature	0C	29	28	28	28	29	29
7	Total Dissolved	mg/lit.	308	428	1468	9656	2952	448
8	Total Alkalinity	mg/lit.	140	280	220	140	210	180
9	Chloride (as Cl)	mg/lit.	66	443	620	1861	1418	86
10	Sulphate (as	mg/lit.	97	32	118	3724	284	20
11	Nitrate (as	mg/lit.	5.29	1.15	21.16	4.75	24.92	<0.2
12	Calcium (as Ca)	mg/lit.	36.07	14.43	28.06	40.08	60.12	48.10
13	Magnesium (as	mg/lit.	27	30	22	19	41	24
14	Fluoride (as F)	mg/lit.	0.66	0.39	<0.1	<0.1	0.87	0.08
15	Iron (as Fe)	mg/lit.	0.09	0.08	0.30	0.08	0.18	0.16
16	Zinc (as Zn)	mg/lit.	0.08	0.10	0.005	0.10	0.02	0.11
17	Phenolic	mg/lit.	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.02)	N.D.(MDL:0.02)	N.D.(MDL:0.02)
18	Residual	mg/lit.	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

### 3) Sample 3

				Locati	on, Date of Sampl	e collected & Mor	nitoring Results	
S. No.	Parameters	Unit	ISGEC SEZ II	C Pumping Station	M/s. Shiva Pharma	Infront of sajju implex chamber leakage	Near M/s. OPaL Boundary	Front of M/s. Indofil Drain Water
			20/10/16	20/11/16	5/12/16	25/01/17	20/02/17	9/03/17
1	pH @ 25 ° C	Unit	8.22	7.21	7.51	7.24	7.65	7.40
2	Colour [Hazen	Hazen	20	10	15	20	20	200
3	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	N.A
4	Odour	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
5	Turbidity(NTU)	NTU	3	N.D.	N.D	N.D	N.D	2
6	Temperature	0C	29	28	28	28	29	29
7	Total	mg/lit.	232	3052	2952	3184	776	2420
8	Total Alkalinity	mg/lit.	110	260	230	320	330	350
9	Chloride (as	mg/lit.	44	1329	1507	753	487	951
10	Sulphate (as	mg/lit.	94	855	295	1557	57	375
11	Nitrate (as	mg/lit.	0.46	7.95	20.70	<0.2	1.76	3.68
12	Calcium (as	mg/lit.	18.44	80.16	86.57	60.12	26.45	53.71
13	Magnesium	mg/lit.	110	17	30	61	33	18
14	Fluoride (as F)	mg/lit.	0.75	0.59	0.68	0.82	0.59	0.78
15	Iron (as Fe)	mg/lit.	0.29	0.24	0.21	0.20	0.09	0.17
16	Zinc (as Zn)	mg/lit.	0.03	0.09	0.002	0.09	0.11	0.16
17	Phenolic	mg/lit.	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.02)	N.D.(MDL:0.02)	N.D.(MDL:0.02)
18	Residual	mg/lit.	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

#### Marine Water Characteristic

### 1) Sample 1 (During High tide)

S.	Davametera	Unit		Date	of Sample collecte	ed & Monitoring Re	esults	
No.	Parameters	Unit	18/10/16	20/11/16	27/12/16	27/01/17	21/02/17	27/03/17
1	pH @ 25 ° C		7.42	7.66	7.56	7.70	7.64	7.49
2	Temperature	°C	29	28	28	28	29	29
3	Turbidity(NTU)	Pt-CO	33	2.8	3.2	2.2	2.6	2.5
4	Total Suspended Solids	mg/L	44	118	107	186	194	170
5	Biochemical Oxygen		23	113	107	115	91	114
6	Ammonical Nitrogen	-	N.D.(MDL:0.01)	N.D.(MDL:0.01)	N.D.(MDL:0.01)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)
7	Salinity (ppt)	mg/L	20.4	26.8	18.7	35	34.5	31.1
8	Dissolved Oxygen	mg/L	3.2	3	3.3	3.1	3.3	3.3
9	Total Nitrogen	mg/L	0.78	0.44	0.37	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)
10	Dissolved Phosphate	mg/L	0.59	0.35	0.59	N.D.(MDL: 1)	N.D.(MDL: 1)	N.D.(MDL: 1)
11	Nitrate	mg/L	2.18	1.92	1.61	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)
12	Nitrite	mg/L	0.08	0.12	0.10	0.02	0.03	0.04
13	Phenol	mg/L	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.02)	N.D.(MDL:0.02)	N.D.(MDL:0.02)
14	Petroleum	mg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

### 2) Sample 2 (During low tide)

S.	Parameters	Unit	Date of Sample o	ollected & Monitori	ng Results			
No.	Parameters	Unit	13/07/16	24/11/16	27/12/16	27/01/17	21/02/17	27/03/17
1	pH @ 25 ° C		7.26	7.63	7.65	7.82	7.52	7.66
2	Temperature	°C	29	28	28	28	29	29
3	Turbidity(NTU)	Pt-	40	2	2.6	1.9	2.1	2.3
4	Total Suspended Solids	mg/L	20	104	95	157	150	137
5	Biochemical Oxygen		18	223	232	100	90	104
6	Ammonical Nitrogen	-	N.D.(MDL:0.01)	N.D.(MDL:0.01)	N.D.(MDL:0.01)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)
7	Salinity (ppt)	mg/L	17.7	28.6	22.3	33.3	32.8	33.5
8	Dissolved Oxygen	mg/L	3.5	3.2	3	3.4	3.5	3.2
9	Total Nitrogen	mg/L	3.33	0.35	0.22	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)
10	Dissolved Phosphate	mg/L	0.47	0.47	0.71	N.D.(MDL: 1)	N.D.(MDL: 1)	N.D.(MDL: 1)
11	Nitrate	mg/L	1.23	1.53	1.00	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)
12	Nitrite	mg/L	0.13	0.07	0.08	0.01	0.04	0.06
13	Phenol	mg/L	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.02)	N.D.(MDL:0.02)	N.D.(MDL:0.02)
14	Petroleum	mg/L	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

#### Annexure 4: Ground Water Characteristic

### 1) <u>Sample 1</u>

				Location	, Date of Sample co	llected & Monitoring	Results	
S. No.	Parameters	Unit	Jageshwar Village	Lakhigam Village	Ambetha Village	Lakhigam Village	Ambetha Village	Suva Village
			3/10/16	08/11/16	9/12/16	11/01/17	17/02/17	22/03/17
1	pH @ 25 ° C		7.68	7.96	7.57	8.26	7.69	8.16
2	Colour [Hazen	оС	10	20	5	5	5	5
3	Taste	Pt-CO	N.A	N.A	N.A	N.A	N.A	N.A
4	Odour	mg/L	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
5	Turbidity(NTU)		N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)
6	Temperature	-	29	28	28	28	29	29
7	Total Dissolved	mg/L	176	5096	2096	5320	2452	2276
8	Total Alkalinity	mg/L	100	920	750	1220	760	690
9	Chloride (as Cl)	mg/L	50	3401	1008	1361	978	951
10	Sulphate (as	mg/L	11	847	202	1938	388	304
11	Nitrate (as NO3)	mg/L	N.D.(MDL:0.06)	33.73	71.91	<0.2	43.09	66.53
12	Calcium (as Ca)	mg/L	23.25	16.03	12.83	66.53	16.03	33.67
13	Magnesium (as	mg/L	15	34	58	88	56	52
14	Fluoride (as F)	mg/L	1.52	1.06	1.52	1.74	1.58	0.74
15	Iron (as Fe)	mg/L	0.06	0.09	0.0039	0.09	0.15	0.11
16	Zinc (as Zn)	NTU	0.08	0.10	0.0031	0.10	0.09	0.08
17	Phenolic	mg/L	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.02)	N.D.(MDL:0.02)
18	Residual Chlorine	mg/L	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.1)	N.D.(MDL:0.1)

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

## 2) <u>Sample 2</u>

				Location	, Date of Sample co	llected & Monitoring	Results	
S. No.	Parameters	Unit	Luvara Village	Dahej Village	Luvara Village	Dahej Village	Jageshwar Village	Lakhigam Village
			3/10/2016	08/11/16	9/12/16	11/01/17	17/02/17	22/03/17
1	pH @ 25 ° C		8.10	7.60	7.26	8.18	7.49	8.03
2	Colour [Hazen	оС	10	10	5	10	5	5
3	Taste	Pt-CO	N.A	N.A	N.A	N.A	N.A	N.A
4	Odour	mg/L	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
5	Turbidity(NTU)		N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)
6	Temperature	-	29	28	28	28	29	29
7	Total Dissolved	mg/L	128	6392	2560	3748	3504	4936
8	Total Alkalinity	mg/L	80	730	1150	980	1210	1050
9	Chloride (as Cl)	mg/L	44	3279	1241	1446	1659	1600
10	Sulphate	mg/L	7	644	240	1812	362	461
11	Nitrate (as NO3)	mg/L	N.D.(MDL:0.06)	18.40	62.87	<0.2	45.85	61.72
12	Calcium (as Ca)	mg/L	20.04	44.09	54.51	36.07	71.34	39.28
13	Magnesium (as	mg/L	27	70	37	83	69	61
14	Fluoride (as F)	mg/L	1.39	0.54	0.89	1.45	1.41	0.14
15	Iron (as Fe)	mg/L	0.12	0.11	0.056	0.15	0.14	0.12
16	Zinc (as Zn)	NTU	0.09	0.08	0.043	0.11	0.13	0.14
17	Phenolic		N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.02)	N.D.(MDL:0.02)	N.D.(MDL:0.02)
18	Residual Chlorine		N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

## 3) <u>Sample 3</u>

	Parameters		Location, Date of Sample collected & Monitoring Results							
S. No.		Unit	Ambetha Village	Suva Village	Jageshwar Village	Suva Village	Luvara Village	Dahej Village		
			3/10/16	03/08/16	9/12/16	11/01/17	17/02/17	22/03/17		
1	pH @ 25 ° C		7.74	8.18	7.54	8.12	7.23	8.14		
2	Colour [Hazen	оС	5	10	5	5	5	5		
3	Taste	Pt-CO	N.A	N.A	N.A	N.A	N.A	N.A		
4	Odour	mg/L	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable		
5	Turbidity(NTU)		N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)		
6	Temperature	-	29	28	28	28	29	29		
7	Total Dissolved	mg/L	3144	4532	3804	5428	2428	5108		
8	Total Alkalinity	mg/L	640	850	1370	1150	980	850		
9	Chloride (as Cl)	mg/L	1285	2304	1728	1574	1064	2076		
10	Sulphate (as	mg/L	210	685	340	857	369	541		
11	Nitrate (as NO3)	mg/L	40.17	20.78	69.54	<0.2	52.52	47.15		
12	Calcium (as Ca)	mg/L	36.07	20.04	80.16	80.16	78.56	71.34		
13	Magnesium (as	mg/L	85	36	73	68	47	37		
14	Fluoride (as F)	mg/L	1.52	1.16	1.23	1.53	0.76	1.27		
15	Iron (as Fe)	mg/L	0.13	0.10	0.0052	0.10	0.44	0.17		
16	Zinc (as Zn)	NTU	0.06	0.09	0.0021	0.09	0.12	0.01		
17	Phenolic	mg/L	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.001)	N.D.(MDL:0.02)	N.D.(MDL:0.02)	N.D.(MDL:0.02)		
18	Residual Chlorine	mg/L	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.2)	N.D.(MDL:0.1)	N.D.(MDL:0.1)	N.D.(MDL:0.1)		

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limi

#### Annexure 5: Waste water Characteristics

#### 1) Sample 1

	Parameters		Location, Date of Sample collected & Monitoring Results							
S. No.		Unit	Unit	Near M/s. Meghmani Cham 2 opp. road	M/s. Ascent Micro Cell	Near. M/s. Fermenta Biotech	D Pumping	C Pumping	Coromandal Inlet	
			14/10/16	7/11/16	14/12/16	23/01/17	2/02/17			
1	рН		6.53	7.60	7.51	7.81	6.82	7.50		
2	Total Dissolve Solid	mg/L	334	2140	4284	2592	14268	2084		
3	Suspended Solids	mg/L	110	31	20	54	84	20		
4	COD	mg/L	145	33	64	325	583	45		
5	BOD (3 days at 27	mg/L	42	10	19	98	176	14		
6	Oil & Grease	mg/L	N.D	N.D.	<1.5	<1	<1	<1		
7	Chloride	mg/L	154	1329	1728	128	2680	432		
8	Sulphate	mg/L	58	116	331	1143	5953	816		
9	Nitrate	mg/L	76.97	25.53	8.89	<0.2	11.65	<0.2		
10	Dissolve Oxygen	mg/L	ND	ND	ND	ND	ND	N.D.(MDL:0.2)		

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

## 2). Sample 2

		Unit	Location, Date of Sample collected & Monitoring Results							
S. No.	Parameters		Unit	Near M/s. meghmani Unichem Outlet	D-Pumping SEZ-2	Near M/s. Sunpharma	M/s. Fermenta Biotech	M/s. Meghmani Organic	Coromandal Final outlet	
			14/10/16	18/11/16	14/12/16	23/01/17	15/02/17	20/03/17		
1	рН		6.78	7.95	7.59	7.79	8.12	6.77		
2	Total Dissolve Solid	mg/L	202	1508	4580	1828	10628	2724		
3	Suspended Solids	mg/L	12	34	16	45	27	14		
4	COD	mg/L	77	138	104	183	296	8		
5	BOD (3 days at 27	mg/L	22	40	31	55	89	2		
6	Oil & Grease	mg/L	N.D.	N.D.	N.D.	<1	<1	<1		
7	Chloride	mg/L	94	22	2038	85	4254	519		
8	Sulphate	mg/L	37	704	321	853	1421	1070		
9	Nitrate	mg/L	44.16	ND	64.48	<0.2	9.58	66.78		
10	Dissolve Oxygen	mg/L	ND	ND	ND	ND	ND	N.D		

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

## 3). Sample 3

		Unit	Location, Date of Sample collected & Monitoring Results							
S. No.	Parameters		Unit	Near M/s. Meghmani Discharge	C Pumping Station	M/s. Torrent Pharma	M/s. Meghmani Organic	M/s. Meghmani Unichem	Fermenta Biotech ETP inlet	
			14/10/16	18/11/16	16/12/16	17/01/17	15/02/17	20/03/17		
1	рН		6.90	7.64	7.53	8.02	6.98	5.39		
2	Total Dissolve Solid	mg/L	194	24908	2256	10296	1412	8224		
3	Suspended Solids	mg/L	24	127	27	24	41	173		
4	COD	mg/L	52	383	108	129	163	7190		
5	BOD (3 days at 27 °C)	mg/L	15	115	32	39	49	2157		
6	Oil & Grease	mg/L	N.D.	N.D.	<1.5	<1	<1	<1		
7	Chloride	mg/L	86	4254	1241	3488	638	1816		
8	Sulphate	mg/L	42	12700	154	2010	118	2533		
9	Nitrate	mg/L	38.02	26.66	11.88	8.39	39.94	7.90		
10	Dissolve Oxygen	mg/L	ND	ND	ND	ND	ND	ND		

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

## 4). Sample 4

	Parameters	Unit	Location, Date of Sample collected & Monitoring Results							
S. No.			D Pumping Station SEZ-2	M/s. Meghmani Uni chem	M/s Sun pharma	M/s.Rockwool	M/s. Rockwool	M/s. Fermenta Biotech ETP outlet		
			14/10/16	28/11/16	17/12/16	17/01/17	16/02/17	20/03/17		
1	pН		7.25	6.85	6.99	7.83	7.62	6.79		
2	Total Dissolve Solid	mg/L	3170	1212	12180	2716	1720	1964		
3	Suspended Solids	mg/L	30	86	17	20	20	37		
4	COD	mg/L	298	154	172	17	21	178		
5	BOD (3 days at 27	mg/L	85	46	52	5	6	53		
6	Oil & Grease	mg/L	N.D.	N.D.	N.D.	<1	<1	<1		
7	Chloride	mg/L	1201	620	7090	1021	936	346		
8	Sulphate	mg/L	1012	98	1075	122	111	733		
9	Nitrate	mg/L	3.83	61.79	<0.1	<0.2	<0.2	49.45		
10	Dissolve Oxygen	mg/L	ND	ND	ND	ND	ND	ND		

<sup>\*</sup> ND: Not Detected, MDL: Minimum Detection Limit

#### Annexure 6: Soil Quality Monitoring Data

## 1) Sample 1

		Unit	Location, Date of Sample collected & Monitoring Results			
S. No.	Parameters		C-Pumping SEZ-1	C-Pumping SEZ-1		
			21.12.2016	22/02/17		
1	Antimoney as Sb	mg/kg	N.D.	N.D.		
2	Arsenic as As	mg/kg	N.D.	N.D.		
3	Beryllium as Be	mg/kg	N.D.	N.D.		
4	Cadmium as Cd	mg/kg	0.043	0.051		
5	Chromium as Cr	mg/kg	0.524	0.428		
6	Copper as Cu	mg/kg	0.231	0.269		
7	Lead as Pb	mg/kg	N.D.	N.D.		
8	Nickel as Ni	mg/kg	0.23	0.33		
9	Selenium as Se	mg/kg	N.D.	N.D.		
10	Silver as Ag	mg/kg	N.D.	N.D.		
11	Titanium as Ti	mg/kg	N.D.	N.D.		
12	Zinc as Zn	mg/kg	0.153	0.168		
13	Mercury as Hg	mg/kg	N.D.	N.D.		
14	Volatile Organic	ppm	N.D.	N.D.		
15	Semi volatile organic compound (SVOCs)	ppm	N.D.	N.D.		
16	Inclusive of polynustear Aromatic Hydrocarbon	Ppb	N.D.	N.D.		
17	Total Polychlorinated	Ppb	N.D.	N.D.		
18	Total Petroleum	Ppb	N.D.	N.D.		

<sup>\*</sup> ND: Not Detected