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adani™

Ref : AMPTPL/2018/ 125

Date: 14.11.2018

To

Additional Principal 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. Murmugao Port Trust for the period of April 2018 to September 2018 – Reg.

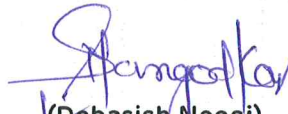
Ref : Environmental and CRZ clearance for modernization of Berth No. 7 for coal handling granted to M/s Murmugao Port Trust vide letter dated 30th December, 2013 bearing F. No. 10-39/2009-IA.III.

Adani Murmugao Port Terminal Private Limited is concessionaire of M/s Murmugao 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 **April 2018 to September 2018** in both hard & soft copy for your kind reference.


Thanking you,

Yours Faithfully,

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


(Debasish Neogi)
Business Head




DESPATCHER
पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forests & Climate Change
क्षेत्रीय कार्यालय, दक्षिण बल्लय
Regional Office, Southern Zone
केन्द्रीय सदन, चौथा तल, कोरमंगला
Kendriya Sadan, 4th Floor, Koramangala
बैंगलूरु/Bengaluru-560 034

Encl: Compliance Report (Hard & soft copy)

Copy to:


1. **The Director (Monitoring-IA-III Division),** Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, 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, Porvorim.
5. **The Chairman,** Mormugao Port trust, Administrative Office, Headland Sada, Mormugao, Goa – 403804.

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Goa, India

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	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
Status of 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 with six monthly compliance reports dated 25 th November, 2014. Now construction 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 reused for dust suppression and settled coal solid particles is 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 has been provided in conveyor system and at all transfer points. • 45 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.

	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
Status of 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
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 meters 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. 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.	Being 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)
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.

	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
Status of 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
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.	<p>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.</p> <p>AMPTPL has installed water meters and log sheet is being maintained to record water consumption in dust suppression system.</p> 
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 Green belt with suitable native species has been developed, along the periphery and coal stock yard. Till date about 11813 plants are planted in port premises and survival rate is good. There is no mangrove in the vicinity of Berth No. 7.</p> 

	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
Status of 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
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.	Complied, Construction of the project is completed and currently it is operational.
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.	Complied 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.. Ballast is not being taken by AMPTPL.
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.	Complied, 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. Solid waste generated is disposed to local authorities. No effluent or solid wastes is being discharged into the water or on the beach.
xvii	The quality of treated effluents, solid wastes, emissions and noise levels and the like, from project are must confirm 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 parameter are within the prescribed limit. Summary of the monitoring report for the period Apr'18-Sep'18 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 through Half Yearly compliance of October 2016 to March 2017.

	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
Status of 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																								
xix	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.	<p>Complied, AMPTPL has kept separate budget for implementation of Environment Management Plan and it is not diverted for any other purpose.</p> <p>Budget allocated for implementation of EMP for FY 18-19 is 36 Lakhs. A brief summary of environmental expenditure during the compliance period is given below.</p> <table border="1"> <thead> <tr> <th>S N</th><th>DESCRIPTION</th><th>Expenditure during Compliance period (in lacs)</th></tr> </thead> <tbody> <tr> <td>1</td><td>Environment Quality Monitoring</td><td>8.47</td></tr> <tr> <td>2</td><td>Sponsorships for Pollution awareness program</td><td>0.07</td></tr> <tr> <td>3</td><td>Broad Band for CAAQMS</td><td>0.01</td></tr> <tr> <td>4</td><td>General Maintenance of CAAQMS</td><td>0.00</td></tr> <tr> <td>5</td><td>Green belt Maintenance & Development</td><td>0.07</td></tr> <tr> <td>6</td><td>Electricity charges of CAAQMS</td><td>0.27</td></tr> <tr> <td align="right" colspan="2">TOTAL</td><td>8.89</td></tr> </tbody> </table>	S N	DESCRIPTION	Expenditure during Compliance period (in lacs)	1	Environment Quality Monitoring	8.47	2	Sponsorships for Pollution awareness program	0.07	3	Broad Band for CAAQMS	0.01	4	General Maintenance of CAAQMS	0.00	5	Green belt Maintenance & Development	0.07	6	Electricity charges of CAAQMS	0.27	TOTAL		8.89
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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	<p>Complied AMPTPL has a well structured Environment Cell staffed with qualified manpower for implementation of the Environmental Management Plan under the supervision of a Senior Executive.</p>																								
7. General Conditions																										
i	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	<p>Complied, There was no digging activity during the compliance period. Construction activity is completed and project is in operational phase.</p>																								

	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
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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
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. There was no visit of officers of Ministry/Regional Office at Bangalore during the Compliance period. Full support will be extended to the officers of Ministry/Regional Office, MoEF as well as officers of Central and State Pollution Control Board during visits.
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 Bangalore, and other authorities (CPCB, GPCB MoEF, MPT etc.). Last Compliance report for the period Oct'17-Mar'18 was submitted vide letter no. AMPPTL/2018/26 dated 28.05.2018.
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.
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).

	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
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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
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.
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 been already been submitted to RO-MoEF&CC (Bangalore).
11.	The 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.

	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
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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
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.
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.	Complied AMPTPL is regularly uploading the status of compliance including results of monitored data on its company website. The same can be viewed at https://www.adaniports.com/ports-downloads?port=Murmugao-Terminal Six monthly compliance report is regularly sent to Regional office of MoEF&CC at Bangalore, CPCB Zonal office, SPCB and other authorities. Last compliance report for the period October'17-March'18 was sent vide letter no. AMPPTL/2018/26 dated 28.05.2018.

	Adani Murmugao Port Terminal Pvt.Ltd.	From : April 2018 to September 2018
Status of 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
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 24th Sep, 2018 vide letter no AMPTPL/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**

APRIL-2018 TO SEPTEMBER-2018

PREPARED BY:



M/s POLLUCON LABORATORIES PVT. LTD.

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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: APRIL-2018 TO SEPTEMBER-2018

Results of AAQM for Sada Village [APRIL-2018 TO SEPTEMBER-2018]

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	02.04.2018	32.62	18.33	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	15.67	15.58	27.94	17.46
2	05.04.2018	64.79	35.00	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	29.38	10.67	23.64	20.43
3	09.04.2018	38.83	17.50	BDL*	BDL*	BDL*	BDL*	0.46	BDL*	10.77	8.37	19.74	16.28
4	12.04.2018	41.50	23.75	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	18.87	5.43	29.13	19.42
5	16.04.2018	50.71	21.67	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	25.36	13.67	22.91	22.70
6	19.04.2018	62.59	26.67	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	32.47	16.32	25.86	24.38
7	23.04.2018	40.92	15.42	BDL*	BDL*	BDL*	BDL*	0.50	BDL*	26.77	7.54	31.86	18.34
8	26.04.2018	33.42	19.58	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	21.34	9.34	16.63	25.25
9	30.04.2018	59.49	25.42	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	17.63	11.41	14.50	15.60
10	03.05.2018	69.82	33.33	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	24.43	13.33	26.51	19.56
11	07.05.2018	51.57	30.42	BDL*	BDL*	BDL*	BDL*	0.27	BDL*	18.37	14.63	25.64	15.42
12	10.05.2018	46.73	25.04	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	25.44	9.56	15.45	24.44
13	14.05.2018	70.47	38.75	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	12.34	16.99	20.65	22.34
14	17.05.2018	42.44	18.33	BDL*	BDL*	BDL*	BDL*	0.30	BDL*	20.71	10.92	19.59	18.37
15	21.05.2018	50.52	29.21	BDL*	BDL*	BDL*	BDL*	0.52	BDL*	36.09	8.55	22.54	21.62
16	24.05.2018	47.21	20.42	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	29.43	12.73	24.20	26.49
17	28.05.2018	49.45	17.50	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	13.05	7.16	18.57	16.58
18	31.05.2018	54.33	28.33	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	32.95	5.56	31.57	20.44
19	04.06.2018	26.79	15.35	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	10.88	5.53	17.64	18.57
20	07.06.2018	43.68	26.59	BDL*	BDL*	BDL*	BDL*	0.49	BDL*	23.74	11.58	21.40	24.55
21	11.06.2018	55.83	28.25	BDL*	BDL*	BDL*	BDL*	0.17	BDL*	29.60	13.62	27.37	26.78
22	14.06.2018	60.48	31.53	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	25.65	15.38	30.29	28.33
23	18.06.2018	39.50	19.12	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	27.70	9.57	26.37	25.41
24	21.06.2018	31.69	17.46	BDL*	BDL*	BDL*	BDL*	0.57	BDL*	17.64	7.64	19.40	20.20
25	25.06.2018	48.41	22.03	BDL*	BDL*	BDL*	BDL*	0.46	BDL*	19.30	14.55	24.67	22.59
26	28.06.2018	29.70	16.22	BDL*	BDL*	BDL*	BDL*	0.37	BDL*	15.43	12.69	15.66	29.39
27	02.07.2018	51.50	29.45	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	25.29	11.46	24.58	26.38
28	05.07.2018	42.72	19.54	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	17.50	9.56	19.67	22.50
29	09.07.2018	58.45	32.40	BDL*	BDL*	BDL*	BDL*	0.49	BDL*	23.52	18.83	31.51	25.31
30	12.07.2018	32.44	18.67	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	10.55	7.54	17.66	16.23
31	16.07.2018	44.60	22.82	BDL*	BDL*	BDL*	BDL*	0.17	BDL*	31.25	16.36	29.59	19.62
32	19.07.2018	38.66	15.39	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	14.36	5.44	15.45	15.67
33	23.07.2018	56.88	30.28	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	11.55	10.49	22.47	24.31
34	26.07.2018	52.48	33.60	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	22.56	8.86	25.68	18.59

35	30.07.2018	60.26	27.38	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	19.57	13.27	20.53	23.58
36	02.08.2018	78.39	40.32	BDL*	BDL*	BDL*	BDL*	0.50	BDL*	26.50	7.30	35.47	24.39
37	06.08.2018	58.40	25.47	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	33.47	13.43	26.85	26.36
38	09.08.2018	72.41	27.79	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	13.59	10.56	23.66	23.32
39	13.08.2018	50.37	21.49	BDL*	BDL*	BDL*	BDL*	0.37	BDL*	35.86	18.33	32.38	18.62
40	16.08.2018	42.61	20.83	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	19.52	11.23	20.56	21.54
41	20.08.2018	37.27	18.67	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	12.47	8.44	18.28	16.85
42	23.08.2018	62.41	33.27	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	25.66	15.25	27.81	19.55
43	27.08.2018	54.65	23.40	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	16.56	6.59	17.55	17.56
44	30.08.2018	55.87	24.68	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	22.65	9.65	22.74	22.83
45	03.09.2018	33.53	17.67	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	12.61	9.57	15.65	14.21
46	06.09.2018	65.49	36.88	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	16.83	15.56	22.60	20.32
47	10.09.2018	50.34	22.40	BDL*	BDL*	BDL*	BDL*	0.53	BDL*	20.56	11.24	19.58	17.55
48	13.09.2018	42.72	19.58	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	25.74	13.54	28.53	22.34
49	17.09.2018	56.66	29.25	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	30.23	8.42	17.55	15.66
50	20.09.2018	69.37	34.35	BDL*	BDL*	BDL*	BDL*	0.60	BDL*	37.50	6.48	25.45	19.44
51	24.09.2018	54.35	24.23	BDL*	BDL*	BDL*	BDL*	0.40	BDL*	29.40	12.30	21.24	23.56
52	27.09.2018	45.57	18.79	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	14.65	18.68	18.36	16.67

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: APRIL-2018 TO SEPTEMBER-2018

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			13/04/2018		21/05/2018		28/06/2018	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	8.08	8.12	8.2	8.11	8.3	8.17
2	Temperature	°C	29.8	30.2	30.8	30.2	31.4	30.8
3	Total Suspended Solids	mg/L	208	230	240	190	212	172
4	BOD (3 Days @ 27 °C)	mg/L	4.5	3.5	5.2	3	5	4
5	Dissolved Oxygen	mg/L	6.2	5.8	6.6	6	6.2	5.8
6	Salinity	ppt	34.4	34.8	34.1	33.7	34.4	34
7	Oil & Grease	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
8	Nitrate as NO ₃	μmol/L	20.6	21.8	14.2	10.4	22.2	18.4
9	Nitrite as NO ₂	μmol/L	2.1	1.8	2.4	1.6	1.8	1.1
10	Ammonical Nitrogen as NH ₃	μmol/L	2.11	2.45	3.2	2.8	2.4	1.8
11	Phosphates as PO ₄	μmol/L	1.8	1.9	2.15	1.94	2.2	1.88
12	Total Nitrogen	μmol/L	3.3	3.9	3.6	3.1	2.9	2.2
13	Petroleum Hydrocarbon	μg/L	16	2	14	4	8	6
14	Total Dissolved Solids	mg/L	35090	35240	34780	34318	35012	34756
15	COD	mg/L	20	15	18	14	16	12
17	Flora and Fauna							
17.1	Primary Productivity	mgC/L/day	1.7	0.4	3.2	1.8	3.06	2.88
18	Phytoplankton							
18.1	Chlorophyll	mg/m ³	2.9	0.75	2.8	1.2	3.78	2.39
18.2	Phaeophytin	mg/m ³	0.8	3.2	1.6	1.1	2.05	1.06
18.3	Cell Count	No, x 10 ³ /L	210	65	218	96	284	148
18.4	Name of Group Number and name of group species of each group	--	Nitzsa sp. Fragillaria sp. Navicula sp. Coscinodiscus sp. Synedra	Fragillaria sp. Nitzsa sp. Amphora -- --	Navicula sp Pleurosigma sp Nitzschia sp Cheatocerous sp Thalassionema sp	Navicula sp Trichodesmia sp Nitzschia sp -- --	Nitzschia sp Navicula sp Ceratum Cheatocerous sp Pleurosigma	Navicula sp Nitzschia sp Trichodesmia sp -- --
19	Zooplanktons							
19.1	Abundance (Population)	No x 10 ³ /100m ³	18		128		95	
19.2	Name of Group Number and name of group species of each group	--	Foraminiferans Polychaete Hydrozoa Copepods		Stomatopores Copepods Ostracods Bivalves		Gastropods Molluscans Fish eggs Siphonophores Polychaetes	
19.3	Total Biomass	mL/100 m ³	5.2		6.1		13.17	

20	Microbiological Parameters				
20.1	Total Bacterial Count	CFU/mL	1760	2060	1850
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			17/07/2018		16/08/2018		21/09/2018	
			Surface	Bottom	Surface	Bottom	Surface	Bottom
1	pH	--	8.28	8.1	8.18	8.03	8.23	8.12
2	Temperature	°C	30.6	30.2	30.5	30.2	30.8	30.6
3	Total Suspended Solids	mg/L	340	250	392	246	350	278
4	BOD (3 Days @ 27 °C)	mg/L	4	3	3	2	4	BDL*
5	Dissolved Oxygen	mg/L	6.6	6.2	6.6	6.3	6.4	6.2
6	Salinity	ppt	33.9	33.5	33.4	33.1	33.8	33.4
7	Oil & Grease	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
8	Nitrate as NO ₃	μmol/L	4.35	3.26	17.2	13.8	10.2	8
9	Nitrite as NO ₂	μmol/L	1.51	1.29	2	1.6	2.4	1.8
10	Ammonical Nitrogen as NH ₃	μmol/L	2.81	2.07	3.1	2.4	2.1	1.6
11	Phosphates as PO ₄	μmol/L	2.5	2.36	2.1	1.6	2.35	2.2
12	Total Nitrogen	μmol/L	8.67	6.62	9	6	14.7	11.4
13	Petroleum Hydrocarbon	μg/L	12	4	12	3	10	4
14	Total Dissolved Solids	mg/L	34826	34612	34312	34218	34972	34516
15	COD	mg/L	14	10	12	6	10	BDL*
17	Flora and Fauna							
17.1	Primary Productivity	mgC/L/day	3.06	2.74	1.13	0.78	2.16	1.44
18	Phytoplankton							
18.1	Chlorophyll	mg/m ³	3.41	2.25	2.14	1.03	1.84	0.88
18.2	Phaeophytin	mg/m ³	3.03	0.97	1.16	0.71	0.99	0.61
18.3	Cell Count	No.x 10 ³ /L	312	172	252	184	252	184
18.4	Name of Group Number and name of group species of each group	--	Navicula sp Pleurosigma Ceratum Trichodesmia Rhizosolenia Coscinodiscus	Cheatoцерous Ceratum Fragillaria -- -- --	Cheatoцерous Thallasiosira Cyclotella Nitzschia Ceratum	Tricodesmium Skeletonema Rhizosolenia -- --	Coscinodiscus Thallasionema Cyclotella Nitzschia Rhizosolenia	Pleurosigma Skeletonema Cheatoцерous -- --
19	Zooplanktons							
19.1	Abundance (Population)	Nox10 ³ /100m ³	79		59		47	
19.2	Name of Group Number and name of group species of each group	--	Copepods Ostracods Mysids Decapods Gastropods		Barnade Copepod Crustaceans Polychaete		Barnade Larve Copepods Crustaceans Mysis	
19.3	Total Biomass	mL/100 m ³	9.32		8.98		8.98	

20	Microbiological Parameters				
20.1	Total Bacterial Count	CFU/mL	2050	2250	2070
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			13/04/2018	21/05/2018	28/06/2018	17/07/2018	16/08/2018	21/09/2018
1	Organic Matter	%	0.61	0.48	0.58	0.75	0.64	0.55
2	Phosphorus as P	µg/g	580	612	580	810	740	910
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	%	5.4	5.6	5.3	5.5	5.2	5.3
5.2	Total Chromium as Cr+3	µg/g	170	240	180	270	196	160
5.3	Manganese as Mn	µg/g	1960	1810	1550	1680	1720	1940
5.4	Iron as Fe	%	5.6	5.1	4.8	5.2	4.9	5.1
5.5	Nickel as Ni	µg/g	65	42	52	58	44	31.4
5.6	Copper as Cu	µg/g	48	36	42	28	36	24.2
5.7	Zinc as Zn	µg/g	180	240	210	308	272	312
5.8	Lead as Pb	µg/g	8.2	6.2	7.8	6.4	4.6	3.4
5.9	Mercury as Hg	µg/g	0.35	0.15	BDL*	BDL*	BDL*	BDL*
6	Benthic Organisms							
6.1	Macrobenthos (No and name of groups present, No and name of species of each group present)	--	Polychaete worms Bivalves	Polychaete worms Bivalves Echinoderms	Echinoderms Decapods	Echinoderms Bivalves Isopods	Polychaete Bivalves	Polychaete Mysis Bivalves
6.2	MeioBenthos (No and name of groups present, No and name of species of each group present)	--	Nematodes Copepods	Gastropods Ostracods	Nematodes Foraminifera Hydrozoa	Nematodes Ostracods	Nematodes Ostracods Hydrozoa	Foraminifera ns
6.3	Population	no/m ²	340	380	412	441	529	471

BDL*: Below Detection Limit

CHAPTER – 3

STP WATER MONITORING

MONITORING PERIOD: APRIL-2018 TO SEPTEMBER-2018

Results of STP water quality monitoring

Sr. No.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Baina Sewerage Plant STP Inlet					
Date of sampling			14/04/2018	21/05/2018	27/06/2018	18/07/2018	17/08/2018	22/09/2018
1	pH	--	--	7.12	6.95	6.78	6.94	6.78
2	Total Suspended Solids	mg/L	--	68	98	104	136	124
3	BOD (3 Days @ 27 °C)	mg/L	--	36	48	40	48	40
4	COD	mg/L	--	132	148	132	172	164
5	Oil & Grease	mg/L	--	8.4	5.1	4.6	5.2	5.8
6	Residual Free Chlorine	mg/L	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Sr. No.	PARAMETERS	UNIT	RESULTS					
Sampling Location			Baina Sewerage Plant STP Outlet					
Date of sampling			14/04/2018	21/05/2018	27/06/2018	18/07/2018	17/08/2018	22/09/2018
1	pH	--	7.25	7.35	7.25	7.3	7.18	7.06
2	Total Suspended Solids	mg/L	22	14	22	21	18	16
3	BOD (3 Days @ 27 °C)	mg/L	18	12	18	15	12	14
4	COD	mg/L	90	44	63	56	62	58
5	Oil & Grease	mg/L	4.4	3.2	3.8	3.2	2.6	2.8
6	Residual Free Chlorine	mg/L	0.8	0.8	0.6	0.7	0.8	0.6

CHAPTER – 4

DUMP POND WATER QUALITY MONITORING MONITORING PERIOD: APRIL-2018 TO SEPTEMBER-2018

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		Dump Pond - 3 Near Jetty	
Date of sampling			28/06/2018	28/09/2018	28/06/2018	28/09/2018	28/06/2018	28/09/2018
1	pH	--	8.15	7.98	7.95	7.74	7.85	7.64
2	Total Dissolved Solids	mg/L	310	346	360	394	392	382
3	Total Suspended Solids	mg/L	40	32	55	42	21	24
4	Turbidity	NTU	7.8	6.82	6.4	5.6	5.2	5.1
5	BOD (3 Days @ 27 oC)	mg/L	22	19	30	24	36	28
6	Dissolved Oxygen	mg/L	5.4	5.5	5.8	5.6	5.2	5.3
7	COD	mg/L	80	72	112	132	124	116
8	Salinity	ppt	0.08	0.1	0.14	0.18	0.12	0.13
9	Oil & Grease	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
10	Total Hardness as CaCO3	mg/L	130	132	160	152	156	136
11	Fluoride as F	mg/L	0.6	0.68	0.5	0.64	0.7	0.74
12	Chloride as Cl	mg/L	48	56	79	84	68	60
13	Zinc as Zn	mg/L	0.12	0.16	0.094	0.099	0.084	0.065
14	Cadmium as Cd	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
15	Lead as Pb	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*
16	Mercury as Hg	mg/L	BDL*	BDL*	BDL*	BDL*	BDL*	BDL*

BDL*: Below Detection Limit

CHAPTER – 5

DRINKING WATER QUALITY MONITORING

MONITORING PERIOD: APRIL-2018 TO SEPTEMBER-2018

Results of Drinking water quality monitoring

SR. NO.	PARAMETERS	UNIT	RESULT			
Sampling Location		Sub Station Building Canteen		Near AMPTPL Exit Gate		
Date of sampling		28/06/2018	28/09/2018	28/06/2018	28/09/2018	
1	Colour	Hazen	1	1	2	2
2	Turbidity	NTU	0.85	0.66	0.78	0.62
3	Conductivity	µmho/cm	250	270	270	280
4	pH	--	7.04	7.16	7.14	7.2
5	Chloride as Cl	mg/L	56.9	62	60.9	64
6	Total Dissolved Solids	mg/L	165	170	171	188
7	Total Hardness as CaCO ₃	mg/L	40	48	55	60
8	Iron as Fe	mg/L	0.096	0.1	0.074	0.08
9	Sulphate as SO ₄	mg/L	16	22	22	24
10	Residual Free Chlorine	mg/L	BDL*	BDL*	BDL*	BDL*
11	Calcium as Ca	mg/L	10	14.4	12	16
12	Magnesium as Mg	mg/L	3.75	2.88	6	4.8
13	Fluoride as F	mg/L	0.45	0.38	0.4	0.38
14	Nitrate as NO ₃	mg/L	0.84	0.66	0.82	0.7
15	Manganese as Mn	mg/L	BDL*	BDL*	BDL*	BDL*
16	Copper as Cu	mg/L	BDL*	BDL*	BDL*	BDL*
17	Cadmium as Cd	mg/L	BDL*	BDL*	BDL*	BDL*
18	Arsenic as As	mg/L	BDL*	BDL*	BDL*	BDL*
19	Mercury as Hg	mg/L	BDL*	BDL*	BDL*	BDL*
20	Lead as Pb	mg/L	BDL*	BDL*	BDL*	BDL*
21	Zinc as Zn	mg/L	BDL*	BDL*	BDL*	BDL*
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		28/06/2018	28/09/2018	28/06/2018	28/09/2018	
24	Colour	Hazen	1	1	1	1
25	Turbidity	NTU	0.45	0.32	0.58	0.44
26	Conductivity	µmho/cm	196	242	228	261
27	pH	--	7.26	7.1	7.3	7.16
28	Chloride as Cl	mg/L	28.9	39.9	61.9	58
29	Total Dissolved Solids	mg/L	129	142	153	172
30	Total Hardness as CaCO ₃	mg/L	72	64	42	60
31	Iron as Fe	mg/L	0.064	0.07	0.054	0.07
32	Sulphate as SO ₄	mg/L	7.8	6.8	13	14.2
33	Residual Free Chlorine	mg/L	BDL*	BDL*	0.3	0.4
34	Calcium as Ca	mg/L	14	15.2	8	12
35	Magnesium as Mg	mg/L	8.88	6.24	5.28	7.2
36	Fluoride as F	mg/L	0.3	0.38	0.3	0.36
37	Nitrate as NO ₃	mg/L	1.1	1.28	0.86	0.9
38	Manganese as Mn	mg/L	BDL*	BDL*	BDL*	BDL*
39	Copper as Cu	mg/L	BDL*	BDL*	BDL*	BDL*
40	Cadmium as Cd	mg/L	BDL*	BDL*	BDL*	BDL*
41	Arsenic as As	mg/L	BDL*	BDL*	BDL*	BDL*
42	Mercury as Hg	mg/L	BDL*	BDL*	BDL*	BDL*
43	Lead as Pb	mg/L	BDL*	BDL*	BDL*	BDL*
44	Zinc as Zn	mg/L	0.031	BDL*	BDL*	BDL*
45	Coliform	/100 mL	Absent	Absent	Absent	Absent
46	E-Coli	/100 mL	Absent	Absent	Absent	Absent

BDL*: Below Detection Limit

CHAPTER – 6

SOIL QUALITY MONITORING

MONITORING PERIOD: APRIL-2018 TO SEPTEMBER-2018

Results of Soil quality monitoring

SR. NO.	PARAMETERS	UNIT	RESULTS			
Sampling Location			NEAR CT-1		NEAR ADANI SITE	
Date of sampling			26/06/2018	25/09/2018	26/06/2018	25/09/2018
1	Type	--	Brown	Brown	Brown	Brown
2	Gravel	%	0.8	1	0.6	1
3	Coarse Sand	%	2.5	3.2	2	3
4	Medium Sand	%	20	14	18	16
5	Fine Sand	%	15	15	20	19
6	Total Sand	%	30	37	27	39
7	Silt & Clay	%	70	63	73	61
8	pH (1:5)	--	8.9	8.75	8.65	8.75
9	Electricity Conductivity	µmho/cm	812	916	590	680
10	Alkali matter	mg/kg	570	610	540	590
11	Cation Exchange Capacity	meq/100 g	10.4	10.6	11	12
12	Sodium Absorption Ratio	--	12	12.8	14	13.4
13	Organic Matter	mg/kg	0.52	0.48	0.3	0.4
14	Available Nitrogen	meq/100 g	0.35	0.3	0.3	0.24
15	Available Potassium	mg/kg	7	18	5	20
16	Available Phosphorus	mg/kg	0.28	0.25	0.3	0.25
17	Available Sodium	%	1.2	1.5	1.6	1.8
18	Permeability	%	0.7	0.65	0.9	0.8

CHAPTER – 7

NOISE LEVEL MONITORING

MONITORING PERIOD: APRIL-2018 TO SEPTEMBER-2018

Results of Day Time Noise level monitoring

April 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		04/04/2018	10/04/2018	17/04/2018	20/04/2018
1	6:00-7:00	46.2	48.7	46.0	45.9
2	7:00-8:00	49.0	49.2	48.3	46.8
3	8:00-9:00	49.5	51.3	49.7	48.4
4	9:00-10:00	50.3	52.8	50.4	51.7
5	10:00-11:00	52.0	54.2	52.1	52.4
6	11:00-12:00	53.7	55.5	54.7	55.4
7	12:00-13:00	55.5	53.5	56.3	57.9
8	13:00-14:00	57.6	53.0	68.8	59.2
9	14:00-15:00	58.9	56.1	67.1	60.6
10	15:00-16:00	60.7	58.0	55.6	62.0
11	16:00-17:00	61.1	59.5	53.0	59.8
12	17:00-18:00	59.8	57.2	54.2	57.2
13	18:00-19:00	58.1	55.7	50.9	55.6
14	19:00-20:00	56.8	53.5	51.7	53.4
15	20:00-21:00	54.1	51.3	49.7	51.5
16	21:00-22:00	52.7	49.4	47.9	49.1
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

April 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		04/04/2018 & 05/04/2018	10/04/2018 & 11/04/2018	17/04/2018 & 18/04/2018	20/04/2018 & 21/04/2018
1	22:00-23:00	50.2	48.6	47.0	49.8
2	23:00-00:00	48.9	46.1	45.6	47.1
3	00:00-01:00	46.4	44.6	43.7	48.3
4	01:00-02:00	43.5	42.3	42.8	46.0
5	02:00-03:00	42.7	46.8	44.5	43.8
6	03:00-04:00	39.9	45.0	45.1	46.9
7	04:00-05:00	41.8	46.6	42.5	44.6
8	05:00-06:00	43.8	48.7	46.1	48.4
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

May 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		18/05/2018	25/05/2018	30/05/2018	19/05/2018
1	6:00-7:00	45.5	59.8	46.9	57.2
2	7:00-8:00	47.7	48.6	44.3	56.7
3	8:00-9:00	51.5	49.2	43.8	48.1
4	9:00-10:00	61.7	61.2	45.1	59.1
5	10:00-11:00	56.1	60.6	47.1	61.9
6	11:00-12:00	57.5	52.4	58.2	63.2
7	12:00-13:00	58.7	63.5	60.7	60.4
8	13:00-14:00	59.1	64.9	61.7	55.2
9	14:00-15:00	60.5	53.9	53.1	54.4
10	15:00-16:00	62.7	55.6	54.6	53.5
11	16:00-17:00	54.6	56.6	52.5	51.5
12	17:00-18:00	55.1	58.5	55.6	50.6
13	18:00-19:00	50.2	57.2	50.4	49.7
14	19:00-20:00	49.8	54.8	59.2	47.6
15	20:00-21:00	46.5	51.6	58.5	46.7
16	21:00-22:00	48.7	50.8	51.6	45.4
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

May 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		18/05/2018 & 19/05/2018	25/05/2018 & 26/05/2018	30/05/2018 & 31/05/2018	19/05/2018 & 20/05/2018
1	22:00-23:00	55.2	49.3	49.8	53.9
2	23:00-00:00	53.7	47.1	50.8	45.3
3	00:00-01:00	49.5	48.3	48.9	46.2
4	01:00-02:00	48.8	43.3	47.9	48.5
5	02:00-03:00	45.9	44.1	44.9	49.4
6	03:00-04:00	44.8	42.2	41.4	47.6
7	04:00-05:00	43.9	46.3	45.6	43.3
8	05:00-06:00	42.4	45.8	46.1	44.9
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

June 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		15/06/2018	22/06/2018	06/06/2018	16/06/2018
1	6:00-7:00	43.4	62.2	49.0	59.7
2	7:00-8:00	41.2	47.6	46.4	59.1
3	8:00-9:00	49.5	50.8	45.9	50.2
4	9:00-10:00	59.5	63.5	47.2	61.4
5	10:00-11:00	53.9	62.7	49.3	63.9
6	11:00-12:00	50.9	54.7	60.6	65.5
7	12:00-13:00	56.3	65.7	63.2	62.8
8	13:00-14:00	57.0	67.4	63.8	57.3
9	14:00-15:00	53.2	55.6	55.6	56.7
10	15:00-16:00	64.7	58.1	56.9	55.9
11	16:00-17:00	56.7	57.3	54.6	49.4
12	17:00-18:00	57.6	59.6	57.7	52.7
13	18:00-19:00	52.4	54.6	52.6	51.7
14	19:00-20:00	52.3	51.8	58.6	46.6
15	20:00-21:00	49.0	49.8	60.8	48.4
16	21:00-22:00	51.2	52.9	53.7	47.4
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

June 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		15/06/2018 & 16/06/2018	22/06/2018 & 23/06/2018	06/06/2018 & 07/06/2018	16/06/2018 & 17/06/2018
1	22:00-23:00	53.2	47.0	47.3	51.4
2	23:00-00:00	51.2	45.1	46.5	42.9
3	00:00-01:00	47.2	43.9	44.6	44.1
4	01:00-02:00	46.6	42.2	43.4	46.1
5	02:00-03:00	43.4	45.6	46.6	47.3
6	03:00-04:00	42.4	42.6	43.6	45.2
7	04:00-05:00	45.6	44.1	40.8	41.1
8	05:00-06:00	40.1	43.4	44.0	42.5
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

July 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		07/07/2018	27/07/2018	11/07/2018	19/07/2018
1	6:00-7:00	45.3	63.6	48.1	60.0
2	7:00-8:00	41.8	50.2	43.4	58.2
3	8:00-9:00	49.6	54.5	49.7	47.6
4	9:00-10:00	64.5	60.4	44.1	59.5
5	10:00-11:00	53.8	61.6	52.7	61.2
6	11:00-12:00	52.9	54.6	64.7	62.3
7	12:00-13:00	60.2	69.0	63.1	59.7
8	13:00-14:00	59.8	70.1	61.4	54.3
9	14:00-15:00	52.0	56.0	55.3	60.2
10	15:00-16:00	68.1	62.2	59.3	59.1
11	16:00-17:00	62.0	57.0	56.2	53.2
12	17:00-18:00	64.1	59.3	62.4	51.7
13	18:00-19:00	51.0	51.9	52.8	49.5
14	19:00-20:00	50.5	50.4	63.4	51.0
15	20:00-21:00	48.5	53.1	67.3	51.6
16	21:00-22:00	52.5	50.6	55.7	53.6
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

July 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		07/07/2018 & 08/07/2018	27/07/2018 & 28/07/2018	11/07/2018 & 12/07/2018	19/07/2018 & 20/07/2018
1	22:00-23:00	54.6	53.3	44.1	55.1
2	23:00-00:00	56.9	45.5	46.2	43.2
3	00:00-01:00	47.1	43.7	43.3	41.7
4	01:00-02:00	47.5	42.1	49.9	46.7
5	02:00-03:00	48.2	45.9	51.8	47.4
6	03:00-04:00	47.3	44.5	40.9	46.3
7	04:00-05:00	47.6	43.1	40.7	40.9
8	05:00-06:00	42.9	44.4	50.4	40.6
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

August 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		10/08/2018	07/08/2018	04/08/2018	24/08/2018
1	6:00-7:00	46.8	65.8	50.5	62.7
2	7:00-8:00	44.0	48.0	46.1	60.3
3	8:00-9:00	50.8	55.3	52.1	49.6
4	9:00-10:00	63.5	58.2	46.3	60.7
5	10:00-11:00	55.6	59.4	53.8	62.4
6	11:00-12:00	56.1	52.4	67.6	64.9
7	12:00-13:00	58.6	66.8	65.5	61.3
8	13:00-14:00	63.0	67.9	63.9	55.6
9	14:00-15:00	54.8	52.1	57.8	58.3
10	15:00-16:00	69.8	60.0	61.6	56.8
11	16:00-17:00	63.8	54.8	55.4	51.3
12	17:00-18:00	65.6	57.1	61.9	53.9
13	18:00-19:00	52.8	53.2	54.3	57.6
14	19:00-20:00	53.7	51.5	65.6	49.3
15	20:00-21:00	51.6	54.2	69.4	52.8
16	21:00-22:00	53.6	53.4	58.2	54.8
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

August 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		10/08/2018 & 11/08/2018	07/08/2018 & 08/08/2018	04/08/2018 & 05/08/2018	24/08/2018 & 25/08/2018
1	22:00-23:00	57.2	51.3	43.2	57.9
2	23:00-00:00	59.9	48.0	47.8	46.2
3	00:00-01:00	49.7	46.7	45.3	44.6
4	01:00-02:00	50.4	44.7	50.8	49.2
5	02:00-03:00	49.2	46.3	52.6	50.1
6	03:00-04:00	50.3	47.1	39.8	48.8
7	04:00-05:00	50.6	45.8	42.7	43.7
8	05:00-06:00	43.7	47.4	53.3	43.5
Night Time Limit		70 dB(A)			

Results of Day Time Noise level monitoring

September 2018					
Day Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		08/09/2018	25/09/2018	26/09/2018	05/09/2018
1	6:00-7:00	44.9	64.3	49.8	61.9
2	7:00-8:00	42.3	47.6	45.6	59.4
3	8:00-9:00	48.7	53.8	51.9	48.4
4	9:00-10:00	62.1	59.4	48.9	58.6
5	10:00-11:00	54.9	60.6	52.6	63.9
6	11:00-12:00	53.4	53.9	66.4	63.2
7	12:00-13:00	59.4	68.4	64.9	55.2
8	13:00-14:00	62.9	69.8	62.1	57.8
9	14:00-15:00	56.1	53.6	56.2	52.1
10	15:00-16:00	65.4	61.9	59.8	54.9
11	16:00-17:00	61.8	55.4	51.1	56.1
12	17:00-18:00	63.4	58.3	60.6	52.8
13	18:00-19:00	53.6	52.9	53.8	56.4
14	19:00-20:00	49.6	50.8	63.8	46.9
15	20:00-21:00	47.3	53.7	68.9	49.8
16	21:00-22:00	51.6	51.8	59.4	50.9
Day Time Limit		75 dB(A)			

Results of Night Time Noise level monitoring

September 2018					
Night Time dB(A)					
SR. NO.	Sampling Time	Near fire station	Near security tower	Sada village	Adani Site Office Near Gate No.02
		08/09/2018 & 09/09/2018	25/09/2018 & 26/09/2018	26/09/2018 & 27/09/2018	05/09/2018 & 06/09/2018
1	22:00-23:00	56.2	49.8	45.2	56.4
2	23:00-00:00	57.4	48.3	43.4	45.1
3	00:00-01:00	48.6	47.4	46.3	47.7
4	01:00-02:00	49.9	45.6	48.1	48.6
5	02:00-03:00	50.8	44.3	51.5	45.4
6	03:00-04:00	41.4	46.4	42.6	46.8
7	04:00-05:00	52.6	44.8	46.4	44.8
8	05:00-06:00	44.9	45.6	52.4	45.8
Night Time Limit		70 dB(A)			

CHAPTER – 8

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

MONITORING PERIOD: APRIL-2018 TO SEPTEMBER-2018

D.G. Stack Monitoring Results

SR. NO.	TEST PARAMETER	UNIT	DG Stack - 1 (2000 KVA) Make Cummins Sr. No.:25388675		LIMIT
			29/06/2018	24/09/2018	
			RESULTS	RESULTS	
1	Particulate Matter	mg/Nm ³	22.75	25.85	75
2	Oxides of Nitrogen as NOX	ppm	39.05	32.58	710
3	Non Methyl Hydro Carbon (NMHC)	mg/Nm ³	BDL*	BDL*	100
4	Carbon Monoxide (CO)	mg/Nm ³	18.32	16.03	150
5	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 - 2 (2000 KVA) Cummins Sr. No.: 25390869		LIMIT
			29/06/2018	24/09/2018	
			RESULTS	RESULTS	
1	Particulate Matter	mg/Nm ³	27.91	19.40	75
2	Oxides of Nitrogen as NOX	ppm	37.3	35.32	710
3	Non Methyl Hydro Carbon (NMHC)	mg/Nm ³	BDL*	BDL*	100
4	Carbon Monoxide (CO)	mg/Nm ³	16.03	13.74	150
5	Sulfur Content in fuel	%	0.013	0.013	< 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
			29/06/2018	24/09/2018	
			RESULTS	RESULTS	
1	Particulate Matter	g/kw-hr	0.001	0.0008	0.3
2	Oxides of Nitrogen as NOX	g/kw-hr	0.0024	0.0018	9.2
3	Hydro Carbon (HC)	g/kw-hr	BDL*	BDL*	1.3
4	Carbon Monoxide (CO)	g/kw-hr	0.0009	0.0007	3.5
5	Sulfur Dioxide (SO2)	Kg/hr	0.0005	0.0004	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	
		29/06/2018	24/09/2018
		RESULTS	RESULTS
1	DG Stack - 1 (2000 KVA) Make Cummins Sr. No.:25388675	73.8	74.4
2	DG Stack - 2 (2000 KVA) Cummins Sr. No.: 25390869	73.2	73.9
3	DG Stack – 3 (380 KVA) Cummins Sr. No.: 25386499	72.4	72.6
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: APRIL-2018 TO SEPTEMBER-2018

Date	Avg wind Speed (m/s)	Avg wind Direction (deg)	Temperature (°C)	RH %	Precip. (mm)
01/04/2018	4.53	286.00	31.6	68.5	0.00
02/04/2018	1.00	275.00	30.6	47.8	0.00
03/04/2018	2.54	267.00	30.6	59.7	0.00
04/04/2018	5.99	280.00	32.1	61.7	0.00
05/04/2018	3.93	26.00	27.9	46.5	0.00
06/04/2018	3.07	283.00	33.7	44.9	0.00
07/04/2018	2.49	276.00	32.6	61.8	0.00
08/04/2018	3.05	296.00	30.1	62.9	0.00
09/04/2018	5.93	307.00	32.0	67.2	0.00
10/04/2018	6.13	287.00	34.0	55.6	0.00
11/04/2018	3.62	98.00	33.0	52.0	0.00
12/04/2018	3.64	316.00	33.6	58.6	0.00
13/04/2018	4.14	268.00	31.2	49.4	0.00
14/04/2018	2.45	301.00	29.1	52.2	0.00
15/04/2018	5.91	21.00	28.5	50.9	0.00
16/04/2018	3.61	286.00	29.5	45.4	0.00
17/04/2018	4.90	265.00	32.3	55.1	0.00
18/04/2018	4.10	294.00	31.9	60.9	0.00
19/04/2018	2.11	279.00	31.3	56.4	0.00
20/04/2018	3.62	266.00	31.3	53.4	0.00
21/04/2018	2.97	80.00	34.5	62.1	0.00
22/04/2018	2.39	283.00	32.7	53.5	0.00
23/04/2018	4.94	303.00	31.7	65.4	0.00
24/04/2018	2.59	300.00	32.4	42.4	0.00
25/04/2018	3.62	301.00	30.8	49.7	0.00
26/04/2018	1.13	316.00	31.1	68.1	0.00
27/04/2018	2.45	248.00	30.4	71.8	0.00
28/04/2018	2.34	283.00	32.0	51.1	0.00
29/04/2018	1.87	279.00	33.5	59.7	0.00
30/04/2018	3.33	289.00	32.1	66.9	0.00
01/05/2018	3.89	144.64	30.5	72.2	0.00
02/05/2018	3.90	171.68	30.8	74.4	0.00
03/05/2018	5.72	175.65	31.0	76.6	0.00
04/05/2018	2.82	183.40	30.0	70.4	0.00
05/05/2018	5.70	177.35	29.7	76.7	0.00
06/05/2018	3.96	160.34	30.5	76.6	0.00
07/05/2018	2.16	163.93	29.7	74.2	0.00
08/05/2018	3.50	172.82	30.2	71.6	0.00
09/05/2018	5.28	212.14	30.7	71.7	0.00
10/05/2018	4.73	161.06	28.7	79.1	0.00
11/05/2018	4.99	181.13	29.7	71.6	0.00
12/05/2018	2.88	157.88	29.7	76.9	0.00
13/05/2018	3.39	192.94	30.6	73.5	0.00
14/05/2018	3.28	159.38	30.2	74.1	0.00
15/05/2018	5.88	182.84	29.1	77.9	0.00
16/05/2018	4.23	187.58	30.7	75.4	0.09

17/05/2018	4.57	182.73	30.0	75.8	0.09
18/05/2018	2.45	184.74	31.9	72.1	2.01
19/05/2018	2.95	172.31	31.3	77.4	2.01
20/05/2018	4.40	173.25	29.9	78.2	2.01
21/05/2018	3.00	157.50	31.2	75.0	2.01
22/05/2018	5.74	204.19	30.6	74.8	2.01
23/05/2018	5.69	218.06	30.9	73.1	2.01
24/05/2018	8.15	241.69	30.6	75.6	2.01
25/05/2018	12.51	222.12	30.6	75.9	2.01
26/05/2018	10.91	246.38	30.7	78.0	2.01
27/05/2018	8.60	202.50	29.2	89.0	4.94
28/05/2018	9.22	231.94	30.3	84.0	4.94
29/05/2018	7.17	207.38	29.4	88.3	5.43
30/05/2018	4.19	189.75	29.8	88.1	5.54
31/05/2018	0.66	177.35	29.2	92.0	5.54
01/06/2018	5.19	150.00	31.0	79.3	6.61
02/06/2018	3.45	164.25	29.9	79.5	0.34
03/06/2018	2.47	152.25	29.6	83.7	0.02
04/06/2018	3.35	171.56	28.9	82.2	0.10
05/06/2018	2.94	167.25	29.0	84.1	0.18
06/06/2018	2.99	162.00	29.9	79.1	0.16
07/06/2018	3.42	190.50	29.2	84.3	0.54
08/06/2018	1.46	165.56	26.0	95.7	20.99
09/06/2018	9.00	150.94	25.2	95.6	6.39
10/06/2018	4.21	132.38	28.6	89.6	0.38
11/06/2018	4.04	135.19	28.5	93.2	5.10
12/06/2018	3.17	137.06	31.0	81.7	0.19
13/06/2018	2.85	126.94	31.0	80.9	0.06
14/06/2018	3.87	148.69	30.6	81.9	0.06
15/06/2018	2.73	170.25	29.7	81.5	0.66
16/06/2018	2.20	146.25	28.4	83.2	1.03
17/06/2018	3.72	160.31	28.0	85.8	3.07
18/06/2018	2.65	168.75	25.2	97.3	6.40
19/06/2018	2.61	174.94	25.8	95.8	5.48
20/06/2018	4.26	153.38	24.9	97.8	9.83
21/06/2018	4.91	180.38	25.2	90.2	0.52
22/06/2018	2.49	156.00	26.0	90.3	0.33
23/06/2018	3.65	175.88	25.2	95.1	4.53
24/06/2018	1.76	182.06	25.3	98.3	2.82
25/06/2018	2.12	130.14	27.0	93.7	1.80
26/06/2018	3.04	170.81	30.1	82.5	0.12
27/06/2018	2.98	160.69	29.7	82.6	0.44
28/06/2018	2.00	157.88	27.4	93.5	2.69
29/06/2018	3.32	168.19	26.7	94.7	3.99
30/06/2018	2.95	178.13	26.0	92.7	5.62
01/07/2018	3.19	165.00	27.9	86.5	0.54
02/07/2018	2.76	182.63	27.0	88.6	0.90

03/07/2018	2.34	157.88	26.8	93.5	2.78
04/07/2018	2.65	169.13	27.8	88.8	0.96
05/07/2018	3.06	163.74	27.5	89.3	6.28
06/07/2018	3.19	149.63	25.7	97.7	11.49
07/07/2018	2.56	128.44	26.9	91.8	1.78
08/07/2018	3.27	127.13	28.1	88.6	0.96
09/07/2018	2.65	139.80	27.8	90.4	0.48
10/07/2018	2.09	119.66	25.8	95.3	2.14
11/07/2018	2.72	132.56	25.7	98.3	4.84
12/07/2018	3.26	130.76	26.6	94.7	2.58
13/07/2018	4.15	102.65	25.1	83.7	1.38
14/07/2018	4.23	136.00	26.7	83.4	0.30
15/07/2018	3.67	94.64	25.4	93.6	0.39
16/07/2018	4.68	108.25	28.2	83.0	0.21
17/07/2018	3.01	68.45	25.6	91.9	0.77
18/07/2018	3.31	132.05	27.6	91.3	1.34
19/07/2018	3.81	98.47	26.0	84.5	2.06
20/07/2018	2.69	202.50	28.9	82.7	0.85
21/07/2018	3.79	123.42	29.0	82.2	1.17
22/07/2018	3.71	105.19	27.4	87.6	1.36
23/07/2018	3.36	103.16	27.3	87.9	0.02
24/07/2018	3.54	89.45	25.0	92.0	0.51
25/07/2018	4.42	102.91	27.2	89.8	1.42
26/07/2018	3.17	129.32	27.2	85.9	0.16
27/07/2018	3.48	123.54	25.4	93.0	0.66
28/07/2018	3.07	125.68	26.8	89.2	1.22
29/07/2018	4.13	144.57	28.0	88.3	0.10
30/07/2018	2.08	112.45	27.9	83.4	3.32
31/07/2018	3.39	125.16	26.0	90.3	1.26
01/08/2018	5.62	284.36	25.6	82.5	20.20
02/08/2018	7.73	272.54	28.4	80.6	10.60
03/08/2018	5.46	278.12	27.3	79.6	10.00
04/08/2018	5.96	290.58	27.5	81.1	18.60
05/08/2018	5.71	300.84	26.5	83.6	43.30
06/08/2018	6.49	268.14	25.5	84.6	50.20
07/08/2018	6.95	270.35	27.3	80.9	62.50
08/08/2018	7.32	279.47	26.5	83.6	79.80
09/08/2018	6.82	259.85	27.4	82.4	77.40
10/08/2018	6.42	310.48	27.2	84.2	46.80
11/08/2018	7.09	296.66	26.5	83.6	35.40
12/08/2018	7.83	274.47	26.6	84.6	74.00
13/08/2018	8.40	225.42	26.1	83.7	62.20
14/08/2018	8.76	285.36	27.3	82.8	48.60
15/08/2018	8.71	276.75	27.0	84.6	61.00
16/08/2018	9.88	266.58	25.4	84.1	81.40
17/08/2018	9.41	271.46	27.6	82.4	82.10
18/08/2018	7.69	278.69	27.8	84.9	98.80

19/08/2018	6.45	298.95	26.1	86.1	27.20
20/08/2018	5.72	322.82	26.7	86.2	29.70
21/08/2018	7.09	269.55	29.7	84.9	61.40
22/08/2018	6.21	273.45	26.6	86.2	63.70
23/08/2018	5.90	320.58	25.4	86.0	53.30
24/08/2018	4.48	314.41	26.9	84.1	52.90
25/08/2018	4.27	292.42	25.1	83.6	38.00
26/08/2018	4.84	274.36	26.3	84.2	54.70
27/08/2018	5.51	282.47	29.7	83.9	51.90
28/08/2018	5.18	304.68	26.8	82.2	49.40
29/08/2018	5.52	332.26	26.2	87.0	37.30
30/08/2018	4.79	340.66	26.5	85.5	33.40
31/08/2018	4.02	329.39	27.6	84.2	14.10
01/09/2018	1.77	163.03	76.7	84.4	0.09
02/09/2018	3.67	185.34	27.7	88.6	3.78
03/09/2018	4.10	198.71	27.0	82.2	0.03
04/09/2018	3.62	179.02	25.9	85.4	0.04
05/09/2018	1.18	156.48	27.1	88.5	0.05
06/09/2018	4.90	211.25	26.2	88.1	0.00
07/09/2018	0.61	185.06	25.8	90.2	1.04
08/09/2018	2.23	173.06	26.2	86.5	0.00
09/09/2018	2.06	154.88	26.7	83.4	0.00
10/09/2018	2.08	146.06	26.9	84.4	0.00
11/09/2018	3.38	194.25	26.9	83.6	0.00
12/09/2018	3.11	179.08	26.9	83.2	0.00
13/09/2018	2.28	175.69	26.8	83.3	0.00
14/09/2018	1.91	183.38	26.4	83.2	0.00
15/09/2018	2.56	189.75	27.6	84.8	0.00
16/09/2018	3.23	181.50	27.8	85.4	0.85
17/09/2018	2.76	186.19	27.3	86.8	0.02
18/09/2018	1.64	159.00	27.5	82.6	0.00
19/09/2018	2.45	186.38	27.2	82.6	0.00
20/09/2018	4.58	193.69	27.3	83.4	0.00
21/09/2018	2.32	195.94	27.3	84.5	0.88
22/09/2018	3.03	160.69	26.6	86.1	0.00
23/09/2018	2.26	158.25	27.3	85.0	0.00
24/09/2018	1.96	147.19	27.2	84.6	0.00
25/09/2018	2.11	170.25	27.8	85.8	0.16
26/09/2018	4.26	215.25	27.8	84.3	0.00
27/09/2018	3.04	184.88	27.6	81.3	0.56
28/09/2018	3.53	191.81	26.6	86.7	0.96
29/09/2018	2.13	175.31	27.3	86.9	0.00
30/09/2018	2.10	189.75	27.9	88.1	0.00