

**MINUTES OF THE 123rd MEETING (SPECIAL MEETING) OF THE
GOA STATE POLLUTION CONTROL BOARD
HELD ON 6TH MARCH, 2017 AT 2.30 PM IN THE
CONFERENCE HALL OF THE CHIEF SECRETARY,
SECRETARIAT, PORVORIM.**

1. The 123rd (Special) meeting of the Goa State Pollution Control Board was held on 6th March, 2017 at 2.30 pm in the Conference hall of the Chief Secretary, Secretariat, Porvorim.

The following members / officials attended the meeting:

1.	Mr. Dharmendra Sharma, Chairman, Goa State Pollution Control Board.
2.	Mr. Ajai Saxena, IFS, Principal Chief Conservator of Forests
3.	Ms. R. Menaka, IAS, Director Industries, Trade and Commerce
4.	Mr. S.T. Nadkarni, Chief Engineer, Water Resource Dept.
5.	Mr. Prasanna Acharya, Director, Mines and Geology
6.	Mr. Sanjiv Dessai, Director, Dept. of Tourism
7.	Ms. Fatima Pereira, Sarpanch, Village Panchayat, Velsao
8.	Mr. Levinson Martins, Member Secretary

Shri Tony Fernandes, Councillor, Corporation of the City of Panaji, Dr. Vasudev Deshprabhu, Pernem Municipal Council, Shri Shrirang Jamble, Agriculturist and Ms. Neelam Naik, Manager Shantadurga Higher Secondary School, Sancoale, expressed their inability to attend the meeting.

II. At the outset the Member Secretary welcomed the members present for the 123rd (Special) meeting. He informed the members that this meeting has been conveyed as per the orders of the Hon. High Court of Bombay at Goa dated 02/03/2017 in Writ Petition no. 222 of 2017 filed by M/s Minescape Minerals Pvt. Ltd. V/s State of Goa through its Chief Secretary and 2 Ors.

Thereafter, the agenda items were taken up for discussion:



Agenda item no. 01

Confirmation of the minutes of the 122nd meeting of the Goa State Pollution Control Board held on 28/11/2016.

The members perused and confirmed the minutes of the 122nd meeting of the Goa State Pollution Control Board held on 28/11/2016, so as to enter the same in the minutes book.

Agenda item no. 02

Application for Consent to Operate under the Water Act and the Air Act of Tembecho Dongor iron and manganese mine of Jairam Neogui.

Member Secretary informed the members that the project proponent has submitted an on-line application for issue of Consent to Operate under the Water Act and the Air Act for operating the Tembecho Dongor iron and manganese mine, T.C no. 59/1951, situated at Maina and Cavorem Villages of Quepem Taluka and Rivona Village of Sanguem Taluka, South Goa District. The project proponent has submitted the following documents:

1. Copy of Environmental Clearance
2. Valid mining lease
3. Capping from Directorate of Mines and Geology
4. Valid approved mining plan (surface plan)
5. Transportation routes (from mine to jetty / plot)
6. Number of trucks expected to ply for transportation and timing
7. Location proposed for air / water quality monitoring in core zone and buffer zone on coastal map of Department of Mines and Geology
8. Mining Plan / Cadastral plan indicating the settling pond, check dams, retaining walls / structures, garland drains (Environmental Plan)
9. Proposed stacking area of overburden / extracted ore. Location showed on mining plan
10. Screening plants / beneficiation plants / mobile screening plants operating in the lease. Exact location shown on mining plan
11. Map indicating water bodies / wells / bore wells in the core and buffer zone will be provided. Monitoring levels of water table of these wells will be submitted by the mine (key plan)

Member Secretary further informed the members that the Ministry of Environment, Forest & Climate Change, Impact Assessment Division, Government of India vide their letter dated 13th February, 2017 has lifted abeyance on Environmental Clearance granted to the Mining lease 'Tembechem Dongor, bearing



T.C. no. 59 of 1951 of M/s Jairam B. Neugi and transfer of EC to M/s Minescape Minerals Pvt. Ltd. – Goa.

Further, Member Secretary informed that the project proponent had applied to the Directorate of Mines and Geology for enhancement of production limit from the previous 0.135 million tons allotted on ad-hoc pro-rata basis to 0.300 million tons. Accordingly, the Directorate of Mines of Geology, Govt. of Goa has vide their letter dated 29/12/2016 vide serial no. (1) has stated that the 'production limit for T.C no. 59/51 after enhancement now stands at 0.300 million tons for the year 2016-2017 valid till 31/03/2017. Further vide serial (2) it is stated that the 'enhancement is granted with the objective of attaining the target of 20 MT production of iron ore capped in the State of Goa by the decision of the Hon. Supreme Court of India in its order dated 21/04/2014 in W.P. no. 435/2012.

The Chairman sought clarifications regarding the present status of Air and Water quality in the area where mining activity is proposed to be undertaken. The Member Secretary clarified that the Goa State Pollution Control Board monitors water quality at Kevona (near Revona) at bund near Kushawati river on monthly basis under the National Water-quality Monitoring Programme (NWMP) of the Central Pollution Control Board. Various physico-chemical parameters were analyzed along with selective metal / microbial concentration. On perusal of said database for a period from April, 2015 to March, 2016, it is seen that water quality parameters are within the prescribed Central Pollution Control Board standards except microbial contamination. The water quality reports indicate that the average total coliform values exceed 5000 MPN per ml. as per the Central Pollution Control Board standards.

Further, the Member Secretary informed that the Ambient Air quality under the National Ambient Air quality Monitoring Programme (NAMP) of the Central Pollution Control Board is carried out by the Goa State Pollution Control Board at 15 locations within the State of which, two locations i.e Tilamol (Quepem) and Curchorem Town are within the peripheral zone of the said mining lease and the respective mining cluster.

The monitoring at these two locations is carried out by the Board through laboratories accredited through the Ministry of Environment Forest and Climate Change, Govt. of India and the parameters analysed include SO₂ and NO₂ along with PM₁₀ and PM_{2.5}. In addition, Carbon monoxide, Ozone and Lead are also monitored twice in a week. On perusal of the said database, it is observed that at both these locations, the analysed parameters are within the prescribed National Ambient Air-quality standards as notified by the Central Pollution Control Board in 2009.

The members noted that the said mining lease has been permitted to extract 0.300 million tons of ore upto 31st March, 2017. This quantum of extraction which

otherwise was expected to be carried out over a period of one year, whereas, within 25 days the mining unit would be proposing to extract the whole quantity i.e 0.300 million tons permitted by Directorate of Mines and Geology and the Environmental Clearance issued by the Ministry of Environment Forest and Climate Change. This would lead to intensive operation and could have adverse impact on the water and air quality. The impact on the ground water if any and would also be required to be assessed.

After due deliberations and discussions it was decided to seek the following clarifications from the mining proponent:


1. The total quantum of ore to be proposed to be extracted upto 31st March, 2017.
2. The proposed quantum of ore proposed to be transported to the jetty at Curchorem from the mine upto 31st March, 2017.
3. The number of trucks that are expected on the road on daily basis to achieve this target.
4. The measures proposed to be undertaken for preventing any adverse impact on the air quality.
5. As the total colliform values in the Kushawati river are already exceeding the prescribed standards, the amount of labour proposed to be deployed, quantum of sewage expected to be generated, the methodology of treatment and disposal in a manner to ensure that there is no impact whatsoever on the total colliform values in the Kushawati river. An action plan for zero discharge of sewage from the mining lease.

It was decided that upon receipt of the clarifications being given by the project proponent/ applicant., the Board meeting could be re-convened and proceedings of that meeting will be read with the part minutes of this deferred meeting.

III. The meeting was adjourned / deferred accordingly.



(Levinson Martins)
Member Secretary



(Dharmendra Sharma)
Chairman

**MINUTES OF THE RE-CONVENED
123rd MEETING (SPECIAL MEETING) OF THE
GOA STATE POLLUTION CONTROL BOARD
HELD ON 10TH MARCH, 2017 AT 5.15 PM IN THE
CONFERENCE HALL OF THE CHIEF SECRETARY,
SECRETARIAT, PORVORIM.**

1. The re-convened 123rd (Special) meeting of the Goa State Pollution Control Board was held on 10th March, 2017 at 5.15 pm in the Conference hall of the Chief Secretary, Secretariat, Porvorim.

The following members / officials attended the meeting:

1. Mr. Dharmendra Sharma, Chairman, Goa State Pollution Control Board.
2. Principal Chief Conservator of Forests was represented by Dr. A. Anil Kumar
3. Ms. R. Menaka, IAS, Director, Dept. of Industries, trade and Commerce
4. Director, Dept. of Mines and Geology was represented by Dy. Director - II
5. Mr. Sanjiv Dessai, Director, Dept. of Tourism
6. Ms. Fatima Pereira, Sarpanch, Village Panchayat Velsao
7. Mr. Levinson Martins, Member Secretary, Goa State Pollution Control Board

Further to the deliberations and discussions held during the adjourned meeting on 6th March, 2017, the project proponent submitted clarifications vide letter dated 6th March, 2017.

Member Secretary informed the members that the said clarifications were forwarded to the Directorate of Mines and Geology (DMG), Water Resource Department (WRD) and Ministry of Mines – Indian Bureau of Mines (IBM) (Office of the Regional Controller of Mines) for their opinion. DMG, WRD and IBM vide their letters dated 08/03/2017, 09/03/2017 and 09/03/2017 respectively have submitted their clarifications. He also informed that the Board has also assessed the probable impact on air quality based on the data of air monitoring available at Tilamol junction. Letters received from DMG, WRD and IBM and the assessment done by the Board were placed before the members.

The details of the existing number of trucks carrying ore from the presently operating mine and the e-auctioned ore being transported on the same route on which the ore from this mine will be transported cannot be ascertained off hand

which is however regulated by the Department of Mines and Geology as informed by the Assistant Director of Mines and Geology during deliberations.

The Government of India and the State Government organizations have already granted their permissions to extract ore from this mine upto 31st March, 2017. The Department of Mines and Geology has permitted extraction of 0.3 million tons upto 31st March, 2017 and the project proponent has undertaken that though they will extract the whole quantity by 31st March, 2017, they will transport only 9% of the ore extracted upto 31st March, 2017, i.e 27,000 tons and they have undertaken that the entire transportation shall be done under prevalent laws and guidelines and under the supervision of the Directorate of Mines and Geology. The balance quantity will be transported in the fair season prior to onset of monsoon. The shortage of time to 31st March, 2017 deadline was the basis of ^{High Court} issuing the direction to the Board to convene a meeting. As verification of the plan submitted by M/s Minescape Minerals Private Limited (earlier Jairam Neogui) will take time and eat into available time for extraction, in the special circumstances and in view of the Court instructions, balance of convenience necessitates a reliance on self certification by the project proponent. Further, considering the ambient air quality monitoring and the water quality data in the area where the mining activity is proposed to be undertaken to be well within the permissible limits, as on date, it is seen that the balance of convenience is in favour of the applicant. After due consideration and discussions, the Board decided to consider this application for Consent to Operate the said mine subject to the following conditions:

1. The project proponent will submit a performance Bank Guarantee amounting to Rs. 1 crore valid for one year as per the decision of the Board by 14/03/2017. However, the project proponent requested for time to submit the Performance Bank Guarantee as the next three days being Bank holidays. Further, the Board decided that in the event the project proponent fails to submit the Bank Guarantee by 14th March, 2017, the Board shall be free to revoke the Consent issued to the project proponent.
2. Having considered the ambient air quality monitoring data which is within the permissible limits for the last six months which should be part of the minutes. The Board shall monitor the air quality in the buffer zone and having established the base-line monitoring data which is within the permissible limits and in the event the air quality deviates the permissible limits from the base- line data during the mining operation of the present mine, then any deviation / rise in the pollution shall be attributed to the operation of the present mine, and the Board shall be free to take action which may include forfeiting the performance Bank Guarantee and revoke the Consent to Operate issued. Similarly, the project proponent shall ensure that the sewage generated within his premises shall be managed as submitted vide their letter dated 06/03/2017, i.e to transport the sewage to the Public Works Department Sewage Treatment Plant at Margao.

3. The project proponent shall transport only 27,000 tons of the ore extracted upto 31st March, 2017.

4. The Board officials will inspect the mine during the weekend to assess the base-line data and maintain appropriate records duly signed by the Board officials and the project proponent with photographs.


5. To co-relate the data, the Department of Mines and Geology will share the data with regard to the transportation of ore with the Goa State Pollution Control Board, so that the data could be co-related with the air quality monitoring at this location as well as all the mines where the operations are in progress.

6. The Board officials will also conduct weekly inspections and submit reports.

7. The Board authorized the Member Secretary of the Board to issue Consent to the mining unit of M/s Minescape Minerals Private Limited (earlier Jairam Neogui) today (i.e 10/03/2017) with a validity period of upto 31st March, 2017, as the project proponent has submitted an Undertaking to submit the performance Bank Guarantee by 14/03/2017, failing which the Board will be at liberty to withdraw the Consent.

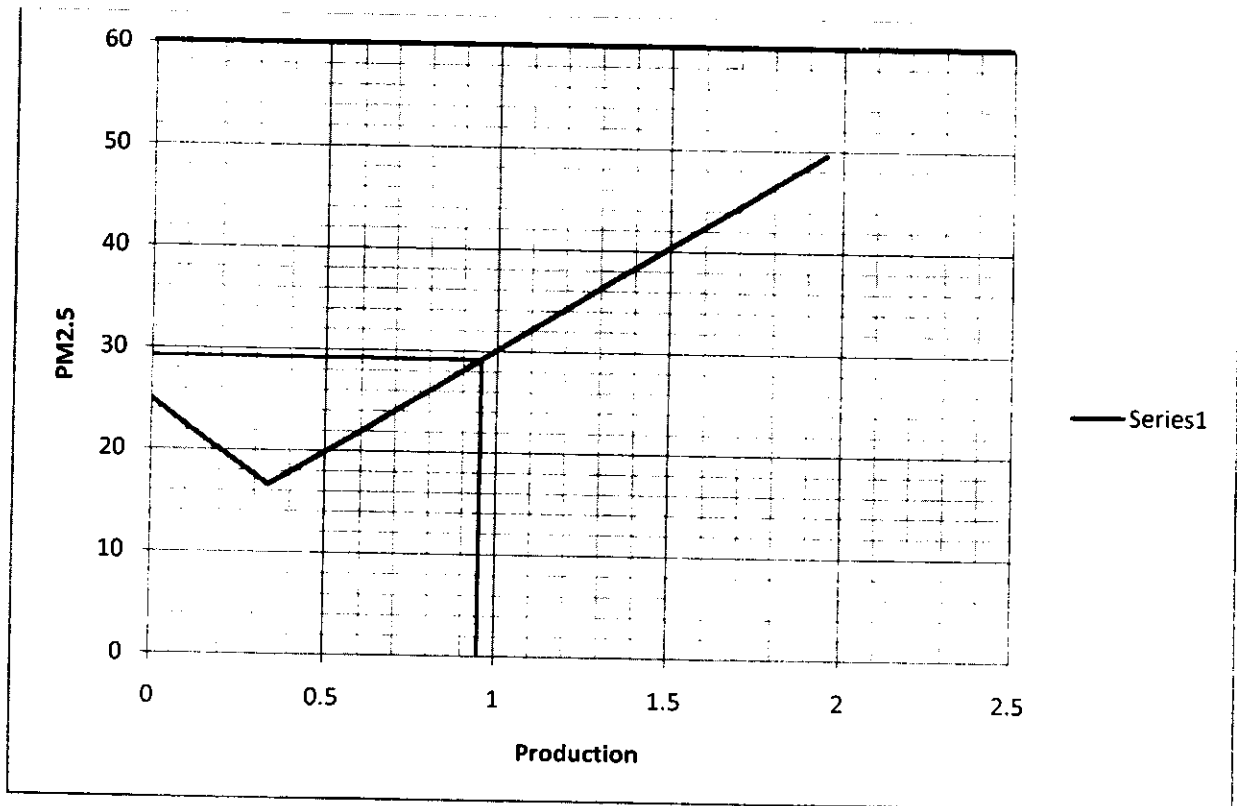
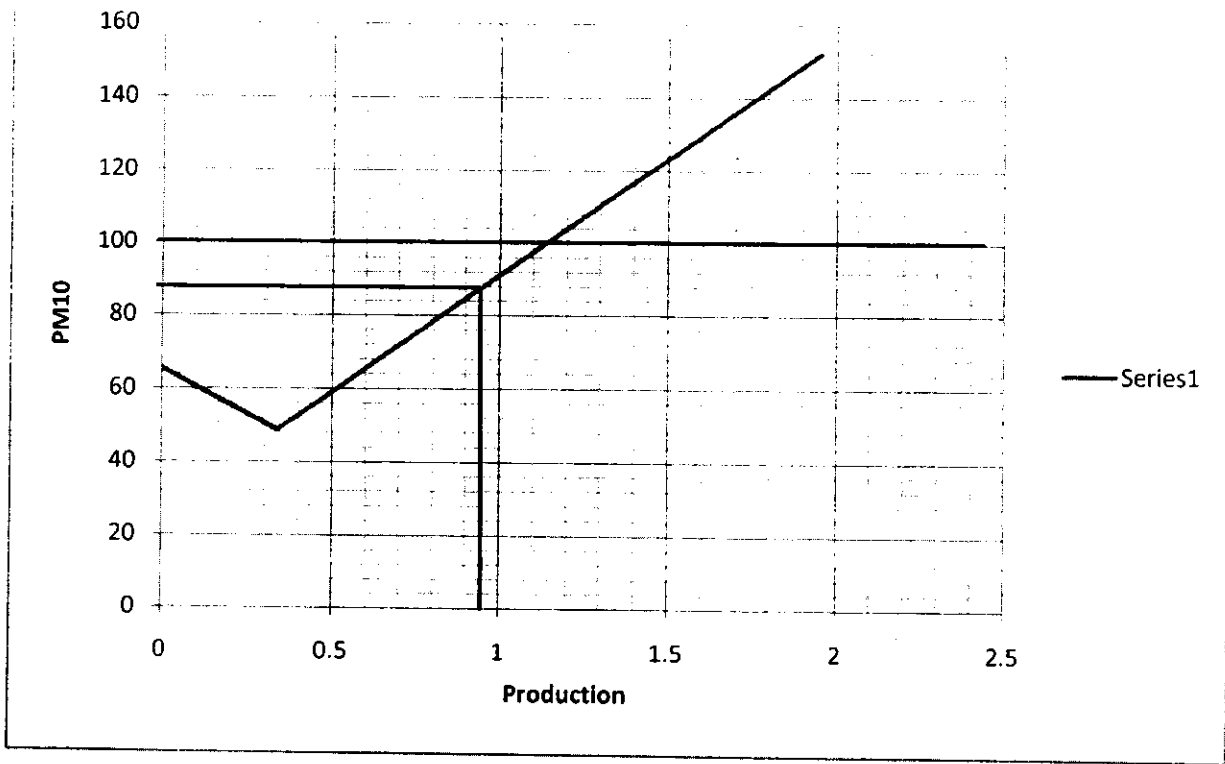
II. The meeting ended with thanks to the Chair.

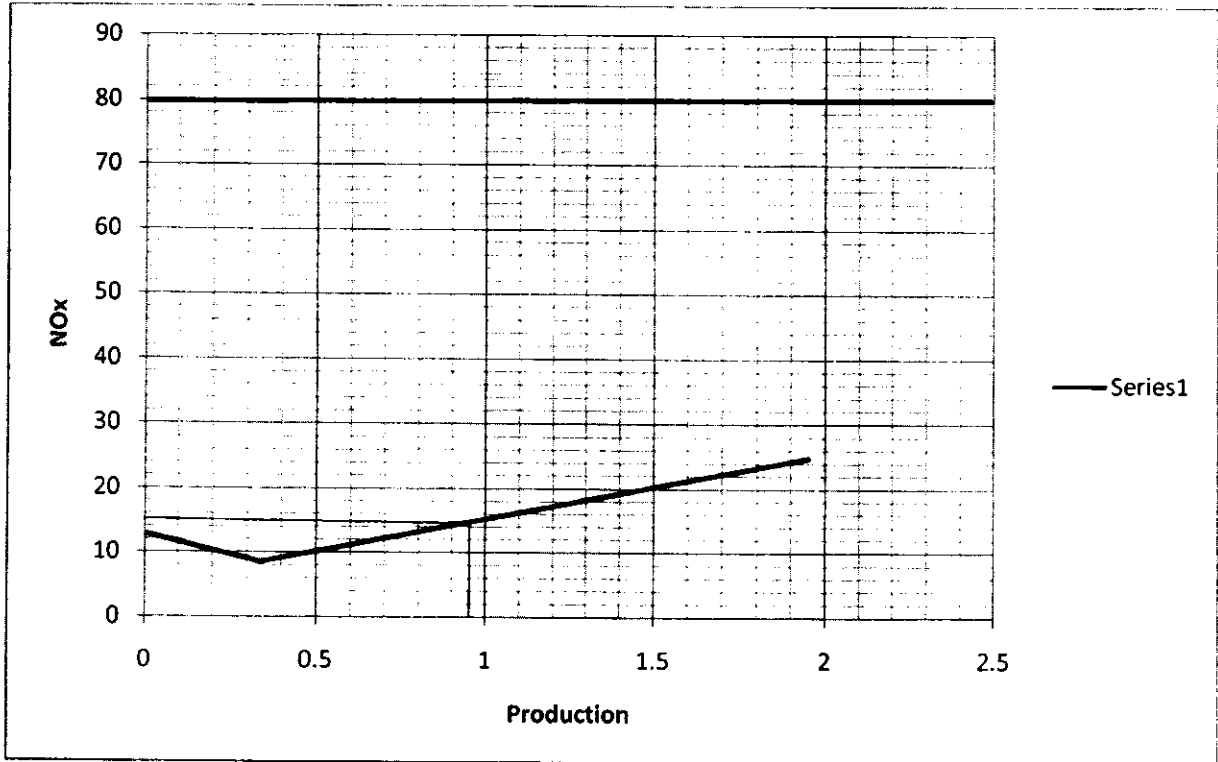
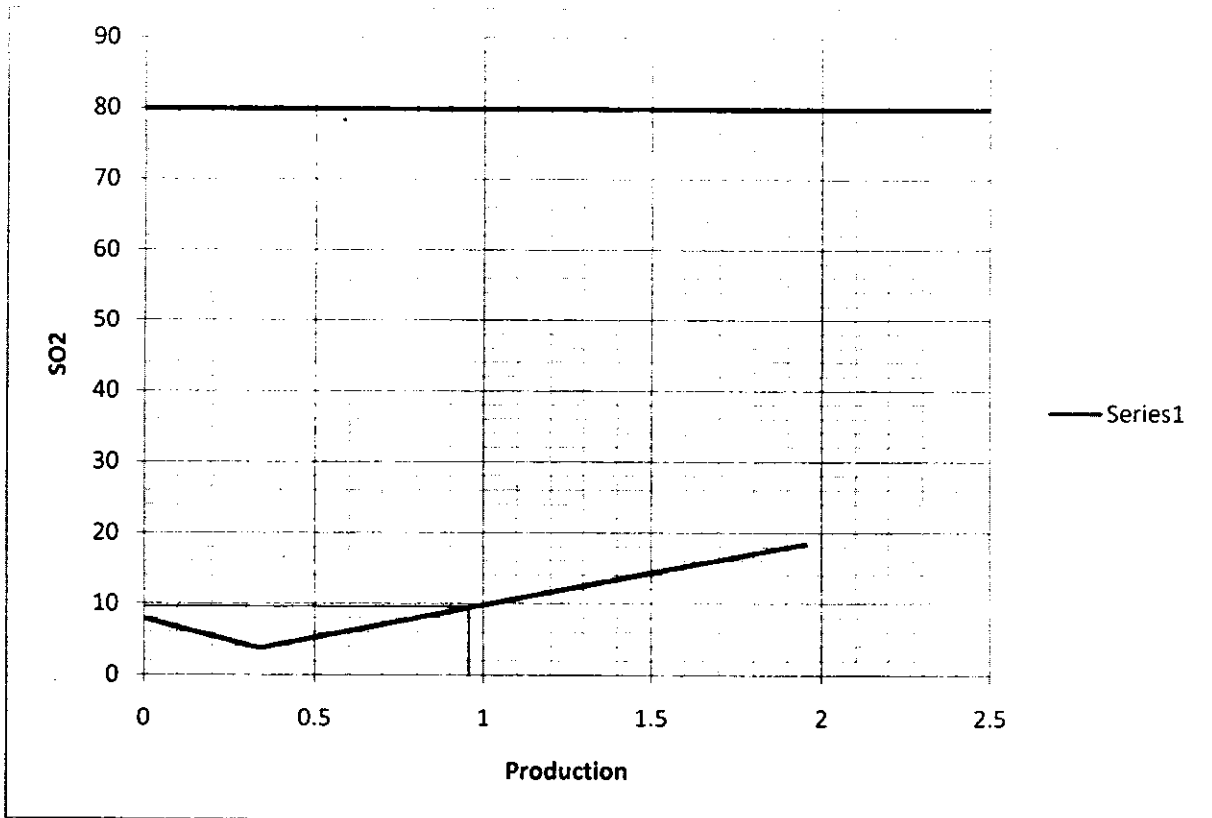

(Levinson Martins)
Member Secretary


(Dharmendra Sharma)
Chairman

AIR QUALITY DATA FOR TILAMOL JUNCTION, QUEPEM										
Date	Production (MTPA)	PM10		PM2.5		SO2		NOX		Permissible Limit
		Recorded Value	Permissible Limit	Recorded Value	Permissible Limit	Recorded Value	Permissible Limit	Recorded Value	Permissible Limit	
2011-12	1.95	152.12	100	49.59	60	18.43	80	24.89	80	80
2012-13	0	91.5	100	35.27	60	13.37	80	17.86	80	80
2013-14	0	47.66	100	18.49	60	6.05	80	11.59	80	80
2014-15	0	57.42	100	21.18	60	4.35	80	9.2	80	80
2015-16	0.338	48.7	100	16.6	60	3.84	80	8.58	80	80
2016-17	0.95		100		60		80		80	80

Note: All the values are in micro-gram per cubic metre





RIVER KUSHAWATI NEAR BUND AT KEVONA, RIVONA, SANGHEM 2015-2016

Sr. No	Parameters	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Average	Max	Min	Limit for class C river as per CPCB classification based on designated best use of rivers
1	pH	6.65	6.74	6.24	6.7	6.64	6.38	6.9	6.38	6.72	6.55	7.33	6.67	6.66	7.33	6.24	6-9
2	Temperature °C	29.9	29.4	27.1	26.9	27.5	27.7	27.7	29.1	29.7	25	26	28.9	27.91	29.9	25.00	
3	Conductivity µs/cm	170.6	192.77	173.27	53.63	83.06	62.4	58.4	85.98	107.18	182.68	166.64	52.29	115.74	192.77	52.29	
4	Dissolved Oxygen mg/l	6.1	4.4	6	7.6	6.5	7	4.2	7.3	7.7	7.2	7.2	6.3	6.46	7.7	4.20	4 mg/l or more
5	Turbidity (NTU)	2.47	2.1	1.13	11.29	20.5	3.43	44.1	7.74	1.09	1.94	2.82	2.61	8.44	44.1	1.09	
6	Nitrite Nitrogen mg/l	0.003	0.003	0.002	0.017	0.007	0.001	0.007	0.003	0.002	0.002	0.008	0.004	0.00	0.017	0.00	
7	Nitrogen(Nitrate) mg/l	0.13	0.18	0.12	0.22	0.71	0.2	0.12	0.15	0.03	0.16	0.21	0.97	0.27	0.97	0.03	
8	Phosphate mg/l	0.02	0.007	0.01	0.02	0.02	0.01	0.017	0.001	0.02	0.01	BDL	0.07	0.02	0.07	0.00	
9	BOD mg/l	2	0.6	0.9	0.7	1.3	0.4	0.5	0.6	0.9	1.6	2.4	1.7	1.13	2.4	0.40	3 mg/l or less
10	COD mg/l	1	4	3	3	2	3	6	10	6	6	16	7	5.58	16	1.00	
11	Chloride mg/l	8.5	14.68	6	3.42	4	10.5	5	9	9.71	18.5	10.27	12.72	9.36	18.5	3.42	
12	Fecal Coliform MPN/100 ml	1700	1300	1700	4900	7900	1300	3300	2300	780	4900	7900	3300	3440.00	7900	780.00	
13	Total Coliform MPN/100 ml	3300	2300	3300	7900	13000	2300	4900	4900	2300	7900	13000	4900	5833.33	13000	2300.00	5000 or less MPN/100 ml
14	Ammonia mg/l	0.02	0.03	0.01	0.06	0.01	0.04	0.02	0.002	0.004	0.02	0.002	0.004	0.02	0.06	0.00	
15	Total Dissolved Solids(mg/l)	78	127	150	33	62	59	38	46	73	131	91	44	77.67	150	33.00	
16	Total Fixed Solids (mg/l)	21	97	82	12	10	25	19	20	41	31	4	20	31.83	97	4.00	
17	Total Suspended Solid (mg/l)	6	12	15	35	21	97	58	35	34	5	4	5	27.25	97	4.00	
18	Hardness(mg/l)	76	68	86	22	26	88	18	22	56	54	64	58	53.17	88	18.00	
19	Fluoride(mg/l)	0.17	0.06	0.09	BDL	0.09	0.16	BDL	0.19	0.21	0.13	0.04	0.1	0.12	0.21	0.04	
20	Boron(mg/l)	9.4	0.45	0.01	0.09	0.13	0.32	0.1	0.97	1.92	3.12	BDL	1.13	1.60	9.4	0.01	
21	Sulphate (mg/l)	2	2.71	2.9	3.2	5.4	82.2	2.15	37	2.52	3.5	1.68	11.21	13.04	82.2	1.68	
22	Total Alkalinity(mg/l)	82	84	90	28	30	22	30	34	52	64	64	80	55.00	90	22.00	
23	Phenolphthalein Alkalinity(mg/l)	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	
24	Sodium(mg/l)	7.6	5.8	3	4.4	4.2	9.3	4.2	4	14.8	11.3	7	6.9	6.88	14.8	3.00	
25	Potassium(mg/l)	4.5	6.5	0.7	1.9	2.6	7.4	1.8	1.8	7.5	4.9	3.2	3	3.82	7.5	0.70	
26	Calcium as CaCO3(mg/l)	44	40	44	10	18	10	12	14	22	36	34	46	27.50	46	10.00	
27	Magnesium(mg/l)	7.8	6.8	10.2	2.92	1.9	19	1	1.9	8.26	4.4	7.3	2.92	6.20	19	1.00	

RIVER KUSHAWATI NEAR BUND AT KEVONA, RIVONA, SANGUEM 2016

Sr. No	Parameters	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Limit for class C river as per CPCB classification based on designated best use of rivers
1	pH	6.57	7.93	6.5	7.62	8.00	6.49	6.36	7.26	6.78	6-9
2	Temperature °C	28	32.8	29.7	27.2	26.80	28.00	27.00	26.00	27.40	
3	Conductivity µs/cm	170.6	131.3	169.4	90.49	51.47	62.64	-	101.50	108.90	
4	Dissolved Oxygen mg/l	4.8	5.6	6.3	7	7.20	7.60	7.70	7.90	8.50	4 mg/l or more
5	Turbidity (NTU)	2.5	1.61	1.3	8.54	5.66	1.26	7.70	5.39	1.32	
6	Nitrite Nitrogen mg/l	0.004	0.002	0.002	0.004	0.001	0.049	0.001	0.003	0.001	
7	Nitrogen(Nitrate) mg/l	0.2	0.17	0.039	0.26	0.17	0.21	0.11	0.14	0.23	
8	Phosphate mg/l	0.003	0.002	0.009	0.02	0.28	0.00	0.01	0.01	0.00	
9	BOD mg/l	2.2	0.4	0.7	0.6	2.30	0.90	0.70	1.00	1.10	3 mg/l or less
10	COD mg/l	8	5	4	5	6.0	2.0	2.8	3.0	3.0	
11	Chloride mg/l	6.9	11	12.14	9.29	6.0	3.2	3.1	6.8	3.4	
12	Fecal Coliform MPN/100 ml	4900	780	2300	2300	2300.00	1700.00	7000.00	1300.00	1700.00	
13	Total Coliform MPN/100 ml	7900	1300	4900	4900	3300.00	3300.00	9400.00	2300.00	3300.00	5000 or less MPN/100 ml
14	Ammonia mg/l	0	0.04	0.06	0.09	0.04	0.02	0.01	0.02	0.01	
15	Total Dissolved Solids(mg/l)	89	69	123	55	31	43	281	72	65	
16	Total Fixed Solids (mg/l)	35	23	33	23	27	13	171	40	32	
17	Total Suspended Solid (mg/l)	2	5	8	30	15	15	47	33	68	
18	Hardness(mg/l)	88	84	84	20	4	20	22	38	54	
19	Fluoride(mg/l)	0.37	0.07	0.82	0.1	0.53	0.6	0.61	BDL	0.09	
20	Boron(mg/l)	2.1	0.12	0.45	BDL	1.08	BDL	BDL	-	-	
21	Sulphate (mg/l)	3.21	3.3	2.02	3.51	2.28	1.44	3.1	3.34	2.3	
22	Total Alkalinity(mg/l)	74	40	22	8	4	30	60	8	49	
23	Phenolphthalein Alkalinity(mg/l)	0	0	0	0	0	0	0	0	0	
24	Sodium(mg/l)	8	8.6	4.5	7.9	5.6	8.2	1.5	3.2	3.7	
25	Potassium(mg/l)	6.4	3.1	6.9	2.3	2.3	3.9	2.9	2.6	2.9	
26	Calcium as CaCO3(mg/l)	40	48	52	8	2	10	10	26	24	
27	Magnesium(mg/l)	11.66	8.8	7.78	2.92	0.5	2.43	2.9	4.37	7.29	
29	Nickel(mg/l)	BDL						0.01			
30	Copper(mg/l)	0.05						0.001			
32	Chromium(mg/l)	BDL						BDL			
33	Cadmium(mg/l)	0.02						BDL			
34	Zinc(mg/l)	0.08						0.412			
35	Lead(mg/l)	BDL						BDL			
36	Iron(mg/l)	0.6						0.31			
38	Alpha BHC (mg/l)	<0.005						<0.005			
39	Beta BHC (mg/l)	<0.005						<0.005			
40	Gamma BHC (mg/l)	<0.005						<0.005			
41	Hexachloro benzene (mg/l)	<0.005						<0.005			
42	Heptachlor (mg/l)	<0.005						<0.005			
43	Aldrin (mg/l)	<0.005						<0.005			

44	Dieldrin (mg/l)	<0.005						<0.005		
45	Endrin (mg/l)	<0.010						<0.010		
46	Methoxychlor (mg/l)	<0.005						<0.005		
47	P,P - DDE (mg/l)	<0.005						<0.005		
48	O,P-DDD (mg/l)	<0.005						<0.005		
49	O,P-DDT (mg/l)	<0.005						<0.005		
50	P,P-DDT (mg/l)	<0.005						<0.005		
51	Heptachlor endo-epoxide (mg/l)	<0.005						<0.005		
52	Alpha endosulphate (mg/l)	<0.005						<0.005		
53	Beta-endosulphar (mg/l)	<0.005						<0.005		
54	carbaryl (mg/l)	<0.005						<0.005		
55	Anilofos (mg/l)	<0.04						<0.04		
56	Parathion methyl (mg/l)	<0.005						<0.005		
57	Malathion (mg/l)	<0.005						<0.005		
58	Chloropylos (mg/l)	<0.005						<0.005		

PADMAJA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Tilamol) for the month of JANUARY-2017

State Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	Average of SO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	Average of NO ₂	8-Hrly value of PM 10	8-Hrly value of PM 10	8-Hrly value of PM 10	8-Hrly value of PM 10	Average of PM 10	8-Hrly value of PM 2.5	8-Hrly value of PM 2.5	8-Hrly value of PM 2.5	8-Hrly value of PM 2.5	Average of PM 2.5	AQI
	Tilamol	Village Area		Goa	21/1/2017	5.3	BDL	6.1	4.6	BDL	6.8	5.7	12.1	13.9	11.1	12.1	9.3	13.0	11.9	73.8	80.2	58.5	70.8	33.7	37.5	30.0	33.7	71			
					5/1/2017	5.3	4.6	4.6	6.1	BDL	6.8	5.5	11.1	13.0	11.1	BDL	10.2	13.0	11.7	66.3	62.0	58.7	62.4	31.2	28.7	32.5	30.8	62			
					9/1/2017	4.6	5.3	6.8	BDL	4.6	5.3	5.3	14.8	12.1	13.0	10.2	9.3	13.0	17.1	84.3	67.3	62.7	71.5	36.2	31.2	27.5	31.7	71			
					12/1/2017	5.3	6.8	6.1	6.8	BDL	7.6	6.3	12.1	11.1	13.0	10.2	11.1	13.0	11.3	76.1	88.9	70.4	78.5	38.7	41.2	30.0	36.7	79			
					16/1/2017	7.6	8.4	6.8	4.6	BDL	5.3	6.5	15.8	13.0	13.9	11.1	13.9	12.1	13.3	68.5	82.7	75.1	75.5	35.0	36.2	27.5	32.9	75			
					19/1/2017	6.8	4.6	6.1	7.6	5.3	7.6	6.3	10.2	12.1	13.9	11.1	10.2	13.0	11.7	60.7	60.1	68.0	62.9	32.5	27.5	31.2	30.4	63			
					23/1/2017	8.4	4.6	6.1	7.6	BDL	6.1	6.5	13.9	15.8	14.8	12.1	13.9	13.9	62.8	66.5	61.7	63.7	31.2	30.0	23.7	28.3	64				
					26/1/2017	4.6	7.6	4.6	4.6	BDL	6.8	5.6	12.1	10.2	13.0	14.8	11.1	13.9	12.4	68.3	76.9	69.1	71.4	27.5	32.5	27.5	29.2	71			
					30/1/2017	4.6	6.1	8.4	6.8	4.6	9.1	6.6	13.9	13.0	11.1	13.0	12.1	14.8	13.0	82.4	71.5	64.3	72.7	30.0	28.7	27.5	28.7	73			

SO₂ BDL value = 4
 NO_x BDL value = 9
 PM 2.5 & PM 10 BDL value = 5
 Pb BDL value = 0.1
 Heavy Rains - HR
 Machine failure = <
 Power failure = ●
 ** All parameters concentration is in micrograms/metercube (µg/m³)

Analysed by:



Authorised Signatory

PADMAJA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Tilarnol) for the month of JANUARY-2017

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	8-Hrly value of O ₃	8-Hrly value of Pb	8-Hrly value of Pb	8-Hrly value of Pb	Average of Pb	8-Hrly Average @ 1-Hrly Sampled CO
	Tilarnol	Village Area		Goa	2/1/2017	0.53	0.12	BDL	0.13	0.1	0.34
					5/1/2017	0.59	0.24	BDL	0.25	0.2	0.36
					9/1/2017	0.47	0.37	0.21	0.34	0.3	0.33
					12/1/2017	0.59	0.40	BDL	0.37	0.4	0.34
					16/1/2017	0.76	0.22	0.18	0.30	0.2	0.35
					19/1/2017	0.65	0.43	0.13	0.23	0.3	0.35
					23/1/2017	0.70	BDL	0.22	BDL	0.2	0.35
					26/1/2017	0.82	0.16	0.14	0.34	0.2	0.37
					30/1/2017	0.65	0.40	0.11	0.49	0.3	0.33

SO2 BDL value = 4
 NOx BDL value = 9
 PM2.5& PM 10 BDL value-5
 Pb BDL value -0.1
 Heavy Rains - HR
 Machine failure= <
 Power failure=●
 **All parameters concentration is in micrograms/metercube(ug/m3)

Analysed by:




Authorised Signatory



PADMAJA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Curchorem) for the month of JANUARY-2017

State Name	City Name	Area Class	Name of monitoring station	Station Code	Sampling date*	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	Average of SO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	Average of NO ₂	8-Hrly value of PM 10	8-Hrly value of PM 10	8-Hrly value of PM 10	Average of PM 10	8-Hrly value of PM 2.5	8-Hrly value of PM 2.5	8-Hrly value of PM 2.5	8-Hrly value of PM 2.5	Average of PM 2.5	AOI
Goa	Curchorem	Area Class	Curchorem	Station Code	31/1/2017	7.6	6.1	6.8	7.6	4.6	6.1	6.5	13.0	9.3	12.1	11.1	13.0	13.9	12.1	62.7	56.4	67.1	62.1	26.2	28.7	28.7	25.0	26.6	62.0
					6/1/2017	4.6	6.1	5.3	6.8	4.6	6.1	5.5	12.1	13.9	10.2	13.0	12.1	13.9	12.5	64.7	54.6	61.4	60.2	28.7	25.0	27.5	27.1	60.0	
					10/1/2017	4.6	6.1	6.8	4.6	4.6	7.6	5.7	12.1	14.8	9.3	13.0	12.1	13.9	12.5	66.2	52.4	46.6	55.1	28.7	25.0	22.5	25.4	55.0	
					14/1/2017	4.6	BDL	6.1	BDL	5.3	BDL	5.3	10.2	13.0	13.9	12.1	11.1	11.9	57.2	52.7	53.3	54.4	31.2	27.5	28.7	29.1	54.0		
					17/1/2017	6.8	4.6	BDL	6.1	BDL	4.6	5.5	14.8	12.1	13.9	14.8	13.0	13.9	13.8	51.8	56.3	53.1	53.7	25.0	22.5	23.7	23.7	54.0	
					20/1/2017	6.1	BDL	6.8	4.6	5.3	4.6	5.5	13.0	13.9	12.1	11.1	11.1	12.7	60.4	57.7	52.5	56.9	30.0	28.7	26.2	28.3	57.0		
					24/1/2017	5.3	7.6	4.6	6.1	6.1	7.6	6.2	13.0	10.2	BDL	12.1	11.1	15.8	63.7	60.2	61.0	61.6	28.7	25.0	26.2	26.6	62.0		
					27/1/2017	6.1	BDL	5.3	4.6	BDL	5.3	5.3	8.3	11.1	13.9	12.1	10.2	11.4	52.9	54.6	59.1	55.5	27.5	28.7	25.0	27.1	56.0		
					31/1/2017	5.3	5.3	7.6	BDL	6.1	6.8	6.2	10.2	12.1	12.1	13.9	11.1	12.1	72.4	58.8	56.5	62.6	33.7	32.5	31.2	32.5	63.0		

SO₂ BDL value = 4
 NO_x BDL value = 9
 PM_{2.5} & PM₁₀ BDL value = 5
 Pb BDL value = 0.1
 Heavy Rains - HR
 Machine failure = <
 Power failure = ●
 **All parameters concentration is in micrograms/metercube(µg/m³)

Analysed by:




Authorised Signatory

paell

PADMAJA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Curchorem) for the month of JANUARY-2017

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	8-Hrly value	8-Hrly value	8-Hrly value	Average of Pb	8-Hrly Average @ 1-Hrly Sampled CO	
						of O ₃	of Pb	of Pb			
Curchorem		City Area	Curchorem	Goa	31/1/2017	0.65	0.21	BDL	0.25	0.2	0.32
					6/1/2017	0.76	0.18	0.12	0.29	0.2	0.33
					10/1/2017	0.41	0.18	0.14	0.11	0.1	0.35
					14/1/2017	0.94	0.23	BDL	0.25	0.2	0.34
					17/1/2017	0.70	BDL	BDL	BDL	BDL	0.35
					20/1/2017	0.82	0.26	0.17	BDL	0.2	0.37
					24/1/2017	0.65	0.12	BDL	0.21	0.2	0.36
					27/1/2017	0.70	BDL	0.20	0.18	0.2	0.36
					31/1/2017	0.59	BDL	0.21	0.33	0.3	0.37

SO₂ BDL value = 4
 NO_x BDL value = 9
 PM 2.5& PM 10 BDL value-5
 Pb BDL value -0.1
 Heavy Rains - HR
 Machine failure=<
 Power failure=●
 **All parameters concentration is in micrograms/metercube(µg/m³)



Prasanna

Authorised Signatory

Analysed by:

[Signature]

PADMAJA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Tilamol) for the month of November-2016

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	November-2016				Average of Pb	
						8-Hrly value of Pb	8-Hrly value of Pb	8-Hrly value of Pb	8-Hrly value of Pb		
Tilamol	Village Area			Goa	3/11/2016	0.47	BDL	0.1	0.2	BDL	0.2
					7/11/2016	0.82	0.3	0.4	0.2	0.3	
					10/11/2016	0.47	0.2	0.2	0.1	0.2	
					14/11/2016	0.70	BDL	0.4	0.2	0.3	
					17/11/2016	0.82	0.4	0.2	0.1	0.2	
					21/11/2016	0.35	0.1	BDL	0.3	0.2	
					24/11/2016	0.82	BDL	1.1	0.2	0.7	
28/11/2016	0.35	0.2	0.2	0.1	0.2						

SO2 BDL value = 4
 NOx BDL value = 9
 PM 2.5& PM 10 BDL value-5
 Pb BDL value -0.1
 Heavy Rains - HR
 Machine failure=<
 Power failure=●
 **All parameters concentration is in micrograms/metercube(µg/m3)



pral

Analysed by: *[Signature]*

Authorised Signatory

Ambient Air Quality Data (Tilanol) for the month of November-2016

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	4-Hrly	4-Hrly	4-Hrly	4-Hrly	4-Hrly	Average	4-Hrly	4-Hrly	4-Hrly	4-Hrly	4-Hrly	4-Hrly	Average	8-Hrly	8-Hrly	8-Hrly	8-Hrly	8-Hrly	8-Hrly	Average			
						value of SO ₂	value of SO ₂	value of SO ₂	value of SO ₂	value of SO ₂	of SO ₂	value of NO ₂	value of NO ₂	value of NO ₂	value of NO ₂	value of NO ₂	value of NO ₂	value of NO ₂	value of NO ₂	value of NO ₂	value of NO ₂	of NO ₂	PM 10	PM 10	PM 10	PM 10	PM 10	PM 10
Tilanol	Village Area			Goa	3/11/2016	9.1	11.4	9.1	7.6	6.1	12.2	9.3	16.7	13.0	10.2	13.9	11.1	18.5	13.9	36.7	38.1	39.4	38.1	17.5	18.7	22.5	19.6	
					7/11/2016	11.4	9.1	6.1	8.4	4.6	6.8	7.7	13.9	11.1	14.8	10.2	9.3	11.1	11.7	41.5	55.1	43.3	46.6	32.0	20.0	25.0	25.7	
					10/11/2016	8.4	10.6	8.4	6.1	5.3	9.9	8.1	12.1	15.8	13.9	9.3	10.2	13.9	12.5	34.8	38.4	46.1	39.8	17.5	17.5	27.5	20.8	
					14/11/2016	8.4	7.6	9.1	4.6	3.8	7.6	6.8	11.1	8.3	13.9	12.1	8.3	13.9	11.3	44.8	52.6	56.2	51.2	32.7	27.5	30.0	30.1	
					17/11/2016	12.2	9.9	11.4	6.8	3.8	9.1	8.9	14.8	13.0	13.0	10.2	7.4	11.1	11.6	39.7	43.1	53.5	45.4	22.5	28.7	33.7	28.3	
					21/11/2016	9.1	9.1	7.6	6.1	3.8	9.9	7.6	11.1	12.1	13.9	10.2	6.5	12.1	11.0	47.2	47.5	40.0	44.9	30.0	18.7	21.2	23.3	
					24/11/2016	11.4	9.9	7.6	3.8	8.4	9.1	8.4	9.3	10.2	15.8	12.1	11.1	10.2	11.4	54.4	46.6	38.1	46.4	32.5	25.0	17.5	25.0	
					28/11/2016	10.6	8.4	12.2	7.6	6.8	9.9	9.3	13.0	10.2	12.1	11.1	10.2	12.1	11.4	59.7	40.3	40.9	47.0	30.0	22.5	25.0	25.8	

S02 BDL value = 4
 NOx BDL value = 9
 PM 2.5 & PM 10 BDL value = 5
 Pb BDL value = 0.1
 Heavy Rains - HR
 Machine failure = <
 Power failure = ●
 **All parameters concentration is in micrograms/metercube (ug/m3)

Analysed by: *[Signature]*



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 Authorised Signatory

PADMAJA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Curchorem) for the month of November-2016

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	Average of SO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	Average of NO ₂	8-Hrly value of PM ₁₀	8-Hrly value of PM ₁₀	8-Hrly value of PM ₁₀	8-Hrly value of PM ₁₀	Average of PM ₁₀	8-Hrly value of PM _{2.5}	8-Hrly value of PM _{2.5}	8-Hrly value of PM _{2.5}	Average of PM _{2.5}
						1/11/2016	4/11/2016	8/11/2016	11/11/2016	15/11/2016	18/11/2016	22/11/2016	25/11/2016	29/11/2016	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Curchorem	City Area	Curchorem	Goa	1/11/2016	6.8	BDL	5.3	6.1	BDL	7.6	6.5	13.0	9.3	BDL	11.1	BDL	10.2	43.7	45.1	41.8	43.5	43.5	20.0	22.5	23.7	22.1
					4/11/2016	5.3	BDL	4.6	7.6	BDL	5.3	5.7	13.9	13.0	13.9	15.8	BDL	9.3	48.2	58.5	55.6	54.1	28.7	30.0	32.5	30.4	
					8/11/2016	4.6	BDL	BDL	6.1	4.6	BDL	5.1	10.2	BDL	13.9	12.1	9.3	11.1	45.5	47.9	43.4	45.6	26.2	22.5	20.0	22.9	
					11/11/2016	4.6	6.1	4.6	5.3	BDL	6.8	5.5	9.3	BDL	BDL	11.1	BDL	11.1	37.6	39.2	43.1	40.0	17.5	20.0	18.7	18.7	
					15/11/2016	5.3	6.8	BDL	BDL	5.3	6.3	6.3	14.8	12.1	BDL	13.0	13.0	12.6	48.5	42.5	40.3	43.8	25.0	17.5	21.2	21.2	
					18/11/2016	6.8	4.6	BDL	7.6	4.6	5.9	5.9	BDL	10.2	BDL	9.3	10.2	10.4	43.1	40.7	53.4	45.7	20.0	22.5	25.0	22.5	
					22/11/2016	4.6	6.8	BDL	5.3	6.8	5.8	5.8	9.3	BDL	BDL	12.1	12.1	10.8	64.6	43.1	45.7	51.1	31.2	21.2	23.7	22.5	
					25/11/2016	7.6	BDL	5.3	4.6	BDL	5.9	5.9	10.2	12.1	BDL	11.1	BDL	10.7	38.6	42.8	38.4	39.9	20.0	17.5	18.7	18.7	
					29/11/2016	8.4	6.1	7.6	5.3	BDL	6.7	6.7	13.0	14.8	13.0	13.9	9.3	12.1	41.8	43.5	49.2	44.8	17.5	18.7	22.5	19.6	

SO₂ BDL value = 4
 NO_x BDL value = 9
 PM_{2.5} & PM₁₀ BDL value = 5
 Pb BDL value = 0.1
 Heavy Rains - HR
 Machine failure = <
 Power failure = ●
 **All parameters concentration is in micrograms/metercube(µg/m³)

Analysed by *[Signature]*



[Signature]
 Authorised Signatory

PADMAMAJA AEROBIOLOGICALS PVT. LTP

Ambient Air Quality Data (Curchorem) for the month of November-2016

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	Pb				Average of Pb
						8-Hrly value of Pb	8-Hrly value of Pb	8-Hrly value of Pb	8-Hrly value of Pb	
Curchorem	Curchorem	City Area	Curchorem	Goa	1/11/2016	0.65	BDL	0.8	0.4	0.6
					4/11/2016	0.47	0.2	0.3	BDL	0.3
					8/11/2016	0.53	BDL	1.4	1.3	1.4
					11/11/2016	0.59	0.2	BDL	0.3	0.2
					15/11/2016	0.76	BDL	1.9	0.4	1.1
					18/11/2016	0.53	0.1	2.5	BDL	1.3
					22/11/2016	0.47	0.3	BDL	1.2	0.8
					25/11/2016	0.82	0.3	1.4	0.2	0.6
29/11/2016	0.23	0.2	2.1	BDL	1.2					

SO2 BDL value = 4

NOx BDL value = 9

PM 2.5 & PM 10 BDL value-5

Pb BDL value -0.1

Heavy Rains - HR

Machine failure = <

Power failure = ●

** All parameters concentration is in micrograms/metercube($\mu\text{g}/\text{m}^3$)



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 Authorised Signatory

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PADMAJA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Curchorem) for the month of December-2016

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	Average of SO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	Average of NO ₂	8-Hrly value of PM 10	8-Hrly value of PM 10	8-Hrly value of PM 10	Average of PM 10	8-Hrly value of PM 2.5	8-Hrly value of PM 2.5	8-Hrly value of PM 2.5	Average of PM 2.5	AQI
						02/12/2016	06/12/2016	09/12/2016	13/12/2016	16/12/2016	20/12/2016	23/12/2016	27/12/2016	30/12/2016	02/12/2016	06/12/2016	09/12/2016	13/12/2016	16/12/2016	20/12/2016	23/12/2016	27/12/2016	30/12/2016	02/12/2016	06/12/2016	09/12/2016	13/12/2016	16/12/2016	
Curchorem	Curchorem	City Area	Curchorem	Goa	02/12/2016	5.3	4.6	6.1	6.8	BDL	5.3	5.6	12.1	10.2	13.9	11.1	10.2	13.0	11.7	11.7	53.2	57.7	52.1	54.3	29.0	30.0	22.5	27.2	54
					06/12/2016	BDL	5.3	4.6	BDL	BDL	5.3	5.3	11.1	9.3	12.1	13.9	10.2	13.0	11.6	11.6	59.5	62.2	50.4	57.4	26.2	28.7	23.7	26.2	57
					09/12/2016	6.1	5.3	4.6	BDL	BDL	5.1	5.1	11.1	BDL	14.8	13.0	10.2	12.1	12.2	12.2	67.3	56.8	52.5	58.9	27.5	25.0	21.2	24.6	59
					13/12/2016	5.3	6.1	BDL	4.6	5.3	5.3	5.3	11.1	9.3	9.3	13.0	10.2	14.8	11.3	11.3	60.7	50.2	57.4	56.1	28.7	23.7	25.0	25.8	56
					16/12/2016	5.3	6.8	4.6	6.1	BDL	5.9	5.9	13.9	11.1	12.1	12.1	BDL	9.3	11.7	11.7	72.5	65.5	58.3	65.4	31.2	28.7	26.2	28.7	65
					20/12/2016	BDL	6.8	6.1	5.3	BDL	6.1	6.1	BDL	9.3	BDL	BDL	9.3	11.1	9.9	9.9	64.9	58.8	56.2	60.0	27.5	30.0	25.0	27.5	60
					23/12/2016	4.6	5.3	6.1	BDL	BDL	5.3	5.3	10.2	BDL	12.1	9.3	BDL	13.0	11.1	11.1	54.3	55.1	54.9	54.8	30.0	32.5	28.7	30.4	55
					27/12/2016	BDL	4.6	6.1	BDL	BDL	5.3	5.3	12.1	13.9	13.0	9.3	BDL	11.1	11.6	11.6	63.7	70.5	49.1	61.1	31.2	30.0	22.5	27.9	61
					30/12/2016	4.6	BDL	6.1	5.3	BDL	5.1	5.1	11.1	13.0	10.2	12.1	BDL	10.2	11.5	11.5	59.2	64.8	47.3	57.1	27.5	31.2	25.0	27.9	57

SO₂ BDL value = 4
 NO_x BDL value = 9
 PM 2.5& PM 10 BDL value=5
 Pb BDL value -0.1
 Heavy Rains - HR
 Machine failure= <
 Power failure=●
 **All parameters concentration is in micrograms/metercube(µg/m3)



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Analysed by:

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PADMAJA AEROBIOLOGICALS PVT LTD.

Ambient Air Quality Data (Curchorem) for the month of December-2016

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	8-Hrly value of O ₃	8-Hrly value of Pb	8-Hrly value of Pb	8-Hrly value of Pb	Average of Pb	8-Hrly Average @ 1-Hrly Sampled CO
Curchorem	Curchorem Area	Curchorem	Goa	02/12/2016	0.70	0.2	BDL	0.2	BDL	BDL	0.28
				06/12/2016	0.47	0.2	BDL	0.2	BDL	BDL	0.26
				09/12/2016	BDL	0.4	0.2	0.2	0.3	0.26	
				13/12/2016	0.65	0.0	0.3	BDL	BDL	0.32	
				16/12/2016	0.82	0.2	BDL	0.2	BDL	0.31	
				20/12/2016	0.59	0.2	0.2	BDL	BDL	0.30	
				23/12/2016	0.35	BDL	0.2	0.0	BDL	0.31	
				27/12/2016	0.76	0.2	0.3	BDL	0.2	0.31	
				30/12/2016	0.29	0.2	BDL	BDL	BDL	0.27	

SO₂ BDL value = 4
 NO_x BDL value = 9
 PM_{2.5} & PM₁₀ BDL value = 5
 Pb BDL value = 0.1
 Heavy Rains - HR
 Machine failure = <
 Power failure = ●
 ** All parameters concentration is in micrograms/metercube(µg/m³)



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PADMAJA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Tilanol) for the month of December-2016

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	4-Hrly value of SO ₂	Average of SO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	4-Hrly value of NO ₂	Average of NO ₂	8-Hrly value of PM ₁₀	8-Hrly value of PM ₁₀	8-Hrly value of PM ₁₀	Average of PM ₁₀	8-Hrly value of PM _{2.5}	8-Hrly value of PM _{2.5}	8-Hrly value of PM _{2.5}	Average of PM _{2.5}	AQI		
Tilanol	Village Area			Goa	01/12/2016	6.1	6.8	9.9	6.8	4.6	4.6	9.1	7.2	13.0	13.0	10.2	11.1	12.1	13.9	12.2	64.3	59.9	56.7	60.3	31.2	33.7	27.5	30.8	60	
					05/12/2016	9.9	6.1	6.8	4.6	6.8	7.6	7.0	14.8	11.1	10.2	13.9	12.1	14.8	11.1	12.1	12.8	54.0	76.1	59.6	63.2	28.7	35.0	26.2	30.0	63
					08/12/2016	7.6	3.8	6.1	4.6	5.3	6.8	5.7	10.2	12.1	10.2	13.0	7.4	11.1	10.7	10.7	68.8	70.3	51.7	63.6	30.0	36.2	25.0	30.4	64	
					12/12/2016	4.6	8.4	5.3	6.8	6.1	8.4	6.6	13.0	10.2	11.1	14.8	9.3	11.1	11.6	64.6	65.2	52.3	60.7	33.7	32.5	28.7	31.6	61		
					15/12/2016	6.8	9.1	8.4	10.6	6.1	4.6	7.6	11.1	12.1	13.9	10.2	12.1	13.9	12.2	67.1	59.7	60.4	62.4	38.7	27.5	33.7	33.3	62		
					19/12/2016	5.3	6.1	6.8	3.0	4.6	6.8	5.5	14.8	13.0	13.9	13.9	12.1	11.1	13.1	66.4	74.9	46.7	62.7	28.7	36.2	25.0	30.0	63		
					22/12/2016	6.8	7.6	6.8	5.3	6.1	4.6	6.2	12.1	13.9	13.0	11.1	10.2	12.1	12.1	57.9	75.3	54.6	62.6	33.7	27.5	26.2	29.1	63		
					26/12/2016	7.6	6.8	8.4	6.1	4.6	6.8	6.7	10.2	11.1	13.0	12.1	9.3	13.0	11.4	62.3	64.5	46.1	57.6	30.0	28.7	22.5	27.1	58		
					29/12/2016	6.8	9.1	4.6	6.1	3.0	8.4	6.3	13.9	12.1	13.0	14.8	10.2	13.0	12.8	66.5	69.7	57.2	64.5	32.5	33.7	26.2	30.8	64		

SO₂ BDL value = 4
 NOx BDL value = 9
 PM_{2.5}& PM₁₀ BDL value = 5
 Pb BDL value = 0.1
 Heavy Rains - HR
 Machine failure = <
 Power failure = ●
 **All parameters concentration is in micrograms/metercube(µg/m³)

Analysed by:



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PADMAYA AEROBIOLOGICALS PVT. LTD.

Ambient Air Quality Data (Tilamol) for the month of December-2016

Station Code	Name of monitoring station	Area Class	City	State Name	Sampling date*	8-Hrly value of O ₃	8-Hrly value of Pb	8-Hrly value of Pb	8-Hrly value of Pb	Average of Pb	8-Hrly Average @ 1-Hrly Sampled CO
Tilamol	Village Area			Goa	01/12/2016	0.35	BDL	BDL	0.2	BDL	0.31
					05/12/2016	0.65	0.4	0.2	0.2	0.3	0.33
					08/12/2016	0.41	0.2	0.2	0.2	0.32	
					12/12/2016	0.59	0.3	0.2	0.2	0.34	
					15/12/2016	0.41	0.2	0.2	0.2	0.33	
					19/12/2016	0.70	BDL	BDL	0.2	BDL	0.34
					22/12/2016	0.53	0.3	0.2	BDL	0.31	
					26/12/2016	0.59	BDL	BDL	0.3	0.32	
					29/12/2016	0.41	0.2	BDL	0.2	0.32	

SO₂ BDL value = 4
 NO_x BDL value = 9
 PM_{2.5}& PM₁₀ BDL value-5
 Pb BDL value -0.1
 Heavy Rains - HR
 Machine failure = <
 Power failure = ●
 **All parameters concentration is in micrograms/metercube(µg/m³)



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