



**Ports and
Logistics**

Ref No. AKBTP/ENVSTATEMENT/2022-23

Date: 10th May 2023

To,
Member Secretary
Gujarat Pollution Control Board
Paryavaran Bhavan,
Sector-10-A, Gandhinagar-382010

**Sub: Environmental Statement for the financial year ending 31st March 2023 for M/s
Adani Kandla Bulk Terminal Pvt Ltd (AKBTPL)**

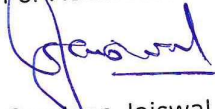
Ref: PCB ID: - 46110, Consent Order No. AWH – 105213

Dear Sir,

With reference to the above mentioned subject and reference, please find enclosed Environmental Statement in Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986, for M/s **Adani Kandla Bulk Terminal Pvt Ltd, Ta. Anjar** for the financial year ending 31st March 2023.

Thank you,

Yours faithfully,
For **Adani Kandla Bulk Terminal Pvt Ltd**


Sandeep Jaiswal
(COO – AKBTP)

Encl: As above.

Copy to:

1. The Regional Officer, Gujarat Pollution Control Board, Gandhidham.

FORM V
(See Rule 14)

Environmental Statement for the Financial Year ending 31st March 2023

PART - A

- (i) Name and address of the Owner/
Occupier of the Industry Operation
or Process : Sandeep Jaiswal
COO – AKBTPPL
Adani Kandla Bulk Terminal Pvt Ltd.
Tuna Tekra, Taluka - Anjar
Dist. Kutch (Gujarat)
- (ii) Industry Category : Red – Large
Primary (STC Code) : NA
Secondary (STC Code) : NA
- (iii) Production Capacity : Dry Bulk Cargo Handling – 14 MMTPA
- (iv) Year of Establishment : 2011 – 12 (As per certification of
incorporation date of company)
- (v) Date of last Environment
Statement submitted : 02.05.2022

PART - B

Water and Raw Material Consumption

(i) Water Consumption

Water Consumption Cu. Mtr. /Day	
Process	Nil
Cooling (Used in sprinkling / gardening / dust suppression)	1136.83 m ³ /day
Domestic	9.35 m ³ /day

Name of Products	Process Water Consumption per unit of Product Output	
	During the previous financial year (2021- 22)	During the current financial year (2022 - 23)
Handling and Storage of dry bulk cargo	6.96 MMT	8.16 MMT

(ii) Raw Material Consumption

Name of Raw Material	Name of Products	Consumption of Raw Material per Unit of output	
		During the previous financial year (2021 - 22)	During the current financial year (2022 - 23)
NIL	Not Applicable	Nil	Nil

Note: AKBTPL is involved in the service business and no production or manufacturing activity involved, hence there no raw material being used.

PART - C
Pollutants discharged to Environment/Unit of Output
(Parameters as specified in consent issued)

Pollutants	Pollution Load				
(a) Water	Sr no	Parameter	Quantity of pollutants discharged (Mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
	Treated Sewage Water (Average value of 2022-23)				
	1	TSS	0.1291 Kg/day	18.2 (Mg/L)	No Deviation from prescribed standards
	2	BOD (3 Days @ 27 °C)	0.0998 (Kg/day)	14.1 (Mg/L)	
(b) Air	Sr no	Parameter	Quantity of pollutants discharged (Mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
Particulate Matter (mg/Nm ³)	SS-1 DG Set- 1 (125 KVA) (Average value of 2022-23)				
Sulphur Dioxide (PPM)	1	PM (Mg/Nm ³)	0.1433 (Kg/day)	19.63 (Mg/Nm ³)	No Deviation from prescribed standards
	2	So ₂ (PPM)	0.1291 (Kg/day)	6.77 (PPM)	
	3	NO _x (PPM)	0.4587 (Kg/day)	33.47 (PPM)	
Nitrogen Oxide (PPM)	SS-2 DG Set- 2 (125 KVA) (Average value of 2022-23)				
	1	PM (Mg/Nm ³)	0.1301 (Kg/day)	18.07 (Mg/Nm ³)	No Deviation from prescribed standards
	2	So ₂ (PPM)	0.1273 (Kg/day)	6.77 (PPM)	
	3	NO _x (PPM)	0.4539 (Kg/day)	33.58 (PPM)	
	SS-3 DG Set- 3 (125 KVA) (Average value of 2022-23)				
	1	PM (Mg/Nm ³)	0.1416 (Kg/day)	19.48 (Mg/Nm ³)	No Deviation from prescribed standards
	2	So ₂ (PPM)	0.1158 (Kg/day)	6.10 (PPM)	
	3	NO _x (PPM)	0.4094 (Kg/day)	30.00 (PPM)	
	<ul style="list-style-type: none"> • DG sets were kept only as standby power source and used only during power failure. • Analysis reports of DG stack monitoring and ambient air quality monitoring are enclosed as Annexure - 1. 				

PART - D

Hazardous Wastes

(As specified under Hazardous Wastes Management and Handling Rules 2016)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year (2021-22)	During the current financial year (2022-23)
<p>(a) From Process</p> <p>i. Oily Cotton Waste</p> <p>ii. Used Oil</p> <p>iii. Discarded Drum</p> <p>iv. Discarded oil filter.</p>	<p><u>Oily Cotton waste: -</u> Generation: - 2.80 MT Disposed: - 2.80 MT</p> <p><u>Used Oil: -</u> Generation: - 5.400 MT Disposed: - 0.0 MT Reused: -3.800 MT (Used in Railway siding and MBU machine as a lubricant)</p> <p><u>Discarded Drum</u> Generation: - 1.067 MT Disposed: - 0.0 MT</p> <p><u>Discarded oil filter.</u> Generation: - 0.50MT Disposed: - 0.0 MT</p> <p>In Stock End of the year: - 01.04.2022 1.60 MT (Used Oil). 0.0 MT (Oily Cotton waste) 1.067 MT (Discarded Drum) 0.500 MT (Discarded oil filter)</p>	<p><u>Oily Cotton waste: -</u> Generation: - 0.52 MT Disposed: - 0.0 MT</p> <p><u>Used Oil: -</u> Generation: - 7.745 MT Disposed: - 1.499 MT Reused: -5.058 MT (Used in Railway siding and MBU machine as a lubricant)</p> <p><u>Discarded Drum</u> Generation: - 3.143 MT Disposed: - 1.067 MT</p> <p><u>Discarded oil filter.</u> Generation: - 0.143MT Disposed: - 0.48 MT</p> <p>In Stock End of the year: - 01.04.2023 2.788 MT (Used Oil). 0.520 MT (Oily Cotton waste) 3.143 MT (Discarded Drum) 0.143 MT (Discarded oil filter)</p>
(b) From Pollution Control facilities	Nil	Nil

*AKBTPL is involved in the service business and no production or manufacturing activity involved, hence there is no raw material being used.

PART - E

Solid Waste

Solid Waste	Total Quantity Disposal (MT/Annum)	
	During the previous financial year (2021-22)	During the current financial year (2022-23)
(a) From Process (Ash)	Nil	Nil
(b) From Pollution Control facilities	0.3MT	0.32MT
(C-1) Quantity recycled or reutilized within the unit	6.169 MT (Food waste converted in to manure and utilized for horticulture purpose)	6.478 MT (Food waste converted in to manure and utilized for horticulture purpose)
(C-2) Sold	--	--
(C-3) Disposed	RDF Waste: - 17.84 MT Recyclable Waste: - 15.00MT (Garbage Waste)	RDF Waste: - 17.84 MT Recyclable Waste: - 17.49MT (Garbage Waste)

RDF: - Refused Derived Fuel.

PART - F

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes:

- Used oil is being sent to authorized recyclers and reusing for the lubrication purpose in stitching machine and railway siding.
- Oily cotton waste is being sent to common hazardous waste incineration facility (SEPPL) for the incineration process.
- Unit has developed MRF (Material recovery Facility) for Waste segregation as per 5R (Reduce, Reuse, Recycle, Recover & Reprocess) principles of waste management. Segregated recyclable materials are sent to respective recycling units, whereas remaining non-recyclable waste is bailed and sent to cement plants for co-processing as RDF (Refused Derived Fuel).
- Agreement with cement unit i.e., Ambuja cement Ltd. for co-processing of Hazardous and non-hazardous waste.
- Food waste is purely converted into manure used as manure by the horticulture department.
- Sludge generated from STP is also used as manure by the horticulture department.

PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- Unit has installed Sewage Treatment Plant and for treatment of the Sewage water being generated at site.
- AKBTPL has planted mangroves in 250 ha area near Sat Saida Bet (Kandla), Kutch Sea coast. Unit has formed dedicated Horticulture department & developing green belt within port premises. So far, we have developed 16.09 Ha green belts within port premises and the same is being well maintained.
- AKBTPL has taken significant step towards energy reduction program Reduced the idle running of Material handling system through PLC interlocking System stop in auto mode if idle up to 30 min's and controlling the speed of high-speed conveyors (KC 2A/2C) with respect to load.
- The total cost incurred on environmental protection measures is enclosed as **Annexure-2** and the green belt developed so far enclosed as **Annexure-3**.

PART - H

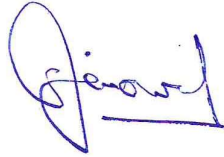
Additional measures /investment/ proposal for environmental protection including abatement of pollution, prevention of pollution.

- Unit is doing Regular Environmental Monitoring of Port & surrounding area through reputed NABL certified Laboratory. All the required environmental parameters are well within specified limits & the details are being submitted regularly to GPCB, CPCB, MOEF & concerned authorities.
 - Unit has installed STP for treatment of the Sewage water being generated at site. The unit has also provided dump pond & conveyance channel for collection of runoffs generated from Coal Yard.
 - Unit has installed OWC (organic waste converter) machine for treatment of daily food waste generated at site. Composting manure is being used by the horticulture department as an organic fertilizer.
 - Unit has provided FFS & DSS at coal yard & conveyer system and carrying out regular water sprinkling to control the dust exposure.
 - The unit has deployed three road sweeping machines to control the fugitive dust emissions.
 - Unit is developing green belt within port and outside continually with help of Horticulture dept. Additional area covered under green belt during FY 2022-23: 0.20 Ha.
 - Continually taking new initiatives for protection of environment with respect to air-water-soil.
 - Unit has hired 3 nos. Bouser for dust suppression ongoing sprinkling activity.
 - Developed the entire unpaved area of Weighbridge complex and Fall Protection System (FPS) area. Also developed the road to the Pump-house.
-

PART - I

Any other particulars for improving the quality of environment:

- Environmental awareness programs have been conducted for workmen at site.
- Integrated housekeeping and waste management being maintained regularly.
- AKBTPL has separate Environment Cell for environmental management.



Date: 10.05.2023

(Signature of a person carrying out an industry,
operation or process)

Name: Sandeep Jaiswal

Designation: COO – AKBTPL

Address: Adani Kandla Bulk Terminal Pvt Ltd,
Tuna Tekra, Taluka-Anjar. District-Kutch (Gujarat)

Annexure - 1

(Ambient Air Monitoring Reports)



POLLOCCON LABORATORIES PVT. LTD.

Environmental Auditors, Consultants & Analysts.
Cleaner Production / Waste Minimization Facilitator

Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

“ENVIRONMENTAL MONITORING REPORT”

For

**ADANI KANDLA BULK TERMINAL PRIVATE LIMITED.
KANDLA, KUTCH.**

APRIL 2022 TO SEPTEMBER 2022



**H. T. Shah
Lab Manager**

**Dr. Arun Bajpai
Lab Manager (Q)**



METHODS AND EQUIPMENTS USED FOR SAMPLING AND ANALYSIS

SR. NO.	Monitoring Details	Equipments Used	Sampling and Analysis Method
1	Ambient Air Quality Monitoring	RDS, FDS, Gaseous Attachment with Impinger	CPCB Guideline/IS:5182
2	Noise Monitoring	Noise Meter	IS 9876/IS 9989
3	Stack Monitoring	Stack Monitoring Sampler/Kit	IS:11255/NDIR Gas Analyzer



H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)



NATIONAL AMBIENT AIR QUALITY STANDARDS
DATED 16TH NOV.2009, CPCB NEW DELHI.

SR. NO.	TEST PARAMETER	UNIT	Concentration in ambient air	Method Of Measurement
1	Particulate Matter (PM ₁₀)	µg/m ³	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	60	CPCB guidelines for AAQM (Vol. I, NAAQMS/36/2012-13)
3	Sulphur Dioxide (SO ₂)	µg/m ³	80	IS:5182(Part 2)
4	Oxides of Nitrogen (NO ₂)	µg/m ³	80	IS:5182(Part6)

NS#: Not Specified, ** National Ambient Air Quality Standards Dated: 18/11/2009 as per Central Pollution Control Board, New Delhi.



H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

TABLE NO. 1 RESULTS OF AAQM FOR LC GATE NO.2 [APRIL 2022 TO SEPTEMBER 2022]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	04/04/2022	72.66	29.59	11.53	20.67
2	07/04/2022	63.43	23.47	6.52	14.68
3	11/04/2022	54.76	27.63	9.34	19.68
4	14/04/2022	64.66	35.00	13.56	27.55
5	18/04/2022	58.46	26.51	7.76	23.40
6	21/04/2022	75.64	32.96	14.24	29.48
7	25/04/2022	60.22	24.63	12.69	25.62
8	28/04/2022	50.27	20.81	8.41	21.92
9	02/05/2022	74.22	38.66	8.64	15.69
10	05/05/2022	57.24	26.72	16.91	23.87
11	09/05/2022	62.45	31.50	10.28	14.56
12	12/05/2022	55.28	28.67	12.66	17.84
13	16/05/2022	75.51	43.61	6.28	12.43
14	19/05/2022	53.25	24.26	13.68	19.33
15	23/05/2022	69.58	33.46	11.77	26.86
16	26/05/2022	59.12	36.54	18.48	22.68
17	30/05/2022	50.25	25.43	7.54	21.17
18	02/06/2022	73.77	26.55	12.42	21.57
19	06/06/2022	62.42	22.64	7.57	15.24
20	09/06/2022	70.62	32.42	11.41	22.34
21	13/06/2022	69.53	34.62	9.57	14.26
22	16/06/2022	60.34	31.50	13.77	20.20
23	20/06/2022	54.57	28.63	10.25	18.66
24	23/06/2022	77.61	37.20	14.26	16.14
25	27/06/2022	52.68	24.34	15.61	23.82
26	30/06/2022	61.52	20.68	8.36	17.68
27	04/07/2022	71.52	32.42	11.28	27.74
28	07/07/2022	60.47	28.55	8.61	16.26
29	11/07/2022	46.58	17.89	6.56	20.52
30	14/07/2022	66.55	35.66	16.40	24.39
31	18/07/2022	58.68	24.55	10.53	21.62
32	21/07/2022	68.27	31.67	7.68	13.43
33	25/07/2022	50.20	23.43	9.65	19.33
34	28/07/2022	57.58	27.67	14.38	17.57
35	01/08/2022	55.77	20.22	7.48	23.01
36	04/08/2022	72.36	27.63	10.85	24.76
37	08/08/2022	57.58	29.63	13.45	14.93
38	11/08/2022	62.67	26.55	17.83	25.60
39	15/08/2022	70.34	34.50	9.51	18.14
40	18/08/2022	52.68	24.34	6.58	15.43
41	22/08/2022	64.54	33.46	8.41	12.85
42	25/08/2022	75.53	31.50	12.32	16.95
43	29/08/2022	56.36	25.63	15.34	27.83
44	01/09/2022	65.64	35.45	14.84	25.43
45	05/09/2022	75.24	37.58	9.70	23.75
46	08/09/2022	58.71	26.38	15.63	26.31
47	12/09/2022	53.57	22.39	10.83	17.51
48	15/09/2022	46.57	18.64	12.39	13.57
49	19/09/2022	74.64	38.66	16.33	21.22
50	22/09/2022	60.31	28.13	11.68	24.52
51	26/09/2022	67.55	34.54	8.51	20.41
52	29/09/2022	51.38	30.38	6.57	16.27



H. T. Shah

H. T. Shah
Lab Manager

Dr. Arun Bajpai

Dr. Arun Bajpai
Lab Manager (Q)

TABLE NO. 2 RESULTS OF AAQM FOR STARTING OF PILE APPROACH [APRIL 2022 TO SEPTEMBER 2022]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	04/04/2022	79.64	35.61	16.51	29.24
2	07/04/2022	84.83	45.64	19.29	33.76
3	11/04/2022	61.43	34.23	12.45	25.44
4	14/04/2022	70.98	40.31	15.46	20.22
5	18/04/2022	81.85	44.27	13.47	30.26
6	21/04/2022	88.91	47.23	17.26	35.44
7	25/04/2022	68.57	32.53	10.62	21.23
8	28/04/2022	73.55	36.27	14.64	24.45
9	02/05/2022	88.62	46.56	14.54	30.22
10	05/05/2022	74.56	40.10	11.20	34.26
11	09/05/2022	79.67	38.56	18.93	38.44
12	12/05/2022	76.65	43.56	10.70	24.15
13	16/05/2022	89.34	50.22	12.55	31.16
14	19/05/2022	81.58	53.22	19.23	27.83
15	23/05/2022	86.25	49.60	15.72	22.52
16	26/05/2022	72.34	41.56	20.44	29.87
17	30/05/2022	66.57	35.44	17.52	36.24
18	02/06/2022	82.36	31.28	15.37	31.29
19	06/06/2022	72.62	34.57	9.23	20.43
20	09/06/2022	85.63	46.60	13.66	35.53
21	13/06/2022	81.21	41.52	16.27	32.58
22	16/06/2022	73.25	35.61	22.12	26.34
23	20/06/2022	80.42	43.60	20.81	23.52
24	23/06/2022	89.85	48.43	17.67	27.34
25	27/06/2022	63.42	33.57	21.21	19.34
26	30/06/2022	71.71	30.19	10.40	24.56
27	04/07/2022	87.62	45.69	20.95	32.77
28	07/07/2022	70.22	41.27	17.54	28.83
29	11/07/2022	60.52	33.57	19.59	24.66
30	14/07/2022	79.65	44.23	22.41	31.33
31	18/07/2022	67.23	36.23	13.46	29.24
32	21/07/2022	82.34	46.64	16.25	22.66
33	25/07/2022	63.48	29.11	12.65	30.23
34	28/07/2022	73.42	35.44	18.62	26.48
35	01/08/2022	69.98	26.53	11.37	29.27
36	04/08/2022	80.65	35.44	18.39	31.43
37	08/08/2022	75.65	42.60	15.41	27.33
38	11/08/2022	83.55	45.64	20.19	18.78
39	15/08/2022	76.38	37.56	23.48	35.45
40	18/08/2022	67.54	30.53	13.59	20.32
41	22/08/2022	81.62	44.23	16.57	22.65
42	25/08/2022	86.57	48.56	19.21	30.13
43	29/08/2022	62.85	31.98	21.52	34.51
44	01/09/2022	78.64	44.31	10.60	21.81
45	05/09/2022	63.23	31.57	21.54	33.46
46	08/09/2022	80.31	41.56	12.71	20.37
47	12/09/2022	64.54	29.44	18.52	26.24
48	15/09/2022	55.21	25.32	16.30	22.42
49	19/09/2022	89.31	48.64	22.41	25.62
50	22/09/2022	65.36	35.65	14.39	28.36
51	26/09/2022	85.34	47.56	11.33	31.62
52	29/09/2022	69.34	33.44	20.71	35.72



H. T. Shah

H. T. Shah
Lab Manager

Dr. Arun Bajpai

Dr. Arun Bajpai
Lab Manager (Q)

TABLE NO. 3 RESULTS OF AAQM FOR SOUTH WEST CORNER AT PUMP HOUSE [APRIL 2022 TO SEPTEMBER 2022]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	04/04/2022	58.65	23.37	14.56	24.56
2	07/04/2022	69.24	27.57	16.23	18.55
3	11/04/2022	47.65	19.55	11.67	21.44
4	14/04/2022	54.84	30.72	18.50	30.41
5	18/04/2022	73.81	39.11	9.62	15.63
6	21/04/2022	81.95	37.78	19.56	32.47
7	25/04/2022	74.64	38.82	8.67	23.64
8	28/04/2022	61.84	31.76	10.21	27.28
9	02/05/2022	83.56	42.60	6.50	23.43
10	05/05/2022	68.63	34.83	18.51	26.47
11	09/05/2022	73.51	36.58	13.50	18.28
12	12/05/2022	66.44	35.41	16.26	22.23
13	16/05/2022	82.66	46.37	8.33	16.22
14	19/05/2022	69.15	33.46	15.49	21.32
15	23/05/2022	75.66	37.24	7.99	13.13
16	26/05/2022	67.38	20.63	11.48	20.23
17	30/05/2022	60.28	28.44	10.64	17.54
18	02/06/2022	56.55	22.42	18.46	29.49
19	06/06/2022	66.23	28.61	10.70	17.55
20	09/06/2022	79.33	35.66	15.23	31.92
21	13/06/2022	58.41	29.44	11.31	19.22
22	16/06/2022	67.33	37.66	16.44	23.45
23	20/06/2022	75.55	40.23	13.56	25.52
24	23/06/2022	84.26	43.68	9.69	22.43
25	27/06/2022	57.65	27.53	12.50	15.32
26	30/06/2022	68.24	34.42	14.61	27.43
27	04/07/2022	80.42	35.41	16.60	20.46
28	07/07/2022	65.68	32.42	11.51	22.55
29	11/07/2022	54.62	26.45	9.34	15.56
30	14/07/2022	72.42	38.65	14.68	27.54
31	18/07/2022	62.68	27.65	6.38	14.38
32	21/07/2022	77.51	36.24	12.86	19.74
33	25/07/2022	56.35	25.33	8.50	16.54
34	28/07/2022	68.42	30.35	17.66	23.46
35	01/08/2022	64.34	23.50	9.39	14.04
36	04/08/2022	59.63	31.51	15.57	20.63
37	08/08/2022	68.63	38.44	8.66	22.36
38	11/08/2022	77.63	33.42	10.59	29.73
39	15/08/2022	61.51	29.15	13.94	25.44
40	18/08/2022	48.33	18.64	7.61	28.12
41	22/08/2022	60.27	28.69	11.50	30.83
42	25/08/2022	69.37	35.66	14.54	24.33
43	29/08/2022	50.27	22.46	6.81	21.57
44	01/09/2022	70.61	38.61	12.56	28.82
45	05/09/2022	55.61	25.37	10.32	30.48
46	08/09/2022	75.51	36.58	19.30	29.39
47	12/09/2022	58.48	26.28	13.50	21.63
48	15/09/2022	51.24	22.63	8.44	16.55
49	19/09/2022	83.52	41.52	14.56	23.23
50	22/09/2022	71.13	40.81	9.57	22.64
51	26/09/2022	80.37	39.57	6.46	15.67
52	29/09/2022	64.43	37.53	15.56	24.24



H. T. Shah

H. T. Shah
Lab Manager

Dr. Arun Bajpai

Dr. Arun Bajpai
Lab Manager (Q)

TABLE NO. 4 RESULTS OF AAQM FOR NORTH EAST CORNER AT RAILWAY BUILDING [APRIL 2022 TO SEPTEMBER 2022]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	04/04/2022	84.57	42.63	19.47	34.33
2	07/04/2022	90.24	49.58	24.58	38.57
3	11/04/2022	73.71	38.45	15.36	31.52
4	14/04/2022	81.28	45.32	22.28	35.69
5	18/04/2022	86.57	48.63	16.48	32.14
6	21/04/2022	95.52	52.51	23.38	44.52
7	25/04/2022	88.42	47.51	17.67	27.64
8	28/04/2022	78.26	39.53	21.23	30.50
9	02/05/2022	93.48	49.62	16.53	33.83
10	05/05/2022	79.55	45.65	21.47	36.56
11	09/05/2022	86.38	43.58	23.45	42.50
12	12/05/2022	82.47	47.59	20.20	28.56
13	16/05/2022	94.55	55.49	15.40	27.63
14	19/05/2022	76.85	40.93	22.46	39.25
15	23/05/2022	91.21	51.27	18.25	29.57
16	26/05/2022	81.66	46.52	24.55	37.67
17	30/05/2022	75.33	38.45	19.48	32.49
18	02/06/2022	88.62	36.55	22.60	36.48
19	06/06/2022	77.52	40.52	12.34	24.38
20	09/06/2022	91.83	50.36	17.48	38.20
21	13/06/2022	86.52	46.52	21.60	30.63
22	16/06/2022	79.68	43.25	19.40	33.54
23	20/06/2022	87.62	48.54	24.24	29.32
24	23/06/2022	94.58	52.68	20.29	35.63
25	27/06/2022	68.62	38.66	25.70	32.46
26	30/06/2022	76.36	39.53	16.30	37.28
27	04/07/2022	94.18	52.59	24.59	24.45
28	07/07/2022	78.63	44.20	13.68	31.51
29	11/07/2022	69.47	36.35	22.31	27.66
30	14/07/2022	84.52	48.67	19.45	37.56
31	18/07/2022	77.52	40.27	16.49	32.42
32	21/07/2022	88.42	49.66	18.36	26.57
33	25/07/2022	68.34	37.54	15.44	33.43
34	28/07/2022	79.52	41.22	23.51	29.46
35	01/08/2022	77.56	30.56	14.38	32.64
36	04/08/2022	86.67	41.18	21.74	37.55
37	08/08/2022	82.62	45.32	19.54	30.27
38	11/08/2022	90.26	49.54	23.40	35.65
39	15/08/2022	83.41	44.53	25.59	39.56
40	18/08/2022	78.51	33.41	15.63	25.55
41	22/08/2022	88.66	46.52	18.42	34.93
42	25/08/2022	93.42	52.68	20.51	36.55
43	29/08/2022	72.65	36.55	22.69	40.23
44	01/09/2022	85.66	49.25	15.27	31.54
45	05/09/2022	94.72	53.67	25.45	40.84
46	08/09/2022	87.16	46.27	23.45	34.57
47	12/09/2022	68.53	32.54	20.26	29.20
48	15/09/2022	73.43	28.32	18.41	26.46
49	19/09/2022	93.47	51.52	24.25	35.47
50	22/09/2022	83.42	44.61	16.14	32.42
51	26/09/2022	91.58	50.24	14.66	38.64
52	29/09/2022	77.66	40.93	17.50	30.27



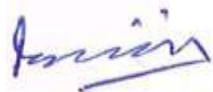

H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

AMBIENT AIR QUALITY ANALYSIS REPORT OBSERVATIONS

Ambient Air Quality Monitoring Sample Analysis									
Sr.No.	Month	Particulate Matter (PM ₁₀) (µg/m ³)		Particulate Matter (PM _{2.5}) (µg/m ³)		Sulphur Dioxide (SO ₂) (µg/m ³)		Oxides of Nitrogen (NO ₂) (µg/m ³)	
		Max	Min	Max	Min	Max	Min	Max	Min
L.C. Gate No.2									
1	April-22	75.64	50.27	35.00	20.81	14.24	6.52	29.48	14.68
2	May-22	75.51	50.25	43.61	24.26	18.48	6.28	26.86	12.43
3	June-22	77.61	52.68	37.20	20.68	15.61	7.57	23.82	14.26
4	July-22	71.52	46.58	35.66	17.89	16.40	6.56	27.74	13.43
5	August-22	75.53	52.68	34.50	20.22	17.83	6.58	27.83	12.85
6	September-22	75.24	46.57	38.66	18.64	16.33	6.57	26.31	13.57
Starting Of Pile Approach (Near SS2 Building)									
1	April-22	88.91	61.43	47.23	32.53	19.29	10.62	35.44	20.22
2	May-22	89.34	66.57	53.22	35.44	20.44	10.70	38.44	22.52
3	June-22	89.85	63.42	48.43	30.19	22.12	9.23	35.53	19.34
4	July-22	87.62	60.52	46.64	29.11	22.41	12.65	32.77	22.66
5	August-22	86.57	62.85	48.56	26.53	23.48	11.37	35.45	18.78
6	September-22	89.31	55.21	48.64	25.32	22.41	10.60	35.72	20.37
South West Corner at Pump House									
1	April-22	81.95	47.65	39.11	19.55	19.56	8.67	32.47	15.63
2	May-22	83.56	60.28	46.37	20.63	18.51	6.50	26.47	13.13
3	June-22	84.26	56.55	43.68	22.42	18.46	9.69	31.92	15.32
4	July-22	80.42	54.62	38.65	25.33	17.66	6.38	27.54	14.38
5	August-22	77.63	48.33	38.44	18.64	15.57	6.81	30.83	14.04
6	September-22	83.52	51.24	41.52	22.63	19.30	6.46	30.48	15.67
North East Corner at Railway Building									
1	April-22	95.52	73.71	52.51	38.45	24.58	15.36	44.52	27.64
2	May-22	94.55	75.33	55.49	38.45	24.55	15.40	42.50	27.63
3	June-22	94.58	68.62	52.68	36.55	25.70	12.34	38.20	24.38
4	July-22	94.18	68.34	52.59	36.35	24.59	13.68	37.56	24.45
5	August-22	93.42	72.65	52.68	30.56	25.59	14.38	40.23	25.55
6	September-22	94.72	68.53	53.67	28.32	25.45	14.66	40.84	26.46

H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

RESULTS OF NOISE LEVEL MONITORING

Sampling Date	: As Per Table
Test Method	: IS 9876/IS 9989
Sampling Location	: As Per Table
Sampling By	: Pollucon Laboratories Pvt. Ltd.
Protocol (purpose)	: Environmental Monitoring

TABLE NO. 5 RESULTS OF DAY TIME NOISE LEVEL MONITORING [APRIL 2022 TO SEPTEMBER 2022]

Noise Level Day Time dB(A)Leq*									
Sr. No.	Name of Location	LC Gate No.2		Starting Of Pile Approach		South West Corner at Pump House		North East Corner at Railway Building	
	Month	Max	Min	Max	Min	Max	Min	Max	Min
1.	April-22	71.8	53.5	69.7	55.7	71.0	53.2	71.7	55.1
2.	May-22	73.5	50.9	71.4	56.1	71.5	54.3	72.6	52.1
3.	June-22	71.5	51.2	72.5	57.4	69.8	56.4	69.6	56.3
4.	July-22	70.5	55.4	71.4	54.2	73.2	54.3	72.5	53.2
5.	August-22	71.8	55.0	73.4	54.3	73.5	57.0	70.8	55.5
6.	September-22	73.1	53.7	71.9	54.4	73.2	55.9	71.7	54.8

TABLE NO. 6 RESULTS OF NIGHT TIME NOISE LEVEL MONITORING [APRIL 2022 TO SEPTEMBER 2022]

Noise Level Night Time dB(A)Leq*									
Sr. No.	Name of Location	LC Gate No.2		Starting Of Pile Approach		South West Corner at Pump House		North East Corner at Railway Building	
	Month	Max	Min	Max	Min	Max	Min	Max	Min
1.	April-22	61.2	50.1	63.9	52.5	65.3	50.9	61.4	51.1
2.	May-22	61.3	49.7	68.4	51.3	68.7	55.3	67.8	52.7
3.	June-22	63.6	55.1	66.9	53.6	62.4	53.2	66.3	54.2
4.	July-22	62.8	51.2	61.7	55.2	66.2	55.6	62.6	56.2
5.	August-22	65.1	49.9	62.7	53.8	66.8	57.1	65.6	57.3
6.	September-22	65.5	49.0	61.4	53.0	66.4	57.0	64.7	56.0

AMBIENT AIR QUALITY STANDARDS FOR NOISE SPECIFIED BY CPCB

Area Code	Category of Area/Zone	Limits in dB(A) Leq#	
		Day time	Night time
A	Industrial area	75	70
Notes:			
1. Day time shall mean from 6.00 a.m. to 10.00 p.m.			
2. Night time shall mean from 10.00 p.m. to 06.00 a.m.			
#dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing			



H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

AMBIENT AIR QUALITY MONITORING & NOISE QUALITY MONITORING LOCATIONS

Sr. No	Name of Location	GPS Coordinate
1.	LC Gate No.2	N 22°58' 14.29" E 70°05' 51.07"
2.	Starting Of Pile Approach	N 22°54' 27.47" E 70°06' 15.63"
3.	South West Corner at Pump House	N 22°55' 22.98" E 70°06' 7.37"
4.	North East Corner at Railway Building	N 23° 0' 48.34" E 70° 12' 30.47"

FIGURE NO. 1 GOOGLE EARTH IMAGE OF AMBIENT AIR QUALITY MONITORING & NOISE QUALITY MONITORING LOCATION



H. T. Shah

H. T. Shah
Lab Manager

Dr. Arun Bajpai

Dr. Arun Bajpai
Lab Manager (Q)



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TABLE NO.12 RESULTS OF STACK MONITORING**PERMISSIBLE LIMIT FOR STACK MONITORING**

SR. NO.	TEST PARAMETER	UNIT	GPCB LIMIT**	TEST/SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	150	IS:11255 (Part-1)
2	Sulfur Dioxide as SO ₂	ppm	100	IS:11255 (Part-2)
3	Oxides of Nitrogen as NO _x	ppm	50	IS: 11255 (Part-7)

**Details provided by customer.

RESULTS OF STACK MONITORING

Date of Monitoring			June-22		
Sampling Location			SS-1 DG Set -1 (125 KVA)	SS-2 DG Set -2 (125 KVA)	SS-3 DG Set -3 (125 KVA)
SR. NO.	TEST PARAMETER	UNIT	24/06/2022		
1	Particulate Matter	mg/Nm ³	16.81	15.61	20.34
2	Sulfur Dioxide as SO ₂	ppm	7.32	5.48	6.89
3	Oxides of Nitrogen as NO _x	ppm	36.42	34.54	31.59
4	Noise Level Monitoring				
4.1	Near DG Set	dB(A)	70.5	71.6	69.5

**H. T. Shah**
Lab Manager**Dr. Arun Bajpai**
Lab Manager (Q)



POLLOCON LABORATORIES PVT. LTD.

Environmental Auditors, Consultants & Analysts.
Cleaner Production / Waste Minimization Facilitator

Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

"ENVIRONMENTAL MONITORING REPORT"

For

**ADANI KANDLA BULK TERMINAL PRIVATE LIMITED.
KANDLA, KUTCH.**

OCTOBER 2022 TO MARCH 2023



**H. T. Shah
Lab Manager**

**Dr. Arun Bajpai
Lab Manager (Q)**



METHODS AND EQUIPMENTS USED FOR SAMPLING AND ANALYSIS

SR. NO.	Monitoring Details	Equipments Used	Sampling and Analysis Method
1	Ambient Air Quality Monitoring	RDS, FDS, Gaseous Attachment with Impinger	CPCB Guideline/IS:5182
2	Noise Monitoring	Noise Meter	IS 9876/IS 9989
3	Stack Monitoring	Stack Monitoring Sampler/Kit	IS:11255/NDIR Gas Analyzer



H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

**NATIONAL AMBIENT AIR QUALITY STANDARDS**
DATED 16TH NOV.2009, CPCB NEW DELHI.

SR. NO.	TEST PARAMETER	UNIT	Concentration in ambient air	Method Of Measurement
5	Particulate Matter (PM ₁₀)	µg/m ³	100	IS:5182(Part 23)
6	Particulate Matter (PM _{2.5})	µg/m ³	60	CPCB guidelines for AAQM (Vol. I, NAAQMS/36/2012-13)
7	Sulphur Dioxide (SO ₂)	µg/m ³	80	IS:5182(Part 2)
8	Oxides of Nitrogen (NO ₂)	µg/m ³	80	IS:5182(Part6)

NS#: Not Specified, ** National Ambient Air Quality Standards Dated: 18/11/2009 as per Central Pollution Control Board, New Delhi.

**H. T. Shah**
Lab Manager**Dr. Arun Bajpai**
Lab Manager (Q)

TABLE NO. 1 RESULTS OF AAQM FOR LC GATE NO.2 [OCTOBER 2022 TO MARCH 2023]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	03/10/2022	60.33	33.41	16.84	28.62
2	06/10/2022	52.64	21.14	20.50	32.52
3	10/10/2022	64.57	35.66	11.25	23.72
4	13/10/2022	57.54	27.59	6.60	29.68
5	17/10/2022	62.42	30.79	14.41	14.82
6	20/10/2022	72.45	25.47	8.60	18.74
7	24/10/2022	50.88	22.55	12.90	26.24
8	27/10/2022	61.47	32.42	10.34	22.63
9	31/10/2022	70.34	29.46	7.54	17.81
10	03/11/2022	56.35	32.46	19.40	24.67
11	07/11/2022	69.48	38.57	12.48	19.54
12	10/11/2022	50.06	21.85	14.48	15.68
13	14/11/2022	64.24	25.55	17.52	22.43
14	17/11/2022	58.65	28.46	8.45	17.54
15	21/11/2022	63.42	34.25	6.34	14.30
16	24/11/2022	70.58	36.54	13.21	23.79
17	28/11/2022	52.74	27.71	15.46	18.54
18	01/12/2022	45.36	18.27	8.49	25.34
19	05/12/2022	57.56	25.26	15.35	28.62
20	08/12/2022	67.55	33.46	12.26	19.57
21	12/12/2022	62.67	19.56	16.24	15.21
22	15/12/2022	56.48	29.46	11.20	23.47
23	19/12/2022	47.33	22.43	14.66	29.41
24	22/12/2022	54.27	26.47	9.49	16.52
25	26/12/2022	73.28	31.21	17.25	24.24
26	02/01/2023	63.51	25.47	12.42	23.33
27	05/01/2023	54.58	18.68	7.31	17.58
28	09/01/2023	60.64	23.51	13.46	20.23
29	12/01/2023	53.82	31.21	9.57	25.34
30	16/01/2023	65.34	26.59	6.68	15.62
31	19/01/2023	78.42	44.36	8.57	19.51
32	23/01/2023	61.32	27.26	14.87	24.61
33	26/01/2023	51.27	30.59	11.97	14.80
34	30/01/2023	64.21	33.21	16.34	21.42
35	02/02/2023	58.88	30.67	16.29	19.28
36	06/02/2023	41.57	16.94	11.91	14.86
37	09/02/2023	53.48	26.22	14.87	16.44
38	13/02/2023	43.21	22.47	6.30	21.25
39	16/02/2023	49.55	27.51	8.77	18.22
40	20/02/2023	56.34	33.79	10.24	26.25
41	23/02/2023	65.24	37.28	13.45	20.38
42	27/02/2023	55.94	28.80	7.27	17.33
43	02/03/2023	70.62	40.28	11.29	18.08
44	06/03/2023	60.45	28.59	9.21	13.04
45	09/03/2023	77.56	42.61	12.72	23.04
46	13/03/2023	62.62	25.63	8.25	28.73
47	16/03/2023	55.71	17.10	10.24	17.39
48	20/03/2023	65.68	37.37	18.23	21.98
49	23/03/2023	50.23	24.47	15.29	26.34
50	27/03/2023	71.68	29.25	6.48	15.34
51	30/03/2023	52.12	20.39	17.58	19.63



H. T. Shah

Dr. Arun Bajpai

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

TABLE NO. 2 RESULTS OF AAQM FOR STARTING OF PILE APPROACH [OCTOBER 2022 TO MARCH 2023]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	03/10/2022	74.88	40.65	12.65	26.55
2	06/10/2022	60.45	29.57	22.47	30.21
3	10/10/2022	77.34	39.52	9.35	14.66
4	13/10/2022	63.32	34.27	13.62	21.58
5	17/10/2022	73.58	42.65	18.63	27.51
6	20/10/2022	88.43	47.68	14.62	22.35
7	24/10/2022	68.72	36.40	20.25	29.27
8	27/10/2022	82.33	41.27	16.02	32.47
9	31/10/2022	75.38	35.48	8.84	19.87
10	03/11/2022	66.54	38.61	20.52	27.55
11	07/11/2022	84.20	46.56	7.75	31.22
12	10/11/2022	72.36	42.65	10.73	28.70
13	14/11/2022	81.42	47.27	15.57	32.41
14	17/11/2022	70.51	37.52	19.22	29.28
15	21/11/2022	76.75	44.10	13.54	23.52
16	24/11/2022	55.14	30.36	16.96	25.87
17	28/11/2022	67.85	40.23	21.49	30.43
18	01/12/2022	64.23	35.27	17.10	33.43
19	05/12/2022	71.28	40.27	10.71	22.62
20	08/12/2022	76.27	45.64	8.18	25.60
21	12/12/2022	56.23	26.40	11.60	23.15
22	15/12/2022	80.96	49.77	9.88	20.67
23	19/12/2022	58.38	25.36	16.29	31.66
24	22/12/2022	70.57	42.52	12.72	24.62
25	26/12/2022	78.65	46.27	18.83	34.27
26	02/01/2023	73.73	31.48	14.60	30.80
27	05/01/2023	67.63	34.19	17.35	21.13
28	09/01/2023	71.62	29.94	19.11	23.78
29	12/01/2023	77.51	39.56	13.53	29.43
30	16/01/2023	69.31	36.36	15.26	33.34
31	19/01/2023	82.62	48.43	11.67	28.25
32	23/01/2023	66.23	23.24	18.86	31.25
33	26/01/2023	61.55	37.56	16.88	27.67
34	30/01/2023	75.22	41.44	9.45	19.68
35	02/02/2023	71.22	33.52	9.45	26.33
36	06/02/2023	62.26	30.28	15.55	27.27
37	09/02/2023	80.23	42.40	18.89	31.24
38	13/02/2023	72.62	37.52	10.35	28.22
39	16/02/2023	58.61	31.78	14.69	32.51
40	20/02/2023	64.22	35.82	12.69	35.45
41	23/02/2023	76.52	39.11	17.36	23.72
42	27/02/2023	70.72	36.52	19.39	21.14
43	02/03/2023	77.32	44.56	19.53	33.84
44	06/03/2023	66.23	35.48	16.52	23.83
45	09/03/2023	88.62	48.56	20.22	17.78
46	13/03/2023	78.65	42.56	12.44	21.53
47	16/03/2023	61.22	28.19	18.64	22.01
48	20/03/2023	76.53	40.23	21.63	29.72
49	23/03/2023	70.25	29.24	11.72	19.47
50	27/03/2023	83.47	43.94	14.53	30.53
51	30/03/2023	67.51	34.57	22.37	31.22



H. T. Shah

H. T. Shah
Lab Manager

Dr. Arun Bajpai

Dr. Arun Bajpai
Lab Manager (Q)

TABLE NO. 3 RESULTS OF AAQM FOR SOUTH WEST CORNER AT PUMP HOUSE [OCTOBER 2022 TO MARCH 2023]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	03/10/2022	54.33	30.18	14.69	20.61
2	06/10/2022	47.58	24.37	16.94	25.64
3	10/10/2022	52.82	28.65	13.64	19.52
4	13/10/2022	44.61	21.84	11.67	15.64
5	17/10/2022	68.45	39.48	17.56	23.48
6	20/10/2022	78.66	36.24	9.45	13.68
7	24/10/2022	61.22	32.26	15.61	24.57
8	27/10/2022	72.63	26.45	8.52	28.43
9	31/10/2022	55.32	23.42	10.52	26.92
10	03/11/2022	61.24	27.61	15.67	21.81
11	07/11/2022	74.52	30.43	9.51	24.53
12	10/11/2022	60.26	35.70	7.82	22.58
13	14/11/2022	77.53	34.79	14.45	26.48
14	17/11/2022	46.55	24.54	11.58	25.40
15	21/11/2022	55.22	29.39	8.90	18.68
16	24/11/2022	50.54	18.43	6.22	29.43
17	28/11/2022	62.47	33.30	17.20	23.86
18	01/12/2022	40.07	24.33	10.20	18.40
19	05/12/2022	64.58	29.60	12.60	31.57
20	08/12/2022	70.63	37.53	6.55	15.63
21	12/12/2022	42.23	23.83	13.24	19.91
22	15/12/2022	71.53	32.67	7.25	16.31
23	19/12/2022	41.36	26.57	11.57	26.25
24	22/12/2022	59.93	31.55	9.62	21.51
25	26/12/2022	65.41	39.61	14.26	30.28
26	02/01/2023	67.42	28.48	7.67	20.48
27	05/01/2023	59.42	22.25	11.37	26.27
28	09/01/2023	66.57	26.40	8.87	18.43
29	12/01/2023	61.21	36.54	6.45	21.63
30	16/01/2023	58.95	31.55	10.64	23.57
31	19/01/2023	72.62	40.35	19.23	17.63
32	23/01/2023	57.33	34.54	16.58	28.43
33	26/01/2023	47.66	20.59	9.25	16.55
34	30/01/2023	70.62	38.49	13.67	24.13
35	02/02/2023	65.31	25.66	6.53	23.54
36	06/02/2023	56.28	21.51	8.58	18.61
37	09/02/2023	72.58	36.66	10.54	21.60
38	13/02/2023	53.98	26.53	19.21	17.63
39	16/02/2023	42.48	23.46	11.27	24.25
40	20/02/2023	49.27	31.22	7.62	20.26
41	23/02/2023	58.56	33.55	15.37	16.33
42	27/02/2023	48.26	24.58	12.19	25.32
43	02/03/2023	66.71	27.44	13.44	25.63
44	06/03/2023	53.52	24.54	6.78	20.37
45	09/03/2023	82.62	45.25	9.54	29.41
46	13/03/2023	73.52	30.14	14.65	32.66
47	16/03/2023	68.68	21.63	16.26	27.02
48	20/03/2023	60.22	34.54	11.82	23.36
49	23/03/2023	55.27	20.26	8.71	18.88
50	27/03/2023	76.24	40.23	10.60	24.26
51	30/03/2023	57.13	25.66	12.41	21.26




H. T. Shah
Lab Manager



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Lab Manager (Q)

TABLE NO. 4 RESULTS OF AAQM FOR NORTH EAST CORNER AT RAILWAY BUILDING [OCTOBER 2022 TO MARCH 2023]

Sr No.	Date of Sampling	Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂)(µg/m ³)	Oxides of Nitrogen (NO ₂) (µg/m ³)
1	03/10/2022	82.62	45.65	18.17	34.40
2	06/10/2022	66.41	33.45	24.79	41.20
3	10/10/2022	83.87	44.82	17.81	38.61
4	13/10/2022	69.32	38.41	15.46	33.46
5	17/10/2022	86.21	46.27	21.27	30.61
6	20/10/2022	94.23	50.36	16.60	26.34
7	24/10/2022	74.54	39.53	22.40	35.40
8	27/10/2022	88.61	47.51	19.39	37.29
9	31/10/2022	80.32	43.62	13.90	29.55
10	03/11/2022	78.64	41.43	17.59	32.51
11	07/11/2022	90.41	50.28	14.56	37.50
12	10/11/2022	76.58	45.28	16.53	33.47
13	14/11/2022	87.68	48.13	19.51	42.42
14	17/11/2022	79.68	39.82	22.10	35.43
15	21/11/2022	88.52	47.84	18.98	28.60
16	24/11/2022	75.38	42.42	21.40	34.55
17	28/11/2022	81.23	46.27	24.54	36.50
18	01/12/2022	67.61	42.88	14.53	37.78
19	05/12/2022	75.64	44.95	21.27	34.66
20	08/12/2022	82.43	50.44	15.63	28.30
21	12/12/2022	68.65	36.88	17.56	32.41
22	15/12/2022	84.98	52.14	19.48	27.27
23	19/12/2022	60.18	39.45	22.32	35.43
24	22/12/2022	76.55	46.23	18.25	31.13
25	26/12/2022	86.24	51.23	23.49	38.63
26	02/01/2023	82.42	34.15	19.78	35.12
27	05/01/2023	76.82	38.33	15.76	31.62
28	09/01/2023	81.34	36.63	21.79	26.14
29	12/01/2023	86.35	43.54	16.32	34.57
30	16/01/2023	77.62	47.26	18.65	38.44
31	19/01/2023	90.34	52.51	13.25	23.40
32	23/01/2023	72.23	44.24	22.36	36.54
33	26/01/2023	68.64	41.43	14.56	29.34
34	30/01/2023	83.55	46.48	23.13	27.75
35	02/02/2023	76.23	39.36	23.22	27.71
36	06/02/2023	69.32	36.35	13.83	29.86
37	09/02/2023	86.32	47.34	22.31	34.02
38	13/02/2023	77.57	42.63	15.27	23.94
39	16/02/2023	64.34	37.92	17.58	28.38
40	20/02/2023	73.53	43.62	14.27	32.46
41	23/02/2023	82.72	48.58	21.78	26.13
42	27/02/2023	75.35	40.27	16.38	31.53
43	02/03/2023	83.68	47.55	25.28	29.56
44	06/03/2023	72.86	41.10	22.18	25.36
45	09/03/2023	93.68	51.23	14.23	31.73
46	13/03/2023	87.15	46.93	17.24	35.64
47	16/03/2023	73.33	36.26	21.30	30.80
48	20/03/2023	84.57	50.28	24.39	34.46
49	23/03/2023	76.33	45.28	18.41	28.66
50	27/03/2023	90.36	48.29	15.75	33.28
51	30/03/2023	71.37	38.25	20.29	36.27



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AMBIENT AIR QUALITY ANALYSIS REPORT OBSERVATIONS

Ambient Air Quality Monitoring Sample Analysis									
Sr.No.	Month	Particulate Matter (PM ₁₀) (µg/m ³)		Particulate Matter (PM _{2.5}) (µg/m ³)		Sulphur Dioxide (SO ₂) (µg/m ³)		Oxides of Nitrogen (NO ₂) (µg/m ³)	
		Max	Min	Max	Min	Max	Min	Max	Min
L.C. Gate No.2									
1	October-22	72.45	50.88	35.66	21.14	20.50	6.60	32.52	14.82
2	November-22	70.58	50.06	38.57	21.85	19.40	6.34	24.67	14.30
3	December-22	73.28	45.36	33.46	18.27	17.25	8.49	29.41	15.21
4	January-23	78.42	51.27	44.36	18.68	16.34	6.68	25.34	14.80
5	February-23	65.24	41.57	37.28	16.94	16.29	6.30	26.25	14.86
6	March-23	77.56	50.23	42.61	17.10	18.23	6.48	28.73	13.04
Starting Of Pile Approach (Near SS2 Building)									
1	October-22	88.43	60.45	47.68	29.57	22.47	8.84	32.47	14.66
2	November-22	84.20	55.14	47.27	30.36	21.49	7.75	32.41	23.52
3	December-22	80.96	56.23	49.77	25.36	18.83	8.18	34.27	18.77
4	January-23	82.62	61.55	48.43	23.24	19.11	9.45	33.34	19.68
5	February-23	80.23	58.61	42.40	30.28	19.39	9.45	35.45	21.14
6	March-23	88.62	61.22	48.56	28.19	22.37	11.72	33.84	17.78
South West Corner at Pump House									
1	October-22	78.66	44.61	39.48	21.84	17.56	8.52	28.43	13.68
2	November-22	77.53	46.55	35.70	18.43	17.20	6.22	29.43	18.68
3	December-22	71.53	40.07	39.61	23.83	17.68	6.55	31.57	15.63
4	January-23	72.62	47.66	40.35	20.59	19.23	6.45	28.43	16.55
5	February-23	72.58	42.48	36.66	21.51	19.21	6.53	25.32	16.33
6	March-23	82.62	53.52	45.25	20.26	16.26	6.78	32.66	18.88
North East Corner at Railway Building									
1	October-22	94.23	66.41	50.36	33.45	24.79	13.90	41.20	26.34
2	November-22	90.41	75.38	50.28	39.82	24.54	14.56	42.42	28.60
3	December-22	86.24	60.18	52.14	36.88	23.49	14.53	38.63	27.27
4	January-23	90.34	68.64	52.51	34.15	23.13	13.25	38.44	23.40
5	February-23	86.32	64.34	48.58	36.35	23.22	13.83	34.02	23.94
6	March-23	93.68	71.37	51.23	36.26	25.28	14.23	36.27	25.36



H. T. Shah

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RESULTS OF NOISE LEVEL MONITORING

Sampling Date	: As Per Table
Test Method	: IS 9876/IS 9989
Sampling Location	: As Per Table
Sampling By	: Pollucon Laboratories Pvt. Ltd.
Protocol (purpose)	: Environmental Monitoring

TABLE NO. 5 RESULTS OF DAY TIME NOISE LEVEL MONITORING [OCTOBER 2022 TO MARCH 2023]

Noise Level Day Time dB(A)Leq*									
Sr. No.	Name of Location	LC Gate No.2		Starting Of Pile Approach		South West Corner at Pump House		North East Corner at Railway Building	
	Month	Max	Min	Max	Min	Max	Min	Max	Min
1.	October-22	72.4	52.5	72.5	54.6	72.8	55.0	72.0	56.3
2.	November-22	73.8	54.9	73.1	57.1	73.2	57.7	74.1	58.8
3.	December-22	74.0	53.7	73.2	57.1	73.5	56.1	73.4	58.7
4.	January-23	74.1	54.6	73.9	54.1	74.2	57.3	73.8	59.2
5.	February-23	73.9	57.4	74.1	55.6	74.2	60.1	73.7	61.5
6.	March-23	73.8	57.1	73.7	56.2	74.1	8.8	73.4	59.8

TABLE NO. 6 RESULTS OF NIGHT TIME NOISE LEVEL MONITORING [OCTOBER 2022 TO MARCH 2023]

Noise Level Night Time dB(A)Leq*									
Sr. No.	Name of Location	LC Gate No.2		Starting Of Pile Approach		South West Corner at Pump House		North East Corner at Railway Building	
	Month	Max	Min	Max	Min	Max	Min	Max	Min
1.	October-22	66.5	49.2	61.1	51.5	67.5	57.1	65.1	55.6
2.	November-22	68.3	51.1	63.1	52.7	68.9	58.3	66.6	57.3
3.	December-22	67.1	51.6	62.7	54.4	68.8	58.2	67.3	55.9
4.	January-23	69.4	51.4	61.8	51.9	68.9	56.7	67.1	56.3
5.	February-23	69.1	52.6	63.5	53.6	68.3	57.7	68.6	59.4
6.	March-23	69.2	54.9	65.3	55.9	68.5	59.2	68.4	58.9

AMBIENT AIR QUALITY STANDARDS FOR NOISE SPECIFIED BY CPCB

Area Code	Category of Area/Zone	Limits in dB(A) Leq#	
		Day time	Night time
A	Industrial area	75	70
Notes:			
3. Day time shall mean from 6.00 a.m. to 10.00 p.m.			
4. Night time shall mean from 10.00 p.m. to 06.00 a.m.			
#dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing			



H. T. Shah

H. T. Shah
Lab Manager

Dr. Arun Bajpai

Dr. Arun Bajpai
Lab Manager (Q)

AMBIENT AIR QUALITY MONITORING & NOISE QUALITY MONITORING LOCATIONS

Sr. No	Name of Location	GPS Coordinate
1.	LC Gate No.2	N 22°58' 14.29" E 70°05' 51.07"
2.	Starting Of Pile Approach	N 22°54' 27.47" E 70°06' 15.63"
3.	South West Corner at Pump House	N 22°55' 22.98" E 70°06' 7.37"
4.	North East Corner at Railway Building	N 23° 0' 48.34" E 70° 12' 30.47"

FIGURE NO. 1 GOOGLE EARTH IMAGE OF AMBIENT AIR QUALITY MONITORING & NOISE QUALITY MONITORING LOCATION



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Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

TABLE NO.12 RESULTS OF STACK MONITORING**PERMISSIBLE LIMIT FOR STACK MONITORING**

SR. NO.	TEST PARAMETER	UNIT	GPCB LIMIT**	TEST/SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	150	IS:11255 (Part-1)
2	Sulfur Dioxide as SO ₂	ppm	100	IS:11255 (Part-2)
3	Oxides of Nitrogen as NO _x	ppm	50	IS: 11255 (Part-7)

**Details provided by customer.

RESULTS OF STACK MONITORING

Date of Monitoring			December-22		
Sampling Location			SS-1 DG Set -1 (125 KVA)	SS-2 DG Set -2 (125 KVA)	SS-3 DG Set -3 (125 KVA)
SR. NO.	TEST PARAMETER	UNIT	24/12/2022		
1	Particulate Matter	mg/Nm ³	22.45	20.34	18.62
2	Sulfur Dioxide as SO ₂	ppm	6.23	8.06	5.32
3	Oxides of Nitrogen as NO _x	ppm	30.52	32.62	28.42
4	Noise Level Monitoring				
4.1	Near DG Set	dB(A)	72.6	70.3	71.8

**H. T. Shah**
Lab Manager**Dr. Arun Bajpai**
Lab Manager (Q)

Annexure 2: Expenditure Details on Environmental Safeguards during FY 2022- 23

Sr. no.	Activity	Cost incurred. (INR in Lakh)
1	Environmental Monitoring	8.60
2	Environment Days Celebration	2.0
3	Greenbelt development [Area: 16.09 Hectare]	33.60
4	Treatment and Disposal of Bio-Medical Waste	1.08
5	Hazardous /Non-Hazardous waste management & Disposal	11.63
6	O&M Of Sewage Treatment plant and OWC Plant	11.96
7	Firefighting Equipment	240.32
8	Dust Suppression	
9	Maintenance of conveyor belt	315.39
Total		624.58

Annexure - 3 Green zone developments details

CURRENT GREEN ZONE DETAILS OF TUNA PORT (AKBTPL) UP TO Mar'2023.						
Sr. No.	Location	Area (Ha)	Tree (No.)	Shrubs (SQM)	Green Carpet (SQM)	Palm (No.)
1	Staff Canteen, POB & SS1 Building	2.25	4491	1975	8569	307
2	Green Belt area & Pump House	6.34	15779	250	0	75
3	Approach Road Zero Point to Main Gate	0.60	220	0	0	1150
4	SS2 Building & Jetty Road Area.	3.45	8002	1230	0	0
5	Internal Road & Railway Building	3.34	13180	150	60	250
6	Near WB 04	0.113	500	0	0	0
	Total	16.09	42172	3605	8629	1782