



o/c

Ref: AMPTPL/2019/115

Date: 27.05.2019

To

Additional Chief Conservator of Forests (C),

Ministry of Environment, Forest and Climate Change,
Regional Office (SZ), Kendriya Sadan,
4th Floor, E&F Wings, 17th Main Road,
Koramangala II Block, Bangalore-560034 (Karnataka)
rosz.bng-mef@nic.in

Dear Sir,

Sub : Half yearly Compliance report of Environment and CRZ clearance for modernization and operation of Berth – 07 in M/s Mormugao Port Trust for the period of October 2018 to March 2019 – Reg.

Ref : Environment and CRZ clearance for modernization of Berth No. – 07 for coal handling granted to M/s Mormugao Port Trust vide letter dated 30th December 2013 bearing F. No. 10-39/2 009-IA.III.

Adani Mormugao Port Terminal Private Limited is concessionaire of M/s Mormugao Port Trust for Berth No. – 7. Please find enclosed herewith the compliance report to the conditions stipulated in the cited reference for the Half Yearly period **October 2018 to March 2019** in soft copy for your kind reference.

Thanking You

Yours Faithfully,

For **M/s Adani Mormugao Port Terminal Private Limited**


Authorized Signatory

Encl: CD of Compliance Report


Copy to:


1. **The Director (Monitoring-IA-III Division),** Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh, New Delhi – 110003.
2. **The Zonal Officer,** Central Pollution Control Board, 1st & 2nd Floor, Nisaraga Bhawan, A Block, Thimmaiah Main Road, 7th D Cross, Shivanagar, opposite Pushpanjali theatre, Bengaluru – 560010
3. **The Member Secretary,** Goa State Pollution Control Board, Nr. Pilerne Industrial Estate, Opp. Saligao Seminary, Saligao – Bardez, Goa – 403511
4. **The Member Secretary,** Goa Coastal Zone Management Authority (GCZMA) 1st Floor, Pt. Deendayal Upadhyay Bhavan, Behind Pundalik Devasthan, Parvorim.
5. **The Chairman,** Mormugao Port Trust, Administrative Office, Headland Sada, Mormugao, Goa – 403804.

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DESPATCHER
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Ministry of Environment, Forests & Climate Change
केन्द्रीय कार्यालय, दक्षिण घटक
Regional Office, Southern Zone
केन्द्रीय सदन, चौथा तल, कोरमंगला
Kendriya Sadan, 4th Floor, Koramangala
बैंगलूरु/Bengaluru-560 034


	Adani Murmugao Port Terminal Pvt.Ltd.	From : October 2018 to March 2019
Compliance to the conditions stipulated in Environment and CRZ clearance.		


Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa		
Sr. No.	Conditions	Compliance
6	Specific Conditions	
i	"Consent for Establishment" shall be obtained from Goa 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.	Complied, Copy of Consent for Establishment (CTE) submitted as annexure in six monthly compliance report dated 25 th November, 2014. All construction works completed and terminal is in operation with valid Consent from GSPCB (No.5/356/10-PCB/CI-4314, dated 06/07/2018 valid up to 31/01/2020)
ii	The project proponent shall provide lining for collection of run off from coal stockyard and the leachate shall be treated before disposal.	Complied, Runoff from Coal Stock Yard is being collected in RCC dump pond provided with proper lining. Settled water from dump pond is being reused for dust suppression and settled coal solid particles are sent back to coal stock piles.
iii	The project proponent shall provide dry fog and sprinkling systems for effective dust suppression.	Complied For effective dust suppression following measures are provided: <ul style="list-style-type: none"> • 224 Nos. of dry fog dust suppression system have been provided in conveyor system and at all transfer points. • 43 Nos. Automatic Water Sprinklers have been provided at coal stock yard for dust suppression. • 02 Nos. Mist Canon provided. (one is mobile canon and other one tyre mounted) 
iv	Entire transportation of coal shall be in closed conveyor.	Complied, The coal is being transported through covered conveyor from jetty to silo/ stock yard. AMPTPL has provided 2700 meters long covered conveyor system from jetty to silo including 11 closed Transfer Points provided with Dry Fog Dust Suppression (DFDS) nozzles.


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Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa		
Sr. No.	Conditions	Compliance
v	There shall be no washing of conveyor belt	Complied No washing of Conveyor belt is done.
vi	The project proponent shall provide wind screen min 15 m height fabric HDPE all along the periphery. The height shall be designed taking into account the wind velocity modelling etc. Also explore creepers in consultation with forest department.	Complied Wind screen of MS structure along with HDPE fabric/ perforated sheet of 15 metres height has been provided along the coal stacking yard facility taking into account the wind velocity. 
vii	Coal shall be kept under moist conditions using water sprinklers. Transportation shall be in closed conveyors with water spray.	Complied The coal is being stored under the moist condition. Jet Sprinklers are provided for the same. Coal is being transported through covered conveyors with inbuilt dry fog dust suppression system.
viii	All the conditions stipulated by Goa Coastal Zone Management Authority (GCZMA) vide letter No. GCZMA/S/13-14/09/360 dated 07.06.2013, shall be complied with.	Complied.
ix	Periodical study on shore line changes shall be conducted and mitigation carried out if necessary. The details shall be submitted along with the six monthly monitoring reports.	Not applicable This is an old berth within the existing premises of MPT and only modernization activity has been done.
x	Oil spills if any shall be properly collected and disposed as per the Rules. Proper Oil Contingency Management Plan shall be put in place.	Complied., AMPTPL is handling dry cargo only such as coal. However, the AMPTPL is abiding by the Oil Spill Contingency Management Plan prepared by M/s MPT. (No such incident occurred till date)

	Adani Murmugao Port Terminal Pvt.Ltd.	From : October 2018 to March 2019
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Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa		
Sr. No.	Conditions	Compliance
xi	All the conditions stipulated in the earlier Clearances including the recommendations of Environment Management Plan, Disaster Management Plan shall be strictly complied with	Noted and being complied. Compliance of earlier clearance is being submitted by M/s MPT. All recommendations made in the Environment Management Plan as contained in the Environment Impact Assessment of the project are covered and effectively implemented.
xii	Cargo shall be unloaded directly into hopper from the ship and transported to the stack yards through closed conveyor system only. Inbuilt dust suppression systems shall be provided at hoppers and all the transfer points / storage yards. Cargo shall not be unloaded directly onto the Berth. Water meters shall be provided at different locations to record the consumption of water used for dust suppression and daily log shall be maintained.	Complied, Coal is being unloaded directly into hopper from the ship and transported to the stack yards through closed conveyor system. Inbuilt dust suppression system has been provided in hoppers, transfer towers and storage yards to avoid fugitive emissions. Coal cargo is not being unloaded directly onto the berth. AMPTPL has installed water meters and log sheet is being maintained to record water consumption in dust suppression system. 

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Sr. No.	Conditions	Compliance
xiii	At least 15 m width of green belt along the periphery and 15 m width along the stockyard shall be undertaken including plantation of mangroves in consultation with Forest Department.	<p>Complied/Being Complied</p> <p>Green belt with suitable native species has been developed, along the periphery and coal stock yard. Till date about 14935 plants have been planted in port premises and survival rate is well maintained. There are no mangroves in the vicinity of Berth No. 7.</p> 
xiv	The dredge material shall be reused for low level rising wherever possible and excess shall be dumped into sea at the designated dumping areas identified based on mathematical model studies.	<p>Complied,</p> <p>Construction of the project already completed and currently terminal is in operation.</p>
xv	To prevent discharge of sewage and other liquid wastes including ballast into marine environment, adequate system for collection, treatment and disposal of liquid wastes must be provided.	<p>Complied</p> <p>There is no discharge of sewage and other liquid waste into marine environment. The domestic sewage is being collected in septic tanks provided within the premises of AMPTPL and sent to Sewage Treatment Plant of PWD at Baina for further treatment. Ballast water is not being taken by AMPTPL.</p>
xvi	Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that the untreated effluents and solid wastes are not discharged into the water or on the beach; and no effluent or solid wastes shall be discharged on the beach.	<p>Complied,</p> <p>The domestic sewage is being collected in septic tanks provided within the premises of AMPTPL and sent to Sewage Treatment Plant of PWD at Baina for further treatment. Solid waste generated is disposed to local authorities. No effluent or solid wastes is being discharged into the water or on the beach.</p>

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Compliance to the conditions stipulated in Environment and CRZ clearance.		


Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa					
Sr. No.	Conditions	Compliance			
xvii	The quality of treated effluents, solid wastes, emissions and noise levels and the like, from project area must conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board under the Environment (Protection) Act 1986	Complied Regular Environmental Monitoring is carried out, to assess the quality of treated effluents from STP, Ambient Air Quality, Noise level, DG set through NABL accredited laboratory. Results for all the monitoring parameters are within the prescribed limit. Summary of the monitoring report for the period Oct. 2018 to March 2019 is enclosed as Annexure -1			
xviii	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.	Complied Compliance submitted along with the Half Yearly compliance report of April 2018 to September 2018.			
xix	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.	Complied, Separate budget for implementation of Environment Management Plan is in plan and it is not diverted for any other purpose. Budget allocated for implementation of EMP for FY 19-20 is 39 Lakhs. A brief summary of environmental expenditure during the compliance period is given below.			
		S. No	Description of Work	Dept	Budget Allocated (Rs.)
		1	Environment Quality Monitoring (Pollucon)	Env.	18.00
		3	Broad Band for CAAQMS connectivity.	Env.	0.80
		4	O & M of CAAQMS	Env.	3.25
		5	Pollution Awareness Programme	Env.	1.5
		7	Green belt Maintenance & Development	Env.	12.00
		8	Electricity charges of CAAQMS	Env.	2.16
		9	Environmental related training	Env.	1.5
		10	Environmental day celebrations	Env.	0.25
xx	The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive	Complied AMPTPL is having well structured Environment Management Cell staffed with qualified manpower well supported by team at Head Office in Ahmedabad for effective implementation of the Environmental Management Plan under the supervision of a Senior Executive.			

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Sr. No.	Conditions	Compliance
7. General Conditions		
i	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	Compiled, There was no digging activity during the compliance period. Construction activity is completed and project is in operational phase.
ii	Full support shall be extended to the officers of this Ministry/Regional Office at Bangalore by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Complied. Full support is being extended to the officers of Ministry/Regional Office, as well as officers of Central and State Pollution Control Board during their visit. Dr. Sridharan, Scientist 'G' of MoEF&CC Bengaluru had visited our terminal on 14.02.2019 during the Compliance period. Full support has been extended to him during the visit. The same shall be continued in future as well.
iii	A six-monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bangalore regarding the implementation of the stipulated conditions.	Complied Six monthly EC & CRZ clearance Compliance reports of the stipulated conditions are regularly submitted to Regional Office of Ministry at Bengaluru, and other authorities (CPCB, GPCB MoEF, MPT etc.). Last Compliance report for the period April 2018-September 2018 was submitted vide letter no. AMPPTL/2018/125 dated 14.11.2018.
iv	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	Noted for Compliance.
v	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	Noted.
vi	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.	Noted. There is no change in project profile or implementation agency.

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Sr. No.	Conditions	Compliance
vii	The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Complied Financial Closure Date: 14 th May, 2010 Concession agreement date with MPT: 22 nd September, 2009
viii	A copy of the clearance letter shall be marked to concern Panchayat/local NGO, if any, from whom any suggestion/representation have been made, received while processing the proposal.	Complied Complied by Murmugao Port Trust (MPT).
ix	Goa State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office/Tehsildar's office for 30 days.	Noted. This condition does not pertain to project proponent. However, it is learnt that Goa State Pollution Control Board has complied with the same.
8.	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 1994, including the amendments and rules made thereafter.	Noted for Compliance.
9.	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.	Complied All applicable clearances from the concerned statutory authorities have been obtained.

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Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa		
Sr. No.	Conditions	Compliance
10.	The project proponent shall 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 Environmental and CRZ Clearance and copies of clearance letters are available with the Goa State 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 Bangalore.	Complied MPT has given advertisement on 11 th January, 2014 in the newspapers mentioned below. 1) Sunaparant 2) Times of India, Goa. Copy of the same has already been submitted to RO-MoEF&CC (Bangalore).
11.	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.	Noted.
12.	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	Complied Copy of six monthly EC&CRZ compliance report is being regularly uploaded by AMPTPL on company website at https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal
13.	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.	Noted.
14.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisaad/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 proponent.	Complied The same has been Complied by Murmugao Port Trust.

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Half yearly Compliance report for Environment and CRZ Clearance for the modernization of Berth No. 7 for coal handling at Murmugao Port, Goa		
Sr. No.	Conditions	Compliance
15.	The proponent shall upload the status of compliance of the stipulated Clearance 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>AMPTPL is regularly uploading the status of compliance including results of monitored data in the company website. The same can be viewed at https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal</p> <p>Six monthly compliance report is regularly submitted to Regional office of MoEF&CC at Bangalore, CPCB Zonal office, SPCB and other authorities. Last compliance report for the period April 2018 - September 2018 was submitted vide letter no. AMPPTL/2018/125 dated 14.11.2018.</p>
16.	The environmental statement for each financial year ending 31 st 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 by e-mail.	<p>Complied</p> <p>Environment Statement in Form V is submitted to Goa State Pollution Control Board for each financial year. Environment Statement for the year FY 17-18 has been submitted on 24.9.2018 vide letter no AMPPTL/2018/100 and has also been uploaded on company website.</p> <p>Copy of the same is available on company website at https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal</p>

"ENVIRONMENTAL MONITORING REPORT"

FOR



**ADANI MURMUGAO PORT TERMINAL PVT. LTD. (AMPTPL),
GROUND FLOOR, PORT USERS COMPLEX, NEAR STATE BANK OF INDIA,
MORMUGAO HARBOUR, GOA 403802 INDIA – TEL 0832 2594253**

OCTOBER-2018 TO MARCH-2019

PREPARED BY:



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TC-5945



ISO 9001:2015



ISO 14001:2015



OHSAS 18001:2007

"ENVIRONMENT MONITORING REPORT"

FOR



**ADANI MURMUGAO PORT TERMINAL PVT. LTD. (AMPTPL),
GROUND FLOOR, PORT USERS COMPLEX, NEAR STATE BANK OF INDIA,
MORMUGAO HARBOUR, GOA 403802 INDIA – TEL 0832 2594253**

For and on behalf of Pollucon Laboratories Pvt. Ltd., Surat

Approved by : Dr. Arun Bajpai

Signed

: 



Designation : Lab Manager (Q)

This report has been prepared by Pollucon laboratories Pvt. Ltd. with all reasonable skills, care and diligence, incorporating our General Terms and Conditions of Business and taking account of the resources devoted, flow chart, diagram etc. is provided by the client itself.

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CHAPTER – 1
AMBIENT AIR QUALITY MONITORING
MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

Results of AAQM for Sada Village [OCTOBER-2018 TO MARCH-2019]

Sr. No.	Date of sampling	Particulate Matter (PM ₁₀) µg/m ³	Particulate Matter (PM _{2.5}) µg/m ³	Lead as Pb µg/m ³	Benzo (a) Pyrene (BaP)-particulate phase only ng/m ³	Arsenic as As ng/m ³	Nickel as Ni ng/m ³	Carbon Monoxide as CO mg/m ³	Benzene as C ₆ H ₆ µg/m ³	Ammonia (NH ₃) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Oxides of Nitrogen (NO ₂) µg/m ³	Ozone (O ₃) µg/m ³
1	01/10/2018	55.55	24.68	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	18.26	8.55	22.69	21.61
2	04/10/2018	48.66	20.66	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	22.45	16.36	32.52	18.51
3	08/10/2018	59.30	36.46	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	30.27	12.33	21.34	26.37
4	11/10/2018	40.54	22.65	BDL*	BDL*	BDL*	BDL*	0.17	BDL*	16.58	15.01	25.57	23.42
5	15/10/2018	75.30	39.16	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	33.55	10.20	33.56	25.86
6	18/10/2018	62.36	28.33	BDL*	BDL*	BDL*	BDL*	0.48	BDL*	27.57	13.26	23.64	20.49
7	22/10/2018	45.36	17.55	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	14.34	6.30	19.36	15.63
8	25/10/2018	70.22	31.57	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	21.71	9.57	16.57	22.71
9	29/10/2018	52.36	26.09	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	26.38	11.27	29.67	17.50
10	01/11/2018	68.13	28.79	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	39.50	11.62	24.47	16.59
11	05/11/2018	58.64	25.68	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	19.52	8.54	29.30	19.51
12	08/11/2018	45.68	17.88	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	15.33	17.59	22.65	24.87
13	12/11/2018	39.57	21.20	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	29.63	12.52	35.62	18.33
14	15/11/2018	60.23	34.22	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	12.40	14.35	19.62	17.53
15	19/11/2018	54.30	22.03	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	24.56	10.50	27.65	25.61
16	22/11/2018	48.65	27.01	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	32.68	13.50	20.44	14.57
17	26/11/2018	71.55	23.69	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	27.53	6.52	21.64	23.66
18	29/11/2018	66.72	29.54	BDL*	BDL*	BDL*	BDL*	0.42	BDL*	35.49	15.32	18.64	20.40
19	03/12/2018	64.60	30.82	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	31.52	9.19	18.53	17.69
20	06/12/2018	43.60	21.49	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	23.43	14.56	21.54	24.58
21	10/12/2018	54.37	33.77	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	13.43	7.63	26.56	16.54
22	13/12/2018	62.58	27.50	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	28.76	13.52	30.85	21.57
23	17/12/2018	40.25	17.42	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	22.88	8.65	16.50	26.57
24	20/12/2018	66.77	25.43	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	30.24	11.51	19.27	18.63
25	24/12/2018	46.34	15.64	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	16.42	10.29	25.62	23.45
26	27/12/2018	58.31	19.25	BDL*	BDL*	BDL*	BDL*	0.50	BDL*	10.30	12.39	35.42	25.50
27	31/12/2018	49.41	28.50	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	24.36	15.69	24.59	19.21
28	03/01/2019	52.34	22.48	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	13.66	12.45	22.50	27.67
29	07/01/2019	66.24	37.50	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	30.28	15.67	34.55	26.73
30	10/01/2019	56.86	28.38	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	24.26	10.41	27.59	18.36
31	14/01/2019	72.48	23.44	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	19.38	8.42	32.82	14.38
32	17/01/2019	46.30	19.25	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	15.24	13.67	25.40	19.83
33	21/01/2019	68.24	31.32	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	29.44	9.81	15.42	21.64
34	24/01/2019	47.16	20.70	BDL*	BDL*	BDL*	BDL*	0.49	BDL*	17.34	6.29	12.36	25.68

35	28/01/2019	76.28	35.39	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	35.37	11.67	20.73	20.54
36	31/01/2019	54.04	25.39	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	12.41	16.86	35.31	15.30
37	04/02/2019	56.48	29.41	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	30.50	11.50	19.37	20.34
38	07/02/2019	96.76	54.55	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	18.60	8.58	23.59	16.32
39	11/02/2019	75.31	40.36	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	28.69	14.36	33.48	25.63
40	14/02/2019	84.02	38.25	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	25.65	10.33	22.40	18.50
41	18/02/2019	78.20	45.34	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	31.28	6.41	15.30	21.24
42	21/02/2019	64.86	35.47	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	36.55	12.56	20.32	23.05
43	25/02/2019	52.35	22.69	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	10.56	9.35	24.59	19.75
44	28/02/2019	61.26	25.64	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	15.37	7.52	18.51	22.83
45	04/03/2019	64.50	36.17	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	18.60	10.48	20.50	16.50
46	07/03/2019	55.60	32.23	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	13.50	6.42	17.60	20.70
47	11/03/2019	68.30	26.47	BDL*	BDL*	BDL*	BDL*	0.27	BDL*	21.50	8.50	31.40	19.50
48	14/03/2019	59.30	35.76	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	26.40	16.31	28.40	23.40
49	18/03/2019	48.60	20.45	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	10.50	11.20	32.40	25.20
50	21/03/2019	52.40	28.38	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	34.50	13.38	22.60	17.60
51	25/03/2019	74.10	31.49	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	19.30	16.49	27.50	15.30
52	28/03/2019	50.60	22.40	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	23.50	9.52	16.30	26.20

BDL*: - Below Detection Limit: Ozone as O₃ (µg/m³): 10

BDL*: - Below Detection Limit - Lead as Pb (µg/m³): 0.5

BDL*: - Below Detection Limit - Carbon Monoxide as CO (mg/m³): 0.01

BDL*: - Below Detection Limit - Ammonia NH₃ (µg/m³): 10

BDL*: - Below Detection Limit - Benzene as C₆H₆ (µg/m³): 2

BDL*: - Below Detection Limit - Benzo (a) Pyrene (BaP) - Particulate Phase only (ng/m³): 0.5

BDL*: - Below Detection Limit - Arsenic as As (ng/m³): 2

BDL*: - Below Detection Limit - Nickel as Ni (ng/m³): 10

CHAPTER – 2

SEA WATER AND SEA SEDIMENTS MONITORING MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

Results of Sea water Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Near Jetty					
GPS Location			15° 24.748'N, 73° 47.938'E					
Date of sampling			12/10/2018		15/11/2018		17/12/2018	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	8.32	8.14	8.26	8.2	8.32	8.28
2	Temperature	°C	30.5	30.2	30.6	30.1	30.1	29.9
3	Total Suspended Solids	mg/L	306	246	279	226	206	184
4	BOD (3 Days @ 27 °C)	mg/L	6	3	4	2	5	BDL*
5	Dissolved Oxygen	mg/L	6.8	6.2	5.9	5.4	6.1	5.8
6	Salinity	ppt	34.2	34	34.8	34.4	35.2	34.9
7	Oil & Grease	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
8	Nitrate as NO ₃	μmol/L	13.4	10.6	8.7	6.53	6.4	5.8
9	Nitrite as NO ₂	μmol/L	3.5	2.6	1.96	1.45	1.18	0.94
10	Ammonical Nitrogen as NH ₃	μmol/L	3	2.8	2.55	1.91	1.89	1.31
11	Phosphates as PO ₄	μmol/L	2.25	1.9	2.46	2.29	2.13	1.97
12	Total Nitrogen	μmol/L	19.9	16	13.21	9.89	9.47	8.05
13	Petroleum Hydrocarbon	μg/L	18	10	14	11	BDL*	BDL*
14	Total Dissolved Solids	mg/L	34943	34706	35102	34652	35930	35680
15	COD	mg/L	22	15	18	12	24	BDL*
17	Flora and Fauna							
17.1	Primary Productivity	mgC/L/day	2.25	1.57	2.39	1.71	3.6	2.7
18	Phytoplankton							
18.1	Chlorophyll	mg/m ³	2.3	1.26	2.69	1.47	2.05	1.99
18.2	Phaeophytin	mg/m ³	1.62	0.99	1.9	1.16	1.35	1.06
18.3	Cell Count	No _x 10 ³ /L	276	192	252	164	180	136
18.4	Name of Group Number and name of group species of each group	--	Pleurosigma Navicula Nitzschia Cheatoceros	Ceratium Navicula Nitzschia --	Coscinodiscus sp. Cyclotella sp. Rhizosolenia sp. Skeletonema sp. Navicula sp. Ceratium sp.	Nitzschia sp. Cheatoceros sp. Ceratium sp. Rhizosolenia sp. -- --	Cheatoceros sp. Coscinodiscus sp. Fragillaria sp. Lyngbya sp.	Cheatoceros sp. Navicula sp. Thalassiosira sp. --
19	Zooplanktons							
19.1	Abundance (Population)	Nox10 ³ /100m ³	61		78		67	
19.2	Name of Group Number and name of group species of each group	--	Copepods Crustaceans Decapods		Bivalves Crustaceans Polychate larvae		Bivalves Crustaceans Barnacles	

			Gastropods	Sugitta sp. Copepods Mysids	Naupliuslarve Mysids
19.3	Total Biomass	mL/100 m ³	10.5	9.45	7.8
20	Microbiological Parameters				
20.1	Total Bacterial Count	CFU/mL	2060	1860	2140
20.2	Total Coliform	/mL	Absent	Absent	Absent
20.3	E.coli	/mL	Absent	Absent	Absent
20.4	Enterococcus species	/mL	Absent	Absent	Absent
20.5	Salmonella species	/mL	Absent	Absent	Absent
20.6	Shigella species	/mL	Absent	Absent	Absent
20.7	Vibrio species	/mL	Absent	Absent	Absent

BDL *: Below Detection Limit

Results of Sea water Monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Near Jetty					
GPS Location			15° 24.748' N, 73° 47.938' E					
Date of sampling			15/01/2019		14/02/2019		14/03/2019	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	8.25	8.17	8.21	8.13	8.14	8.09
2	Temperature	°C	29.9	29.7	30	29.8	30.1	29.8
3	Total Suspended Solids	mg/L	228	246	224	295	238	274
4	BOD (3 Days @ 27 °C)	mg/L	6	BDL*	6.4	BDL*	3.8	BDL*
5	Dissolved Oxygen	mg/L	5.1	5.9	6	6.3	5.9	6.2
6	Salinity	ppt	35.6	35.1	35.2	35.6	35.4	35.8
7	Oil & Grease	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
8	Nitrate as NO ₃	µmol/L	3.72	2.03	3.51	2.84	1.59	1.16
9	Nitrite as NO ₂	µmol/L	1.29	0.82	1.13	1.01	1.06	0.78
10	Ammonical Nitrogen as NH ₃	µmol/L	1.75	1.13	1.69	1.08	1.45	1.36
11	Phosphates as PO ₄	µmol/L	2.29	2.07	1.98	1.55	1.65	1.17
12	Total Nitrogen	µmol/L	6.75	3.97	6.33	4.75	4.11	3.3
13	Petroleum Hydrocarbon	µg/L	BDL*	BDL*	13	BDL*	10	BDL*
14	Total Dissolved Solids	mg/L	36348	36184	36418	36780	36684	36933
15	COD	mg/L	21	9	19	7.2	15	6
17	Flora and Fauna							
17.1	Primary Productivity	mgC/L/day	2.93	1.8	3.6	2.47	3.96	2.31
18	Phytoplankton							
18.1	Chlorophyll	mg/m ³	2.4	1.59	3.38	2.12	2.71	1.92
18.2	Phaeophytin	mg/m ³	2.2	0.91	2.14	1.51	1.23	1.46
18.3	Cell Count	No.x 10 ³ /L	246	118	284	102	260	96
18.4	Name of Group Number and name of group species of each group	--	Coscinodiscus sp. Thalassiosira sp. Rhizosolenia sp. Skeletonema sp.	Nitzschia sp. Pleurosigma sp. Navicula sp. --	Rhizosolenia sp. Nitzschia sp. Cheatoceros sp. Coscinodiscus sp.	Thalassiosira sp. Skeletonema sp. Spirulina sp. --	Nitzschia sp. Cheatoceros sp. Thalassiosira sp. Rhizosolenia sp.	Navicula sp. Nitzschia sp. -- --
19	Zooplanktons							
19.1	Abundance (Population)	Nox10 ³ /100m ³	73		82		90	
19.2	Name of Group Number and name of group species of each group	--	Foraminiferans Copepods Fish larve Gastropods		Bivalves Polychaetes Mysids		Gastropods Crustaceans Copepods	
19.3	Total Biomass	mL/100 m ³	8.1		6.75		7.1	
20	Microbiological Parameters							

20.1	Total Bacterial Count	CFU/mL	2160	1920	1900
20.2	Total Coliform	/mL	Absent	Absent	Absent
20.3	E.coli	/mL	Absent	Absent	Absent
20.4	Enterococcus species	/mL	Absent	Absent	Absent
20.5	Salmonella species	/mL	Absent	Absent	Absent
20.6	Shigella species	/mL	Absent	Absent	Absent
20.7	Vibrio species	/mL	Absent	Absent	Absent

BDL*: Below Detection Limit

Results of Sea Sediment Monitoring

Sr. No.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Near Jetty					
GPS Location			N 15° 24.748', E 73° 47.938'					
Date of sampling			12/10/2018	15/11/2018	17/12/2018	15/01/2019	14/02/2019	14/03/2019
1	Organic Matter	%	0.4	0.78	0.46	0.60	0.72	0.53
2	Phosphorus as P	µg/g	690	564	630	710	658	579
3	Texture	--	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy
4	Petroleum Hydrocarbon	µg/g	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
5	Heavy Metals							
5.1	Aluminum as Al	%	5.1	5.4	5.18	4.9	5.4	4.98
5.2	Total Chromium as Cr+3	µg/g	130	248	114	196	214	170
5.3	Manganese as Mn	µg/g	1640	1744	1380	1434	1590	1238
5.4	Iron as Fe	%	4.95	5.1	4.84	4.6	5.2	5.12
5.5	Nickel as Ni	µg/g	43.8	38	26	44	31	20
5.6	Copper as Cu	µg/g	53	32	20	37	42	36
5.7	Zinc as Zn	µg/g	348	260	218	296	312	218
5.8	Lead as Pb	µg/g	2.6	1.8	2.9	2.1	2.78	2.34
5.9	Mercury as Hg	µg/g	BDL*	0.01	0.02	BDL*	BDL*	BDL*
6	Benthic Organisms							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Echinoderms Polychaetes	Crustaceans Bivalves	Gastropods Crustacean	Polychaetes Bivalves	Gastropods Crustaceans	Polychaetes Bivalves Gastropods
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Nematodes Foraminiferans Copepods	Harpacticoids Ostracodes Nematodes	Nematodes Foraminiferans	Foraminiferans	Foraminiferans Nematodes	Nematodes
6.3	Population	no/m ²	559	647	588	735	821	938

BDL*: Below Detection Limit

CHAPTER – 3

STP WATER MONITORING

MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

Results of STP water quality monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Baina Sewerage Plant STP Inlet					
Date of sampling			13/10/2018	16/11/2018	18/12/2018	16/01/2019	15/02/2019	13/03/2019
1	pH	--	6.98	7.06	7.25	7.10	7.18	7.76
2	Total Suspended Solids	mg/L	94	112	98	128	102	118
3	BOD (3 Days @ 27 °C)	mg/L	32	24	36	44	26	30
4	COD	mg/L	140	110	125	138	118	110
5	Oil & Grease	mg/L	1.2	5.8	8.4	12.6	8.4	4.8
6	Residual Free Chlorine	mg/L	< 0.1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

SR. NO.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Baina Sewerage Plant STP Outlet					
Date of sampling			13/10/2018	16/11/2018	18/12/2018	16/01/2019	15/02/2019	13/03/2019
1	pH	--	7.24	7.18	7.45	7.63	7.53	7.83
2	Total Suspended Solids	mg/L	12	16	24	27	19	20
3	BOD (3 Days @ 27 °C)	mg/L	9.2	7	12	19	15	16
4	COD	mg/L	30	25	40	56	63	50
5	Oil & Grease	mg/L	1.6	2.4	3.4	2.8	2.2	2.9
6	Residual Free Chlorine	mg/L	0.8	0.6	0.8	0.6	0.8	0.6

CHAPTER – 4

DUMP POND WATER QUALITY MONITORING MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

Results of Dump Pond Water quality monitoring

SR. NO.	PARAMETERS	UNIT	RESULT			
Sampling Location			Dump Pond-1 Near CT 08		Dump Pond-2 Near Pump House	
Date of sampling			17/12/2018	15/03/2019	17/12/2018	15/03/2019
1	pH	--	8.15	8.35	8.01	8.16
2	Total Dissolved Solids	mg/L	460	496	408	439
3	Total Suspended Solids	mg/L	48	62	34	50
4	Turbidity	NTU	5.4	3.8	7.4	6.2
5	BOD (3 Days @ 27 oC)	mg/L	15	18	20	16
6	Dissolved Oxygen	mg/L	5.6	6.2	5	5.6
7	COD	mg/L	60	64	84	68
8	Salinity	ppt	16	0.15	0.14	0.13
9	Oil & Grease	mg/L	BDL*	BDL*	BDL*	BDL*
10	Total Hardness as CaCO ₃	mg/L	148	164	156	160
11	Fluoride as F	mg/L	0.7	0.85	0.5	0.72
12	Chloride as Cl	mg/L	75	84	70	74
13	Zinc as Zn	mg/L	0.14	0.22	0.21	0.16
14	Cadmium as Cd	mg/L	BDL*	BDL*	BDL*	BDL*
15	Lead as Pb	mg/L	BDL*	BDL*	BDL*	BDL*
16	Mercury as Hg	mg/L	BDL*	BDL*	BDL*	BDL*

BDL*: Below Detection Limit

CHAPTER – 5

DRINKING WATER QUALITY MONITORING

MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

Results of Drinking water quality monitoring

SR. NO.	PARAMETERS	UNIT	RESULT			
Sampling Location		Sub Station Building Canteen		Near AMPTPL Exit Gate		
Date of sampling		18/12/2018	14/03/2019	18/12/2018	14/03/2019	
1	Colour	Hazen	1	1	1	1
2	Turbidity	NTU	0.44	0.36	0.52	0.44
3	Conductivity	µmho/cm	236	268	252	288
4	pH	--	6.98	7.02	7.11	6.91
5	Chloride as Cl	mg/L	48	55	52	65
6	Total Dissolved Solids	mg/L	156	180	172	196
7	Total Hardness as CaCO ₃	mg/L	40	48	74	62
8	Iron as Fe	mg/L	0.056	0.024	0.072	0.033
9	Sulphate as SO ₄	mg/L	16	20	30	24
10	Residual Free Chlorine	mg/L	< 0.2	< 0.2	< 0.2	< 0.2
11	Calcium as Ca	mg/L	12	14	20	20
12	Magnesium as Mg	mg/L	2.4	3.12	5.76	5.28
13	Fluoride as F	mg/L	0.45	0.5	0.25	0.44
14	Nitrate as NO ₃	mg/L	0.82	1.1	0.45	0.75
15	Manganese as Mn	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
16	Copper as Cu	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
17	Cadmium as Cd	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
18	Arsenic as As	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
19	Mercury as Hg	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
20	Lead as Pb	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
21	Zinc as Zn	mg/L	< 0.06	< 0.06	< 0.06	< 0.06
22	Coliform	/100 mL	Absent	Absent	Absent	Absent
23	E-Coli	/100 mL	Absent	Absent	Absent	Absent

BDL*: Below Detection Limit.

Results of Drinking water quality monitoring

Sr. No.	Parameters	Unit	Result			
Sampling Location			Near Workshop Area		Near Amenity Building	
Date of sampling			18/12/2018	14/03/2019	18/12/2018	14/03/2019
1	Colour	Hazen	1	1	1	1
2	Turbidity	NTU	0.44	0.36	0.29	0.4
3	Conductivity	µmho/cm	244	264	244	271
4	pH	--	7.19	6.99	7.01	7.15
5	Chloride as Cl	mg/L	47	58	51	62
6	Total Dissolved Solids	mg/L	164	180	159	188
7	Total Hardness as CaCO3	mg/L	72	68	56	78
8	Iron as Fe	mg/L	0.065	0.033	0.055	0.047
9	Sulphate as SO4	mg/L	10.4	21	14.2	27
10	Residual Free Chlorine	mg/L	< 0.2	< 0.2	0.3	< 0.2
11	Calcium as Ca	mg/L	18	22	14	24
12	Magnesium as Mg	mg/L	6.48	3.12	5.04	4.32
13	Fluoride as F	mg/L	0.45	0.39	0.4	0.46
14	Nitrate as NO3	mg/L	0.98	0.56	1.3	0.68
15	Manganese as Mn	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
16	Copper as Cu	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
17	Cadmium as Cd	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
18	Arsenic as As	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
19	Mercury as Hg	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
20	Lead as Pb	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
21	Zinc as Zn	mg/L	< 0.06	< 0.06	< 0.06	< 0.06
22	Coliform	/100 mL	Absent	Absent	Absent	Absent
23	E-Coli	/100 mL	Absent	Absent	Absent	Absent

BDL*: Below Detection Limit

CHAPTER – 6

SOIL QUALITY MONITORING

MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

Results of Soil quality monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS			
Sampling Location			NEAR CT-1		NEAR ADANI SITE	
Date of sampling			18/12/2018	14/03/2019	18/12/2018	14/03/2019
1	Type	--	Brown	Brown	Brown	Brown
2	Gravel	%	1.5	1.8	1.2	2
3	Coarse Sand	%	2	3.8	2.8	3
4	Medium Sand	%	16	16	15	18
5	Fine Sand	%	22	22	21	24
6	Total Sand	%	40	35	36	37
7	Silt & Clay	%	60	65	64	62
8	pH (1:5)	--	8.58	8.49	8.7	8.4
9	Electricity Conductivity	µmho/cm	1040	750	780	1078
10	Alkali matter	mg/kg	624	580	610	610
11	Cation Exchange Capacity	meq/100 g	10.8	11.2	12.6	11.4
12	Sodium Absorption Ratio	--	12.4	13.8	14.8	12.9
13	Organic Matter	mg/kg	0.42	0.6	0.52	0.52
14	Available Nitrogen	meq/100 g	0.4	0.2	0.28	0.35
15	Available Potassium	mg/kg	20	30	24	15
16	Available Phosphorus	mg/kg	0.3	0.36	0.32	0.24
17	Available Sodium	%	1.65	2	1.7	1.9
18	Permeability	%	0.55	0.6	0.65	0.45

CHAPTER – 7

NOISE LEVEL MONITORING

MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

Results of Day Time Noise level monitoring

October 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		19/10/2018	03/10/2018	06/10/2018	26/10/2018
1	6:00-7:00	47.3	63.8	51.4	60.3
2	7:00-8:00	46.4	48.7	47.8	55.6
3	8:00-9:00	47.5	54.6	53.4	45.8
4	9:00-10:00	60.9	57.9	47.4	59.3
5	10:00-11:00	51.3	61.8	54.4	61.8
6	11:00-12:00	54.8	56.4	62.6	62.4
7	12:00-13:00	56.4	67.8	66.4	54.8
8	13:00-14:00	61.8	66.4	64.8	56.4
9	14:00-15:00	55.9	54.8	54.7	55.2
10	15:00-16:00	68.4	63.9	58.7	53.4
11	16:00-17:00	62.8	56.3	53.6	47.8
12	17:00-18:00	64.8	58.4	62.6	51.4
13	18:00-19:00	52.4	55.6	55.4	55.3
14	19:00-20:00	50.6	52.8	64.8	47.6
15	20:00-21:00	48.6	51.9	66.4	50.4
16	21:00-22:00	52.8	52.6	57.4	53.8
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

October 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		19/10/2018 & 20/10/2018	03/10/2018 & 04/10/2018	06/10/2018 & 07/10/2018	26/10/2018 & 27/10/2018
1	22:00-23:00	55.8	48.6	46.8	55.3
2	23:00-00:00	56.3	47.3	44.8	44.8
3	00:00-01:00	46.4	45.1	47.8	48.4
4	01:00-02:00	48.7	43.8	51.9	47.6
5	02:00-03:00	47.9	47.8	53.4	42.8
6	03:00-04:00	42.6	45.6	44.2	45.4
7	04:00-05:00	51.9	45.3	45.8	43.2
8	05:00-06:00	40.8	43.6	54.4	44.2
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

November 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		23/11/2018	09/11/2018	03/11/2018	20/11/2018
1	6:00-7:00	45.8	62.7	49.2	61.6
2	7:00-8:00	47.9	47.3	46.6	58.7
3	8:00-9:00	49.8	52.7	52.9	44.5
4	9:00-10:00	61.9	56.8	47.8	57.5
5	10:00-11:00	52.6	54.1	53.5	60.3
6	11:00-12:00	55.7	54.4	63.9	61.8
7	12:00-13:00	57.3	66.5	65.8	59.6
8	13:00-14:00	60.1	68.8	62.8	55.3
9	14:00-15:00	54.2	55.5	55.4	53.7
10	15:00-16:00	67.6	64.8	60.8	57.8
11	16:00-17:00	63.7	53.2	52.4	50.6
12	17:00-18:00	62.5	57.6	61.7	54.3
13	18:00-19:00	56.9	51.7	54.8	53.8
14	19:00-20:00	51.9	51.6	62.9	48.3
15	20:00-21:00	50.8	54.9	65.6	47.6
16	21:00-22:00	54.5	50.7	58.9	52.8
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

November 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		23/11/2018 & 24/11/2018	09/11/2018 & 10/11/2018	03/11/2018 & 04/11/2018	20/11/2018 & 21/11/2018
1	22:00-23:00	58.9	47.8	44.9	54.8
2	23:00-00:00	55.8	46.5	45.5	43.1
3	00:00-01:00	47.5	47.6	44.8	45.8
4	01:00-02:00	46.9	44.1	50.6	46.4
5	02:00-03:00	51.2	45.4	52.6	49.8
6	03:00-04:00	41.8	43.2	40.8	47.9
7	04:00-05:00	49.9	42.8	43.9	40.1
8	05:00-06:00	43.8	46.3	53.6	43.6
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

December 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		07/12/2018	28/12/2018	05/12/2018	14/12/2018
1	6:00-7:00	44.3	63.1	52.1	60.6
2	7:00-8:00	44.7	46.7	46.6	58.8
3	8:00-9:00	48.8	54.9	54.2	43.0
4	9:00-10:00	59.0	53.6	50.5	59.4
5	10:00-11:00	52.4	51.5	52.5	60.7
6	11:00-12:00	55.1	53.3	60.5	62.9
7	12:00-13:00	58.9	63.7	67.2	59.2
8	13:00-14:00	57.8	70.7	65.0	55.7
9	14:00-15:00	54.5	52.7	53.7	51.0
10	15:00-16:00	64.4	67.7	61.7	56.9
11	16:00-17:00	60.2	53.1	53.5	49.4
12	17:00-18:00	62.3	60.0	62.1	56.5
13	18:00-19:00	55.5	49.9	51.1	52.9
14	19:00-20:00	52.0	52.3	61.6	44.9
15	20:00-21:00	47.9	54.7	62.4	45.5
16	21:00-22:00	53.9	50.2	58.6	51.3
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

December 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		07/12/2018 & 08/12/2018	28/12/2018 & 29/12/2018	05/12/2018 & 06/12/2018	14/12/2018 & 15/12/2018
1	22:00-23:00	55.5	50.4	47.4	52.4
2	23:00-00:00	53.7	49.2	44.3	45.5
3	00:00-01:00	44.5	48.7	46.9	45.2
4	01:00-02:00	43.6	46.4	47.6	43.8
5	02:00-03:00	53.0	45.9	55.2	49.1
6	03:00-04:00	39.1	43.7	43.1	46.3
7	04:00-05:00	50.7	41.5	45.4	42.9
8	05:00-06:00	44.2	43.4	54.7	42.3
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

January 2019					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		08/01/2019	22/01/2019	02/01/2019	24/01/2019
1	6:00-7:00	48.1	47.3	46.4	49.9
2	7:00-8:00	49.5	48.6	47.9	48.4
3	8:00-9:00	50.6	49.8	49.7	50.9
4	9:00-10:00	51.3	50.4	49.0	51.4
5	10:00-11:00	52.8	52.7	50.1	52.9
6	11:00-12:00	54.8	54.3	52.4	54.7
7	12:00-13:00	61.4	53.7	51.8	56.5
8	13:00-14:00	53.6	65.5	53.8	57.4
9	14:00-15:00	51.1	54.6	64.9	55.1
10	15:00-16:00	52.5	52.3	52.0	54.2
11	16:00-17:00	50.5	51.2	50.2	53.2
12	17:00-18:00	49.2	49.3	49.1	51.7
13	18:00-19:00	48.9	47.5	48.3	49.4
14	19:00-20:00	47.2	48.5	45.6	47.6
15	20:00-21:00	45.1	45.3	47.7	48.2
16	21:00-22:00	43.1	50.3	48.8	44.4
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

January 2019					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		08/01/2019 & 09/01/2019	22/01/2019 & 23/01/2019	02/01/2019 & 03/01/2019	24/01/2019 & 25/01/2019
1	22:00-23:00	45.8	46.5	47.2	50.4
2	23:00-00:00	43.7	47.6	45.7	46.8
3	00:00-01:00	42.4	45.3	44.9	47.9
4	01:00-02:00	43.0	43.5	46.2	45.9
5	02:00-03:00	42.1	44.0	47.1	45.2
6	03:00-04:00	41.5	45.1	51.6	42.6
7	04:00-05:00	43.8	46.4	45.4	46.3
8	05:00-06:00	42.5	47.0	46.9	47.4
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

February 2019					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		15/02/2019	16/02/2019	24/02/2019	18/02/2019
1	6:00-7:00	38.8	50.6	45.0	47.8
2	7:00-8:00	40.1	49.5	45.7	49.3
3	8:00-9:00	47.7	52.4	50.8	51.6
4	9:00-10:00	45.7	56.1	48.4	52.9
5	10:00-11:00	50.7	58.6	48.9	49.3
6	11:00-12:00	52.5	60.0	52.0	51.1
7	12:00-13:00	51.8	58.7	51.2	53.2
8	13:00-14:00	50.4	64.0	50.7	56.3
9	14:00-15:00	46.4	66.4	57.3	52.2
10	15:00-16:00	49.3	64.0	54.5	50.3
11	16:00-17:00	46.0	61.8	49.1	54.3
12	17:00-18:00	47.0	59.2	48.2	53.8
13	18:00-19:00	43.4	57.7	47.6	45.4
14	19:00-20:00	46.0	54.5	45.3	44.9
15	20:00-21:00	43.5	52.9	47.7	43.7
16	21:00-22:00	38.0	50.5	50.0	42.8
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

February 2019					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		15/02/2019 & 16/02/2019	16/02/2019 & 17/02/2019	24/02/2019 & 25/02/2019	18/02/2019 & 19/02/2019
1	22:00-23:00	42.6	52.6	46.5	46.9
2	23:00-00:00	42.2	50.6	47.6	46.3
3	00:00-01:00	37.9	49.6	42.4	44.4
4	01:00-02:00	38.5	45.2	46.9	43.2
5	02:00-03:00	39.4	43.0	48.3	41.9
6	03:00-04:00	39.8	47.4	49.6	43.4
7	04:00-05:00	38.6	46.2	44.5	40.5
8	05:00-06:00	38.3	50.6	45.1	42.1
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

March 2019					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		19/03/2019	05/03/2019	02/03/2019	12/03/2019
1	6:00-7:00	47.7	48.9	49.5	47.0
2	7:00-8:00	48.6	49.8	48.3	49.6
3	8:00-9:00	49.4	42.2	49.3	49.6
4	9:00-10:00	50.5	46.0	50.1	50.3
5	10:00-11:00	51.9	48.5	51.0	51.2
6	11:00-12:00	52.5	49.9	52.2	53.3
7	12:00-13:00	53.8	50.3	53.2	55.6
8	13:00-14:00	54.7	52.3	54.9	53.8
9	14:00-15:00	54.3	54.6	57.6	54.4
10	15:00-16:00	53.9	56.7	56.0	53.7
11	16:00-17:00	52.3	55.4	53.1	51.1
12	17:00-18:00	50.4	52.6	52.0	50.5
13	18:00-19:00	49.0	50.9	50.0	48.3
14	19:00-20:00	48.8	49.2	48.4	46.7
15	20:00-21:00	47.0	47.8	46.2	45.5
16	21:00-22:00	46.1	46.9	47.4	48.0
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

March 2019					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		19/03/2019 & 20/03/2019	05/03/2019 & 06/03/2019	02/03/2019 & 03/03/2019	12/03/2019 & 13/03/2019
1	22:00-23:00	46.0	46.4	47.7	45.4
2	23:00-00:00	44.7	47.6	48.8	46.3
3	00:00-01:00	46.3	48.6	50.1	44.3
4	01:00-02:00	47.1	46.9	47.1	45.1
5	02:00-03:00	46.4	45.5	46.5	43.5
6	03:00-04:00	46.3	44.9	46.5	42.0
7	04:00-05:00	47.5	40.6	42.8	44.2
8	05:00-06:00	45.5	45.7	43.2	46.0
Night Time Limit		70 dB(A)			

CHAPTER – 8

D.G. STACK & D.G. STACK NOISE MONITORING

MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

D.G. Stack Monitoring Results

SR. NO.	TEST PARAMETER	UNIT	DG Stack - 1 (2000 KVA) Make Cummins Sr. No.:25388675		LIMIT
			21/12/2018	15/03/2019	
			RESULTS	RESULTS	
1	Particulate Matter	mg/Nm ³	21.82	17.86	75
2	Sulfur Dioxide as SO ₂	ppm	--	5.65	--
3	Oxides of Nitrogen as NOX	ppm	35.23	29.34	710
4	Non Methyl Hydro Carbon (NMHC)	mg/Nm ³	BDL*	BDL*	100
5	Carbon Monoxide (CO)	mg/Nm ³	15.56	18.74	150
6	Sulfur Content in fuel	%	0.018	0.018	< 2.0

BDL*: Below Detection Limit, Results on 15 % O2 Correction when Oxygen is greater than 15 %

SR. NO.	TEST PARAMETER	UNIT	DG Stack - 2 (2000 KVA) Cummins Sr. No.: 25390869		LIMIT
			21/12/2018	15/03/2019	
			RESULTS	RESULTS	
1	Particulate Matter	mg/Nm ³	26.63	23.82	75
2	Sulfur Dioxide as SO ₂	ppm	--	6.55	--
3	Oxides of Nitrogen as NOX	ppm	30.35	26.45	710
4	Non Methyl Hydro Carbon (NMHC)	mg/Nm ³	BDL*	BDL*	100
5	Carbon Monoxide (CO)	mg/Nm ³	18.5	16.3	150
6	Sulfur Content in fuel	%	0.015	0.015	< 2.0

BDL*: Below Detection Limit, Results on 15 % O2 Correction when Oxygen is greater than 15 %

SR. NO.	TEST PARAMETER	UNIT	DG Stack – 3 (380 KVA) Cummins Sr. No.: 25386499		LIMIT
			21/12/2018	15/03/2019	
			RESULTS	RESULTS	
1	Particulate Matter	g/kw-hr	0.0013	0.0012	0.3
2	Sulfur Dioxide as SO ₂	ppm	--	4.63	--
3	Oxides of Nitrogen as NOX	g/kw-hr	0.0021	0.0018	9.2
4	Hydro Carbon (HC)	g/kw-hr	BDL*	BDL*	1.3
5	Carbon Monoxide (CO)	g/kw-hr	0.0011	0.001	3.5
6	Sulfur Dioxide (SO ₂)	Kg/hr	0.0003	0.0007	1.8

BDL*: Below Detection Limit, Results on 15 % O2 Correction when Oxygen is greater than 15 %

D.G. Stack Noise Level Monitoring Results

SR. NO.	SAMPLING LOCATION	Outside DG Room 1 m distance	
		21/12/2018	15/03/2019
		RESULTS	RESULTS
1	DG Stack - 1 (2000 KVA) Make Cummins Sr. No.:25388675	73.5	72.8
2	DG Stack - 2 (2000 KVA) Cummins Sr. No.: 25390869	72.4	73.6
3	DG Stack – 3 (380 KVA) Cummins Sr. No.: 25386499	73.1	73.6
LIMIT**		75 dB(A)	

**as per Noise limit for diesel generator sets (upto 1000 KVA) manufactured on or after the 1st January, 2005

CHAPTER – 9
WEATHER DATA MONITORING
MONITORING PERIOD: OCTOBER-2018 TO MARCH-2019

Date	Avg wind Speed (m/s)	Avg wind Direction (deg)	Temperature (°C)	RH %	Precip. (mm)
01/10/2018	2.94	169	28.0	84.85	0.01
02/10/2018	2.43	174	28.0	82.83	1.80
03/10/2018	2.29	148	27.9	84.34	0.56
04/10/2018	1.82	155	28.0	85.24	1.39
05/10/2018	2.37	165	27.9	86.88	0.01
06/10/2018	2.38	162	28.9	84.33	0.0
07/10/2018	2.26	153	29.6	81.71	0.08
08/10/2018	2.35	164	29.1	85.63	0.08
09/10/2018	1.85	142	27.5	86.98	0.0
10/10/2018	2.56	157	27.8	87.41	0.0
11/10/2018	3.15	190	28.5	87.14	0.0
12/10/2018	5.38	255	29.2	87.77	0.0
13/10/2018	2.57	192	29.3	85.93	0.0
14/10/2018	1.54	155	29.4	83.93	0.0
15/10/2018	1.72	171	29.7	83.83	1.32
16/10/2018	2.20	184	28.0	89.01	0.02
17/10/2018	1.94	166	27.0	87.83	0.02
18/10/2018	1.98	181	27.6	85.28	0.0
19/10/2018	2.52	159	27.9	84.17	0.0
20/10/2018	2.03	145	27.7	80.97	0.0
21/10/2018	2.53	185	28.2	81.03	0.0
22/10/2018	1.65	166	28.9	74.61	0.0
23/10/2018	1.69	159	28.5	80.76	0.0
24/10/2018	2.49	180	29.2	82.62	0.0
25/10/2018	3.94	175	39.3	84.12	0.0
26/10/2018	2.61	194	29.4	83.55	0.0
27/10/2018	3.10	157	29.1	82.45	0.0
28/10/2018	2.82	164	27.1	84.39	0.0
29/10/2018	1.30	197	28.5	83.24	0.0
30/10/2018	4.72	161	26.9	80.12	0.0
31/10/2018	1.34	177	28.9	75.63	0.0
01/11/2018	2.08	155	28.0	74.33	0.0
02/11/2018	2.28	170	28.7	77.13	0.0
03/11/2018	1.37	173	29.1	80.56	0.0
04/11/2018	2.54	174	29.2	81.36	0.0
05/11/2018	1.97	172	29.3	80.85	0.0
06/11/2018	2.55	177	29.2	83.98	0.0
07/11/2018	2.77	149	29.9	76.42	0.0
08/11/2018	2.28	166	29.4	71.53	0.0
09/11/2018	1.99	150	28.7	72.63	0.0
10/11/2018	1.70	165	28.5	77.50	0.0
11/11/2018	2.03	166	28.6	77.93	0.0
12/11/2018	1.58	157	27.7	78.21	0.0
13/11/2018	1.97	152	27.3	74.63	0.0
14/11/2018	3.42	194	26.8	79.62	0.0
15/11/2018	2.34	154	27.4	73.08	0.0
16/11/2018	2.57	196	28.0	74.64	0.0
17/11/2018	2.64	179	29.5	77.08	0.0
18/11/2018	2.00	168	28.7	84.00	1.7
19/11/2018	1.28	196	25.9	96.61	5.4
20/11/2018	3.26	203	27.5	87.16	0.0

21/11/2018	2.04	171	28.3	83.63	0.0
22/11/2018	2.75	189	28.1	78.48	0.0
23/11/2018	3.07	145	29.0	76.38	0.0
24/11/2018	1.90	166	28.6	80.58	0.0
25/11/2018	1.39	148	27.8	81.57	0.0
26/11/2018	1.24	153	27.7	77.66	0.0
27/11/2018	2.84	129	26.9	73.14	0.0
28/11/2018	2.74	157	26.8	75.58	0.0
29/11/2018	3.13	137	25.9	84.74	0.0
30/11/2018	2.23	190	27.3	88.99	0.0
01/12/2018	4.17	150	27.6	54.23	0.0
02/12/2018	4.40	132	26.8	49.75	0.0
03/12/2018	5.57	92	26.3	51.67	0.0
04/12/2018	5.27	76	25.9	62.45	0.0
05/12/2018	6.50	110	27.1	67.12	0.0
06/12/2018	3.79	82	27.4	64.78	0.0
07/12/2018	7.34	311	27.3	62.58	0.0
08/12/2018	6.45	290	28.3	60.47	0.0
09/12/2018	4.70	315	27.9	56.87	0.0
10/12/2018	8.05	303	26.8	54.25	0.0
11/12/2018	6.02	284	24.2	44.56	0.0
12/12/2018	4.01	325	25.4	60.17	0.0
13/12/2018	5.47	294	25.1	57.23	0.0
14/12/2018	3.57	90	26.4	59.78	0.0
15/12/2018	5.83	82	28.6	56.98	0.0
16/12/2018	5.07	69	27.4	52.87	0.0
17/12/2018	6.81	41	24.5	43.28	0.0
18/12/2018	5.44	62	24.9	50.44	0.0
19/12/2018	5.56	103	25.1	52.78	0.0
20/12/2018	6.35	945	25.5	61.23	0.0
21/12/2018	6.83	333	24.7	57.45	0.0
22/12/2018	4.80	23	25.3	64.82	0.0
23/12/2018	4.49	183	26.4	62.34	0.0
24/12/2018	5.33	43	27.1	59.70	0.0
25/12/2018	4.74	174	29.9	64.25	0.0
26/12/2018	6.59	350	27.7	65.22	0.0
27/12/2018	6.81	319	27.0	54.64	0.0
28/12/2018	4.39	357	26.2	49.28	0.0
29/12/2018	5.30	165	25.5	43.65	0.0
30/12/2018	6.63	184	27.0	45.82	0.0
31/12/2018	7.07	96	26.4	43.21	0.0
01/01/2019	2.25	184	25.0	62.77	0.0
02/01/2019	2.30	184	24.6	66.73	0.0
03/01/2019	1.85	160	24.3	65.28	0.0
04/01/2019	2.05	107	26.5	73.07	0.0
05/01/2019	3.18	102	25.6	71.24	0.0
06/01/2019	3.05	115	26.6	62.84	0.0
07/01/2019	2.67	219	25.5	65.97	0.0
08/01/2019	3.27	206	27.0	74.12	0.0
09/01/2019	1.97	176	25.1	77.56	0.0
10/01/2019	1.57	164	25.6	73.11	0.0
11/01/2019	2.07	148	24.3	78.57	0.0
12/01/2019	1.86	173	26.3	67.30	0.0

13/01/2019	3.17	184	25.3	70.17	0.0
14/01/2019	2.35	158	23.0	73.73	0.0
15/01/2019	2.43	180	28.4	64.07	0.0
16/01/2019	1.79	171	25.6	71.59	0.0
17/01/2019	1.91	182	26.1	74.96	0.0
18/01/2019	2.19	177	26.3	74.82	0.0
19/01/2019	2.35	156	26.3	74.24	0.0
20/01/2019	2.19	169	26.2	72.62	0.0
21/01/2019	2.69	164	24.2	79.79	0.0
22/01/2019	4.07	221	26.8	74.11	0.0
23/01/2019	7.89	227	25.2	74.83	0.0
24/01/2019	8.96	231	24.5	78.41	0.0
25/01/2019	5.87	214	24.5	65.37	0.0
26/01/2019	2.31	183	23.4	73.60	0.0
27/01/2019	2.51	161	24.3	76.48	0.0
28/01/2019	3.58	157	26.4	71.89	0.0
29/01/2019	4.21	146	26.7	70.49	0.0
30/01/2019	4.15	152	27.2	65.77	0.0
31/01/2019	3.01	162	25.9	71.59	0.0
01/02/2019	3.37	190	25.8	73.61	0.0
02/02/2019	3.09	192	26.1	75.19	0.0
03/02/2019	1.91	168	26.6	71.29	0.0
04/02/2019	2.13	151	27.1	71.52	0.0
05/02/2019	3.83	195	27.4	74.58	0.0
06/02/2019	6.97	226	26.6	78.34	0.0
07/02/2019	11.55	229	25.4	71.38	0.0
08/02/2019	15.69	211	23.5	73.40	0.0
09/02/2019	8.88	195	24.3	75.90	0.0
10/02/2019	6.48	183	24.4	73.98	0.0
11/02/2019	3.02	189	24.3	78.81	0.0
12/02/2019	2.17	189	26.8	79.29	0.0
13/02/2019	2.82	188	28.0	76.12	0.0
14/02/2019	1.95	160	27.7	78.58	0.0
15/02/2019	4.78	178	26.3	78.89	0.0
16/02/2019	6.16	222	25.9	70.06	0.0
17/02/2019	5.39	223	25.1	73.26	0.0
18/02/2019	2.81	184	24.3	75.34	0.0
19/02/2019	3.61	171	25.4	79.99	0.0
20/02/2019	4.91	216	27.3	77.64	0.0
21/02/2019	5.67	235	28.2	85.47	0.0
22/02/2019	4.81	238	27.1	84.93	0.0
23/02/2019	2.39	183	27.1	82.24	0.0
24/02/2019	3.82	176	28.2	80.68	0.0
25/02/2019	7.56	204	27.6	77.81	0.0
26/02/2019	8.70	225	24.9	78.26	0.0
27/02/2019	12.72	233	23.8	73.77	0.0
28/02/2019	10.37	201	25.7	76.97	0.0
01/03/2019	8.45	221	26.14	78.50	0
02/03/2019	12.55	196	25.89	75.23	0
03/03/2019	9.78	254	26.56	76.92	0
04/03/2019	11.68	231	27.19	77.34	0
05/03/2019	9.18	246	26.11	79.67	0
06/03/2019	9.94	246	25.72	77.47	0

07/03/2019	13.81	267	25.21	75.49	0
08/03/2019	6.53	186	26.07	79.65	0
09/03/2019	6.19	202	27.12	83.36	0
10/03/2019	9.20	198	27.37	80.34	0
11/03/2019	8.38	224	26.97	79.62	0
12/03/2019	8.92	227	26.20	82.36	0
13/03/2019	13.60	272	26.35	78.30	0
14/03/2019	12.32	254	26.21	73.71	0
15/03/2019	6.06	216	27.16	76.13	0
16/03/2019	5.22	196	27.43	81.01	0
17/03/2019	5.75	201	27.37	81.39	0
18/03/2019	5.12	199	26.94	81.55	0
19/03/2019	4.96	196	27.59	80.57	0
20/03/2019	6.65	204	27.46	78.26	0
21/03/2019	8.90	233	26.96	80.30	0
22/03/2019	9.77	235	27.31	76.71	0
23/03/2019	7.00	237	27.25	81.50	0
24/03/2019	3.31	144	28.04	84.50	0
25/03/2019	5.44	187	29.14	83.81	0
26/03/2019	5.18	185	30.02	84.51	0
27/03/2019	4.37	199	30.27	81.71	0
28/03/2019	5.29	196	30.12	82.50	0
29/03/2019	4.53	196	29.47	81.47	0
30/03/2019	3.11	171	29.34	81.18	0
31/03/2019	4.07	175	29.93	80.38	0