

MONITORING OF ENVIRONMENTAL PLAN FOR JN PORT ENVIRONMENTAL MONITORING REPORT- EXECUTIVE SUMMARY

1. Ambient Air Monitoring:

Monthly average values of Air Pollutants concentration at various stations in JNPT Area during April, 2018.

STATION	PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	O ₃	Pb	As	Ni	C ₆ H ₆	B(a)P	CO	CO ₂
	[µg/m ³]	[ng/m ³]	[ng/m ³]	[µg/m ³]	[ng/m ³]	[mg/m ³]	[ppm]						
NAAQMS	100	60	80	80	400	100	1	6	20	5	1	4	.
INDUSTRIAL AREA													
POC	89	47.01	30.62	36.631	28.29	13.45	<0.05	<5	<1.0	1.61	<0.5	1.5	335
IMC	88	67.52	36.83	40.52	32.95	13.56	<0.05	<5	<1.0	1.51	<0.5	1.46	341
NG	160	68.71	31.61	38.82	28.02	12.27	<0.05	<5	<1.0	1.72	<0.5	1.44	353
SG	110	59.96	31.52	36.42	31.31	13.09	<0.05	<5	<1.0	1.43	<0.5	1.4	349
RESIDENTIAL AREA													
RC	83	45.36	23.04	28.29	25.38	12.25	<0.05	<5	<1.0	1.66	<0.5	1.46	299
ECO-SENSITIVE AREA													
EC	85	37	15.65	26.98	24.98	9.65	<0.05	<5	<1.0	<1.0	<0.5	<1.0	312

Conclusion and Non-confirmatory:

From the results obtained for the month of April, 2018, it is concluded that overall Ambient Air Quality of the JN Port is within CPCB limits, except the levels of PM₁₀ at South Gate Complex (SG) and North Gate Complex (NG), whereas PM_{2.5} is exceed little bit more then the above permissible limits at North gate complex (NG), and Indian molasses company (IMC). which due to change in weather pattern on April, To overcome air pollution problem port has initiated number of precautionary measures, such as use of water sprinklers on road and project site, time to time cleaning of paved and unpaved roads, use of tarpaulin sheets to cover dumpers and tree plantation etc.

Corrective Action Suggested:

- ✓ Collection of wreckage and frequent cleaning should be done time to time from paved and unpaved road.
- ✓ Plantation of trees adjacent to the construction site/road for wind barriers.

- ✓ Green mesh cloth should be used to minimize dust generated during renovation work at JNP Township.
- ✓ Dumper carrying construction material and earth filling material must be covered with tarpaulin sheet to avoid spreading of dust particle in the air.
- ✓ Mechanical cleaning of road must be initiated at port premises to reduce PM₁₀.
- ✓ Water sprinkler should be used to lessen dust generated during vehicular movement
- ✓ PUC documents must be strictly checked of all vehicles entering into the port region and promote for routine maintenance of vehicle to lessen emission.

2.0 Marine Water Quality

Observed Concentration Ranges of Marine Water for Various Parameters for JNPT area during Tidal Cycle (For April, 2018)

Sl. No.	Parameter	Unit	Observed Range (Harbour)	Prescribed Limits
1	Temperature	°C	24.0-25.8	-
2	pH	-	7.04-7.91	6.5 - 9.0
3	Salinity	ppt	31.4-35.5	-
4	Turbidity	NTU	24.3-61.2	-
5	TDS	mg/L	21052-24926	-
6	TSS	mg/L	69-185	-
7	TS	mg/L	21190-25051	-
8	DO	mg/L	5.4-6.5	3.0 mg/L(min.) or 40% of saturation value
9	COD	mg/L	39-95	-
10	BOD	mg/L	<2.0	5 (max.)
11	NH ₃ -N	mg/L	<1.0	-
12	Phenol	mg/L	<0.001	-
13	Oil & Grease	mg/L	<4.0	10 (max.)
14	Total Plate Count	CFU/ml	52-129	-
15	Fecal Coliforms	MPN/100ml	40-112	500 (max.)

Conclusion:

From the above results it is concluded that, the Port's working does not affect the Quality of the Marine water. The overall Marine water Quality of the Harbour is in good category.

3.0 Marine Ecology (Flora and Fauna)

Sr. No.	Parameter	Observed Range	Criteria
1	Net Primary Productivity	87.5-212.5 mg C/m ³	<1500 mg C/m ³ /day at surface
2	Chlorophyll a	0.055-1.529 mg/m ³	<4 mg/m ³ (Oligotrophic class), 4-10 mg/m ³ (Mesotrophic class), >10 (Eutrophic class)
3	Phosphate	38-78 µg/L	0.1-90 µg/L
4	Nitrate	2515-3666 µg/L	1.0-500 µg/L
5	Nitrite	<10 µg/L	<125 µg/L
6	Particulate Organic Carbon	438-628 mg/m ³	10-100 mg/m ³
7	Silicate	1265-2222 µg/L	10-5000 µg/L

The results obtained from the study for the month of April 2017. The values for Nitrates and Particulate Organic Carbon (POC) exceeds the prescribed standards which might be usual phenomenon happening due to discharge of untreated sewage and Industrial waste in to the sea water by the concerned authorities Brihanmumbai Municipal Corporation, Thane Municipal Corporation, Panvel Municipal Corporation, Uran Municipal Council, Navi Mumbai Municipal Corporation and nearby villages etc. On the other hand, Net Primary Productivity and Chlorophyll-a were well within prescribe standards for ecological parameters for Arabian Sea.

Phosphate, Nitrite and Silicate are also well within prescribing standards for ecological parameters for Arabian Sea. However, considering the activities in JNP Harbour, it is seen that the marine ecosystem is not adversely affected by Port activities.



Corrective Action Suggested:

Proper care should be taken for treatment of sewage and industrial waste before discharging into the open sea by concerned authorities like Brihanmumbai Municipal Corporation, Thane Municipal Corporation, Panvel Municipal Corporation, Uran Municipal Council, Navi Mumbai Municipal Corporation and nearby villages, etc.

4.0 Drinking Water Quality

The drinking water being supplied to JN Port is safe for drinking purpose. At all drinking water monitoring stations around port area are found to be as per the drinking water specifications given in IS 10500:2012 and also on the basis of analysis parameters.