

Date: 1st August, 2016

Ref No. AKBTPL/ENVSTATEMENT/2015-16

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

Dear Sir,

Kind Attn. Sh. Hardik Shah

Sub: Environmental Statement for the financial year ending 31st March, 2016 for M/s
Adani Kandla Bulk Terminal Pvt Ltd (AKBTPL)

Ref: PCB ID: - 46110, Consent Order No. AWH - 68051

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 2016.

Thank you,

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


Col. Parag Srivastava
(Head - AKBTPL)

Encl: Annexure - 1, 2 & 3.

Copy to:

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


Gujarat Pollution Control Board
Head Office
Sector No. 10-A,
Gandhinagar-382010



o/c

Date: 1st August, 2016

Ref No. AKBTP/ENVSTATEMENT/2015-16

To,
Member Secretary
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Paryavaran Bhavan,
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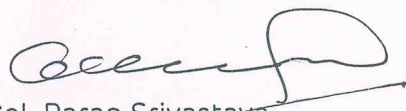
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1. The Regional Officer, Gujarat Pollution Control Board, Gandhidham.

 12-8-2016
Received
Gujarat Pollution Control Board
Regional Office
Kutch (East)

**Environment Statement for 2015-16 for M/s Adani Kandla Bulk Terminal
Pvt Ltd**

FORM V
(See Rule 14)

Environmental Statement for the Financial Year ending 31st March 2016

PART - A

- | | | | |
|-------|--|---|--|
| (i) | Name and address of the Owner/
Occupier of the Industry Operation
or Process | : | Col. Parag Srivastava
Head – AKBTPL
Adani Kandla Bulk Terminal Pvt Ltd.
Tuna Tekra, Taluka - Anjar
Dist. Kutch (Gujarat) |
| | | | |
| (ii) | Industry Category
Primary (STC Code)
Secondary (STC Code) | : | Red – Large
NA
NA |
| | | | |
| (iii) | Production Capacity | : | Dry Bulk Cargo Handling – 12 MMTPA |
| | | | |
| (iv) | Year of Establishment | : | 2011 – 12 (As per certification of
incorporation date of company) |
| | | | |
| (v) | Date of last Environment
Statement submitted | : | 18.09.2015 |

Environment Statement for 2015-16 for M/s Adani Kandla Bulk Terminal
Pvt Ltd
PART - B

Water and Raw Material Consumption

(i) Water Consumption

Water Consumption Cu.Mtr./Day	
Process	Nil
Cooling (Used in sprinkling / gardening / dust suppression)	716.58 m ³ /day*
Domestic	26.50 m ³ /day*

Name of Products	Process Water Consumption per unit of Product Output	
	During the previous financial year (2014 - 15)	During the current financial year (2015 - 16)
Handling and Storage of dry bulk cargo*	0.194 MMT	3.727 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 (2014 - 15)	During the current financial year (2015 - 16)
NIL*	Not Applicable	Nil	Nil

Note: AKBTPPL is involved logistic business, hence there no raw material being used.

Environment Statement for 2015-16 for M/s Adani Kandla Bulk Terminal
Pvt Ltd
PART - C

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

Pollutants	Quantity of pollutants discharged (Mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	AKBTPL is involved in logistic business; hence there is no process effluent discharge.		
(b) Air	• DG sets are provided as standby power source and used during power failure. • All the ambient air parameters are within standards. • Refer Annexure 3 [Ambient Air Monitoring Reports]		

Environment Statement for 2015-16 for M/s Adani Kandla Bulk Terminal
Pvt Ltd
PART - D

Hazardous Wastes
(As specified under Hazardous Wastes Management and Handling Rules 1989)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year (2014-15)	During the current financial year (2015-16)
(a) From Process Used Oil	Nil	Generation – 8.29 KL Reuse – 1.16 KL (Used in Railway siding and MBU machine as a lubricant)
* A (b) From Pollution Control facilities	Nil	Nil

AKBTPL is involved in logistic business; hence there is no process waste

PART - E
Solid Waste

Solid Waste	Total Quantity Generated (MT/Annum)	
	During the previous financial year (2014-15)	During the current financial year (2015-16)
(a) From Process (Ash)	Nil	Nil
(b) From Pollution Control facilities	Nil	Nil
(C-1) Quantity recycled or reutilized within the unit	--	--
(C-2) Sold	--	--
(C-3) Disposed	--	--

Environment Statement for 2015-16 for M/s Adani Kandla Bulk Terminal Pvt Ltd

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 used as a lubricant for maintenance purpose.

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. AKBTPPL has planted mangroves in 250 ha area near Satsaida Bet (Kandla), Kutch sea cost. Unit has formed dedicated Horticulture department & developing green belt within port premises.

During the project, the total cost incurred on environmental protection measures is enclosed as Annexure 1 and the green belt developed so far enclosed as Annexure 2.

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 limit & 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. Unit has also provided dump pond & conveyance channel for collection of runoff generated from Coal Yard.
- Unit has provided DSS at coal yard & conveyer system and carrying out regular water spreading to control the dust exposure.
- Unit is developing green belt within port and outside continually with help of Horticulture dept.
- Continually taking new initiatives for protection of environment with respect to air-water-soil.

PART - I

**Environment Statement for 2015-16 for M/s Adani Kandla Bulk Terminal
Pvt Ltd**

Any other particulars for improving the quality of environment:

- Environmental awareness programs have been conducted for workmen.
- Integrated housekeeping and waste management being maintained regularly.

Date : 01.08.2016



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

Name : Col. Parag Srivastava

Designation : Head – AKBTPPL

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



Adani Kandla Bulk Terminal Pvt. Ltd.

From : October 2015
To : March 2016

Annexure 1: Expenditure Details on Environmental Safeguards

Sr. no.	Activity	Cost incurred (INR in Lakh)
1	Environmental Monitoring	16.00
2	Greenbelt development [Area: 7.15 Hectare]	60.59
3	Mangrove plantation	72
4	Disposal of wastes	10.86
5	Fire fighting Equipment	85.00
Total		244.45

**Environment Statement for 2015-16 for M/s Adani Kandla Bulk Terminal
Pvt Ltd**

Annexure – 2 Green developments for Year 2015 -16

Sr. No.	Green Zone Nos.	Location	Area (Ha)	Tree (No.)	Name of Species/Plant	Shrubs (SQM)	Green Carpet (SQM)	Palm (No.)
1	71a	SITE OFFICE BUILDING AND POB BUILDING AREA, SS-1 BUILDING	0.004	5	Neem (AZARDICA INDICA),			
			0.20	2000	CASURINA PLANT			
			0.01	25	Ficus Panda Topiary			
			0.00	0	Delonix regia			
			0.03	0	Washingtonia f.f.			87
			0.003	0	Almunda Dwarf.	25		
			0.00	0	IXORA RED	15		
			0.03	0	Lilly (HYMENOCALLIS SPECIOSA)	275		
			0.0015	0	Euphorbia Milli	15		
			0.60	1500	Eucalyptus spp			
			0.00	0	Bougainvillia Red	25		
			0.02	0	Cycus			48
			0.03	0	Clerodendron Inerme.	260		
			0.15	0	Flat lawn		1480	
2	71b	GREEN BELT AREA	2.31	5779	Casurina Spp.			
			0.334	417	Neem (AZARDICA INDICA),			
			0.334	417	Peltophorum			
					Nerrium	100		
3	71c	5KM. ROAD	0.40	0	Washingtonia F.F			1000
4	71d	SS-2 BUILDING AREA	0.00	0	Washingtonia F.F			
			0.08	815.00	Casurina Spp.			
			0.00		Lilly (HYMENOCALLIS SPECIOSA)			
			0.00		Inermi			
			0.50	1251.00	Coconut			
			0.00		Sloppy lawn			
4	71e	INTERNAL ROAD, RAILWAY BUILDING	0.10		Washingtonia F.F			250.00
			0.70	7000.00	Casurina Spp.			
			0.114	143	Neem (AZARDICA INDICA),			
			0.114	143	Peltophorum			
			1.08	2700	Eucalyptus spp			
			0.01	0	Flat lawn		60.78	
			0.00	0	Clerodendron Inerme.	100		



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

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

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):Gravimetric CPCB - Method (Vol.I,May-2011)
2	Particulate Matter (PM _{2.5})	µg/m ³	60	Gravimetric- CPCB - Method (Vol.I,May-2011)
3	Lead as Pb	µg/m ³	1.0	CPCB Method (Vol.I,May-2011)
4	Benzo (a) Pyrene (BaP)- particulate phase only	ng/m ³	1.0	CPCB Method (Vol.I,May-2011)
5	Arsenic as As	ng/m ³	6.0	CPCB Method (Vol.I,May-2011)
6	Nickel as Ni	ng/m ³	20	CPCB Method (Vol.I,May-2011)
7	Carbon Monoxide as CO	mg/m ³	4.0	NDIR Digital Gas Analyzer
8	Benzene as C ₆ H ₆	µg/m ³	5.0	IS 5182 (Part XI):2006/CPCB Method
9	Ammonia (NH ₃)	µg/m ³	400	CPCB Method (Vol.I,May-2011)
10	Sulphur Dioxide (SO ₂)	µg/m ³	80	IS:5182(Part 2): Improved West and Gaeke
11	Oxides of Nitrogen (NO ₂)	µg/m ³	80	IS:5182(Part 6):Modified Jacob & Hochheiser (Na-Arsenite)
12	Ozone (O ₃)	µg/m ³	180	IS 5182 (PART IX) 1974 / CPCB Method (Vol.I,May-2011)

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

Date of Sampling	: As Per Table	Sampling Location	: As Per Table
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: Ambient Air Quality Monitoring

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)



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

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

Table No. 1 Ambient Air Quality Monitoring Results for Zero Point

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Lead (µg/m ³)	BaP (ng/m ³)	As (ng/m ³)	Ni (ng/m ³)	CO (mg/m ³)	C ₆ H ₆ (µg/m ³)	NH ₃ (µg/m ³)	SO ₂ (µg/m ³)	NOx (µg/m ³)	O ₃ (µg/m ³)
01/10/2015	78.49	38.37	BDL*	BDL*	BDL*	BDL*	0.54	BDL*	48.36	18.51	30.44	29.69
05/10/2015	66.81	35.41	BDL*	BDL*	BDL*	BDL*	0.64	BDL*	56.58	15.65	36.48	27.86
08/10/2015	70.00	31.62	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	46.5	19.56	39.45	19.5
12/10/2015	64.49	28.67	BDL*	BDL*	BDL*	BDL*	0.76	BDL*	32.51	21.68	34.46	26.41
15/10/2015	58.41	34.72	BDL*	BDL*	BDL*	BDL*	0.48	BDL*	41.94	24.73	20.64	24.26
19/10/2015	80.51	40.47	BDL*	BDL*	BDL*	BDL*	0.69	BDL*	34.47	10.46	26.45	28.44
22/10/2015	90.38	52.28	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	38.37	12.6	32.94	23.49
26/10/2015	57.59	29.51	BDL*	BDL*	BDL*	BDL*	0.77	BDL*	44.55	22.49	18.25	20.61
29/10/2015	65.52	32.46	BDL*	BDL*	BDL*	BDL*	0.62	BDL*	42.51	17.47	29.38	18.47
02/11/2015	69.53	31.62	BDL*	BDL*	BDL*	BDL*	0.66	BDL*	36.35	18.61	39.49	17.51
05/11/2015	56.42	22.77	BDL*	BDL*	BDL*	BDL*	0.6	BDL*	38.37	20.47	19.91	19.06
09/11/2015	63.48	35.41	BDL*	BDL*	BDL*	BDL*	0.48	BDL*	33.82	16.48	29.42	20.38
14/11/2015	76.61	40.47	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	39.34	19.37	33.03	27.51
16/11/2015	65.52	36.41	BDL*	BDL*	BDL*	BDL*	0.56	BDL*	43.89	14.42	40.55	28.65
19/11/2015	87.52	49.33	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	30.56	11.49	35.62	21.37
23/11/2015	61.49	26.56	BDL*	BDL*	BDL*	BDL*	0.58	BDL*	25.69	21.5	37.66	24.31
26/11/2015	54.52	32.46	BDL*	BDL*	BDL*	BDL*	0.37	BDL*	35.77	23.73	22.7	22.05
30/11/2015	78.71	43.42	BDL*	BDL*	BDL*	BDL*	0.54	BDL*	26.8	9.51	28.94	25.91
3/12/2015	81.62	40.47	BDL*	BDL*	BDL*	BDL*	0.59	BDL*	29.08	8.61	30.62	30.45
7/12/2015	57.59	34.57	BDL*	BDL*	BDL*	BDL*	0.65	BDL*	44.5	17.34	21.57	18.24
10/12/2015	68.42	32.46	BDL*	BDL*	BDL*	BDL*	0.69	BDL*	54.49	12.57	44.53	24.72
14/12/2015	56.38	29.51	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	34.51	20.37	24.58	27.6
17/12/2015	72.6	30.48	BDL*	BDL*	BDL*	BDL*	0.73	BDL*	42.18	15.57	42.91	28.82
21/12/2015	65.22	36.68	BDL*	BDL*	BDL*	BDL*	0.53	BDL*	38.45	13.43	32.35	25.66
24/12/2015	82.38	45.53	BDL*	BDL*	BDL*	BDL*	0.65	BDL*	30.36	18.57	40.63	29.29
28/12/2015	90.69	51.44	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	35.47	9.5	38.36	20.43
31/12/2015	78.88	35.41	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	45.71	16.58	35.37	26.81
04/01/2016	95.21	54.39	0.56	BDL*	BDL*	10.27	0.78	BDL*	31.54	20.48	34.5	29.38
07/01/2016	84.51	39.63	BDL*	BDL*	BDL*	10.52	0.57	BDL*	52.67	13.37	39.38	26.6
11/01/2016	60.58	26.56	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	30.5	18.45	21.89	30.51
14/01/2016	76.48	41.74	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	55.45	19.68	29.44	24.31
18/01/2016	87.48	48.69	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	22.76	7.37	25.38	28.62
21/01/2016	91.5	51.44	0.64	BDL*	BDL*	BDL*	0.55	BDL*	47.75	11.55	40.22	23.5
25/01/2016	82.62	43.42	BDL*	BDL*	BDL*	BDL*	0.76	BDL*	39.67	16.34	36.44	27.49
28/01/2016	65.52	34.57	BDL*	BDL*	BDL*	BDL*	0.52	BDL*	35.44	21.55	19.52	18.54
01/02/2016	84.68	47.64	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	30.56	18.58	39.51	19.21
04/02/2016	60.31	25.72	0.58	BDL*	BDL*	BDL*	0.47	BDL*	41.28	9.57	36.8	25.35
08/02/2016	52.51	22.34	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	52.98	16.64	26.32	27.18
11/02/2016	64.49	36.68	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	26.49	19.62	40.16	30.58
15/02/2016	85.72	52.5	BDL*	BDL*	BDL*	BDL*	0.48	BDL*	44.22	11.57	35.67	28.34
18/02/2016	76.79	33.73	BDL*	BDL*	BDL*	BDL*	0.68	BDL*	29.57	17.37	30.87	26.39
22/02/2016	67.88	28.67	BDL*	BDL*	BDL*	BDL*	0.4	BDL*	19.18	6.55	22.56	20.25
25/02/2016	78.52	42.58	BDL*	BDL*	BDL*	BDL*	0.65	BDL*	34.47	13.44	33.61	24.13
29/02/2016	82.72	37.52	BDL*	BDL*	BDL*	BDL*	0.7	BDL*	42.82	10.49	38.75	29.55
03/03/2016	83.48	39.63	BDL*	BDL*	BDL*	BDL*	0.61	BDL*	23.41	14.45	26.28	23.79
07/03/2016	92.37	35.41	0.64	BDL*	BDL*	10.23	0.41	BDL*	32.65	21.54	31.66	21.57
10/03/2016	85.59	47.64	BDL*	BDL*	BDL*	BDL*	0.62	BDL*	38.5	19.62	38.45	26.63
14/03/2016	78.5	34.57	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	29.26	15.66	33.59	18.44
17/03/2016	58.48	28.37	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	42.59	13.5	25.63	24.57
21/03/2016	73.19	32.46	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	17.56	5.61	27.63	22.33
24/03/2016	65.4	21.5	BDL*	BDL*	BDL*	BDL*	0.58	BDL*	27.64	10.61	30.43	29.28
28/03/2016	70.58	40.47	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	21.46	16.59	34.3	27.89
31/03/2016	91.91	33.73	0.52	BDL*	BDL*	10.58	0.44	BDL*	35.42	9.5	39.37	25.67

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

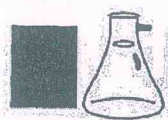
**POLLUCON****LABORATORIES PVT. LTD.**Environmental Auditors, Consultants & Analysts
Cleaner Production / Waste Minimization Facilitator

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

BDL*: Below Detection Limit, Minimum Detection Limit, Lead as Pb ($\mu\text{g}/\text{m}^3$):0.5, Benzo (a) Pyrene (BaP) - particulate phase only (ng/m^3): 0.5, Nickel as Ni (ng/m^3):10, Arsenic as As (ng/m^3):2, Benzene as C_6H_6 ($\mu\text{g}/\text{m}^3$): 2**Table No. 2 Ambient Air Quality Monitoring Results for Starting of pile Approach**

Date of Sampling	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	Lead ($\mu\text{g}/\text{m}^3$)	BaP (ng/m^3)	As (ng/m^3)	Ni (ng/m^3)	CO (mg/m^3)	C ₆ H ₆ ($\mu\text{g}/\text{m}^3$)	NH ₃ ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NOx ($\mu\text{g}/\text{m}^3$)	O ₃ ($\mu\text{g}/\text{m}^3$)
01/10/2015	86.49	46.44	BDL*	BDL*	BDL*	BDL*	0.49	BDL*	27.62	14.72	24.5	22.45
05/10/2015	75.57	39.32	BDL*	BDL*	BDL*	BDL*	0.56	BDL*	20.47	7.41	27.58	18.52
08/10/2015	65.39	28.45	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	24.37	10.43	30.65	26.32
12/10/2015	72.41	34.3	BDL*	BDL*	BDL*	BDL*	0.63	BDL*	17.86	17.42	38.4	23.32
15/10/2015	91.5	55.64	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	22.17	21.58	29.4	21.67
19/10/2015	88.6	47.69	BDL*	BDL*	BDL*	BDL*	0.54	BDL*	46.49	18.46	31.41	25.33
22/10/2015	78.39	35.56	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	52.32	16.76	28.37	19.28
26/10/2015	84.81	49.36	BDL*	BDL*	BDL*	BDL*	0.66	BDL*	33.56	19.56	35.41	24.69
29/10/2015	77.48	36.4	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	29.55	12.71	39.51	28.42
02/11/2015	62.37	26.36	BDL*	BDL*	BDL*	BDL*	0.17	BDL*	19.5	9.47	32.35	24.47
05/11/2015	81.53	47.69	0.56	BDL*	BDL*	10.13	0.52	BDL*	26.65	18.65	38.28	22.08
09/11/2015	77.52	42.67	BDL*	BDL*	BDL*	BDL*	0.42	BDL*	23.4	11.7	42.57	25.39
14/11/2015	83.13	48.53	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	21.86	13.58	26.35	23.4
16/11/2015	73.42	41.42	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	15.7	6.52	29.74	30.35
19/11/2015	80.38	45.6	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	41.25	15.65	30.99	17.44
23/11/2015	69.28	30.54	0.52	BDL*	BDL*	10.13	0.49	BDL*	13.97	12.72	41.4	20.85
26/11/2015	89.37	40.58	BDL*	BDL*	BDL*	BDL*	0.27	BDL*	30.17	19.71	31.62	19.29
30/11/2015	92.41	50.62	0.58	BDL*	BDL*	10.38	0.41	BDL*	35.4	16.4	34.28	27.76
3/12/2015	96.5	54.38	0.68	BDL*	BDL*	10.57	0.45	BDL*	38.64	14.34	37.2	25.65
7/12/2015	85.63	45.6	BDL*	BDL*	BDL*	BDL*	0.56	BDL*	30.34	12.59	42.2	20.31
10/12/2015	77.48	40.58	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	18.52	5.63	32.3	27.59
14/12/2015	93.59	47.69	0.54	BDL*	BDL*	10.38	0.3	BDL*	26.19	16.56	34.24	18.59
17/12/2015	87.48	48.53	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	22.39	8.63	36.53	21.27
21/12/2015	79.51	32.63	BDL*	BDL*	BDL*	BDL*	0.46	BDL*	28.14	18.56	29.2	23.42
24/12/2015	94.5	42.67	0.64	BDL*	BDL*	10.81	0.54	BDL*	15.73	10.35	44.51	19.59
28/12/2015	84.93	36.4	BDL*	BDL*	BDL*	BDL*	0.35	BDL*	47.2	13.47	23.6	22.62
31/12/2015	92.58	50.62	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	24.2	11.33	28.34	24.13
04/01/2016	69.51	47.69	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	42.57	12.5	21.38	26.56
07/01/2016	78.2	50.62	0.58	BDL*	BDL*	BDL*	0.14	BDL*	19.17	7.4	35.45	19.73
11/01/2016	84.29	44.34	0.52	BDL*	BDL*	BDL*	0.24	BDL*	48.42	15.68	29.35	17.21
14/01/2016	71.01	36.4	BDL*	BDL*	BDL*	BDL*	0.74	BDL*	41.59	13.65	26.4	21.82
18/01/2016	82.37	41.42	BDL*	BDL*	BDL*	BDL*	0.37	BDL*	33.86	19.47	33.44	23.34
21/01/2016	70.49	29.7	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	16.62	22.64	28.55	25.41
25/01/2016	86.32	48.53	0.61	BDL*	BDL*	10.2	0.44	BDL*	54.18	9.54	42.57	18.15
28/01/2016	77.8	30.54	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	26.48	17.5	38.36	29.57
01/02/2016	79.79	43.51	BDL*	BDL*	BDL*	BDL*	0.38	BDL*	22.75	14.47	35.28	30.37
04/02/2016	84.51	48.53	BDL*	BDL*	BDL*	BDL*	0.3	BDL*	14.3	19.61	25.57	27.76
08/02/2016	91.52	54.38	0.62	BDL*	BDL*	BDL*	0.63	BDL*	35.42	11.55	23.34	23.49
11/02/2016	75.29	32.63	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	41.59	13.63	18.56	18.72
15/02/2016	68.47	29.28	BDL*	BDL*	BDL*	BDL*	0.17	BDL*	16.32	6.54	31.29	21.32
18/02/2016	90.7	50.62	0.68	BDL*	BDL*	BDL*	0.22	BDL*	36.63	10.35	19.85	28.57
22/02/2016	83.48	47.69	BDL*	BDL*	BDL*	BDL*	0.31	BDL*	29.55	16.42	28.58	25.4
25/02/2016	94.49	52.71	0.58	BDL*	BDL*	BDL*	0.37	BDL*	45.87	8.65	38.38	19.6
29/02/2016	89.31	43.51	BDL*	BDL*	BDL*	BDL*	0.53	BDL*	31.09	17.65	34.52	22.24
03/03/2016	96.48	52.71	0.56	BDL*	BDL*	10.53	0.34	BDL*	29.25	8.68	17.44	25.6
07/03/2016	85.51	47.69	BDL*	BDL*	BDL*	BDL*	0.3	BDL*	10.4	16.76	22.34	23.55
10/03/2016	90.48	54.38	0.54	BDL*	BDL*	10.2	0.48	BDL*	24.7	14.67	29.45	20.55
14/03/2016	86.62	40.58	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	18.2	10.64	26.48	27.1
17/03/2016	93.37	49.36	0.7	BDL*	BDL*	10.38	0.56	BDL*	28.32	9.46	19.84	21.27
21/03/2016	84.2	39.32	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	44.64	13.55	32.59	26.71
24/03/2016	76.52	35.56	BDL*	BDL*	BDL*	BDL*	0.46	BDL*	36.94	17.37	38.66	18.4
28/03/2016	82.63	44.76	BDL*	BDL*	BDL*	BDL*	0.17	BDL*	31.4	11.76	31.75	22.52
31/03/2016	72.89	29.7	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	13.85	5.35	27.25	19.83

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BDL*: Below Detection Limit, Minimum Detection Limit, Lead as Pb ($\mu\text{g}/\text{m}^3$):0.5, Benzo (a) Pyrene (BaP) - particulate phase only (ng/m^3): 0.5, Nickel as Ni (ng/m^3):10, Arsenic as As (ng/m^3):2, Benzene as C_6H_6 ($\mu\text{g}/\text{m}^3$): 2**Table No. 3 Ambient Air Quality Monitoring Results for South West Corner of Back up Area**

Date of Sampling	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	Lead ($\mu\text{g}/\text{m}^3$)	BaP (ng/m^3)	As (ng/m^3)	Ni (ng/m^3)	CO (mg/m^3)	C ₆ H ₆ ($\mu\text{g}/\text{m}^3$)	NH ₃ ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NOx ($\mu\text{g}/\text{m}^3$)	O ₃ ($\mu\text{g}/\text{m}^3$)
01/10/2015	73.41	32.71	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	23.65	10.57	18.53	24.4
05/10/2015	60.37	27.45	BDL*	BDL*	BDL*	BDL*	0.3	BDL*	29.49	13.35	22.63	20.2
08/10/2015	52.6	22.22	BDL*	BDL*	BDL*	BDL*	0.44	BDL*	32.25	16.41	16.26	23.35
12/10/2015	82.63	38.22	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	13.62	14.31	23.54	27.53
15/10/2015	63.51	28.56	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	17.83	18.57	25.47	18.36
19/10/2015	72.62	36.58	BDL*	BDL*	BDL*	BDL*	0.42	BDL*	26.59	7.75	20.35	21.32
22/10/2015	58.6	26.58	BDL*	BDL*	BDL*	BDL*	0.52	BDL*	33.4	9.56	24.33	25.32
26/10/2015	65.64	35.73	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	19.66	12.6	29.3	22.5
29/10/2015	71.63	42.61	BDL*	BDL*	BDL*	BDL*	0.53	BDL*	38.26	11.5	34.47	26.52
02/11/2015	51.63	21.52	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	25.8	14.65	17.81	21.48
05/11/2015	63.66	26.58	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	15.36	11.39	31.76	26.44
09/11/2015	70.49	38.35	BDL*	BDL*	BDL*	BDL*	0.4	BDL*	29.49	13.44	35.45	24.54
14/11/2015	68.37	29.4	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	17.51	9.42	19.85	22.33
16/11/2015	59.15	34.44	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	22.7	12.69	24.36	18.3
19/11/2015	74.62	41.32	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	26.26	8.66	26.18	23.23
23/11/2015	80.65	37.48	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	10.7	10.34	25.54	25.57
26/11/2015	61.58	35.73	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	18.43	17.32	27.36	16.75
30/11/2015	71.86	40.46	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	20.75	7.32	22	19.44
3/12/2015	51.63	21.52	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	25.8	14.65	17.81	21.48
7/12/2015	63.66	26.58	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	15.36	11.39	31.76	26.44
10/12/2015	70.49	38.35	BDL*	BDL*	BDL*	BDL*	0.4	BDL*	29.49	13.44	35.45	24.54
14/12/2015	68.37	29.4	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	17.51	9.42	19.85	22.33
17/12/2015	59.15	34.44	BDL*	BDL*	BDL*	BDL*	0.23	BDL*	22.7	12.69	24.36	18.3
21/12/2015	74.62	41.32	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	26.26	8.66	26.18	23.23
24/12/2015	80.65	37.48	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	10.7	10.34	25.54	25.57
28/12/2015	61.58	35.73	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	18.43	17.32	27.36	16.75
31/12/2015	71.86	40.46	BDL*	BDL*	BDL*	BDL*	0.33	BDL*	20.75	7.32	22	19.44
04/01/2016	61.55	38.74	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	26.72	7.74	25.59	18.24
07/01/2016	71.39	32.68	BDL*	BDL*	BDL*	BDL*	0.26	BDL*	21.4	10.39	17.59	24.41
11/01/2016	52.48	22.66	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	17.51	12.38	23.23	19.24
14/01/2016	65.7	46.2	BDL*	BDL*	BDL*	BDL*	0.36	BDL*	29.49	9.44	34.3	27.18
18/01/2016	72.56	33.6	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	19.35	5.78	20.54	21.11
21/01/2016	57.51	25.39	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	20.75	13.45	18.49	20.5
25/01/2016	66.49	30.5	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	32.56	6.51	26.56	25.1
28/01/2016	70.59	39.22	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	16.59	14.58	30.64	23.37
01/02/2016	65.58	32.71	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	12.59	12.65	27.73	25.56
04/02/2016	58.78	29.63	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	17.83	15.11	30.34	22
08/02/2016	67.78	35.73	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	25.29	7.76	16.48	18.5
11/02/2016	53.85	21.42	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	15.67	10.36	21.85	20.63
15/02/2016	60.81	33.6	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	19.04	8.67	17.61	26.69
18/02/2016	71.59	28.41	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	23.67	6.6	24.54	19.7
22/02/2016	51.52	23.53	BDL*	BDL*	BDL*	BDL*	0.24	BDL*	16.59	11.57	15.5	21.56
25/02/2016	62.38	30.5	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	28.87	5.65	23.79	27.22
29/02/2016	75.58	29.7	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	14.59	9.44	31.76	17.83
03/03/2016	77.95	35.72	BDL*	BDL*	BDL*	BDL*	0.29	BDL*	19.04	5.61	20.55	17.57
07/03/2016	58.6	28.33	BDL*	BDL*	BDL*	BDL*	0.14	BDL*	14.59	12.7	25.34	20.6
10/03/2016	80.93	33.55	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	10.38	7.41	18.6	23.49
14/03/2016	70.44	30.66	BDL*	BDL*	BDL*	BDL*	0.11	BDL*	26.42	18.45	36.73	21.48
17/03/2016	65.22	38.64	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	19.97	6.15	16.53	18.82
21/03/2016	55.35	24.53	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	13.62	9.47	24.47	19.43
24/03/2016	60.5	29.63	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	21.5	14.61	21.35	24.58
28/03/2016	57.31	36.6	BDL*	BDL*	BDL*	BDL*	0.13	BDL*	11.37	8.62	27.51	29.57
31/03/2016	65.11	25.82	BDL*	BDL*	BDL*	BDL*	0.19	BDL*	25.61	11.58	22.61	27.41

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Table No. 4 Ambient Air Quality Monitoring Results for North East Corner of Back up Area

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Lead (µg/m ³)	BaP (ng/m ³)	As (ng/m ³)	Ni (ng/m ³)	CO (mg/m ³)	C ₆ H ₆ (µg/m ³)	NH ₃ (µg/m ³)	SO ₂ (µg/m ³)	NOx (µg/m ³)	O ₃ (µg/m ³)
01/10/2015	54.48	24.38	BDL*	BDL*	BDL*	BDL*	0.22	BDL*	42.56	12.49	27.46	20.32
05/10/2015	85.62	43.48	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	38.67	18.67	39.54	25.54
08/10/2015	78.57	39.09	BDL*	BDL*	BDL*	BDL*	0.27	BDL*	39.4	22.65	33.38	29.33
12/10/2015	94.5	50.44	BDL*	BDL*	BDL*	BDL*	0.58	BDL*	22.47	19.54	29.62	21.56
15/10/2015	76.48	38.25	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	34.48	11.49	35.51	26.28
19/10/2015	92.5	52.54	BDL*	BDL*	BDL*	BDL*	0.57	BDL*	40.63	14.66	38.86	30.36
22/10/2015	84.51	47.7	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	44.51	20.6	40.45	27.26
26/10/2015	75.43	41.61	BDL*	BDL*	BDL*	BDL*	0.5	BDL*	26.47	15.52	32.49	19.28
29/10/2015	90.48	48.34	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	30.47	24.48	42.42	24.48
02/11/2015	76.91	36.57	BDL*	BDL*	BDL*	BDL*	0.47	BDL*	31.52	20.39	36.55	26.18
05/11/2015	69.87	33.35	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	20.79	14.72	35.87	17.58
09/11/2015	88.27	51.7	0.54	BDL*	BDL*	10.28	0.55	BDL*	24.63	22.49	39.46	21.82
14/11/2015	52.61	22.7	BDL*	BDL*	BDL*	BDL*	0.15	BDL*	33.55	11.65	30.19	18.26
16/11/2015	82.51	46.66	BDL*	BDL*	BDL*	BDL*	0.5	BDL*	37.55	17.65	34.62	22.86
19/11/2015	68.42	30.68	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	35.71	19.34	40.75	28.42
23/11/2015	91.4	48.54	0.58	BDL*	BDL*	10.24	0.46	BDL*	17.55	18.72	32.35	19.19
26/11/2015	74.47	44.55	BDL*	BDL*	BDL*	BDL*	0.3	BDL*	26.16	10.63	38.39	29.41
30/11/2015	86.49	47.5	BDL*	BDL*	BDL*	BDL*	0.53	BDL*	29.55	13.47	31.83	27.48
3/12/2015	90.49	49.6	0.56	BDL*	BDL*	10.24	0.48	BDL*	31.61	11.67	35.49	28.55
7/12/2015	73.78	39.68	BDL*	BDL*	BDL*	BDL*	0.43	BDL*	22.35	15.53	38.22	22.44
10/12/2015	87.14	44.55	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	40.23	17.69	37.76	29.5
14/12/2015	77.32	32.36	BDL*	BDL*	BDL*	10.13	0.32	BDL*	30.25	8.66	41.48	26.6
17/12/2015	81.58	36.57	BDL*	BDL*	BDL*	BDL*	0.51	BDL*	36.91	19.43	39.44	23.9
21/12/2015	93.81	54.64	0.62	BDL*	BDL*	10.75	0.6	BDL*	44.17	21.42	42.56	30.5
24/12/2015	88.9	47.7	0.58	BDL*	BDL*	10.37	0.5	BDL*	20.44	16.43	34.46	24.25
28/12/2015	72.02	38.67	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	41.19	18.67	44.24	25.63
31/12/2015	85.31	45.4	BDL*	BDL*	BDL*	BDL*	0.16	BDL*	38.72	10.48	33.73	27.31
04/01/2016	86.53	43.71	0.52	BDL*	BDL*	BDL*	0.53	BDL*	36.39	15.49	39.47	24.5
07/01/2016	92.42	54.45	0.62	BDL*	BDL*	10.75	0.42	BDL*	46.46	18.55	29.57	22.76
11/01/2016	72.68	35.73	BDL*	BDL*	BDL*	BDL*	0.25	BDL*	26.97	7.37	40.3	26.21
14/01/2016	85.39	50.44	BDL*	BDL*	BDL*	10.58	0.48	BDL*	34.48	21.54	37.53	29.41
18/01/2016	79.48	38.67	BDL*	BDL*	BDL*	BDL*	0.18	BDL*	29.55	10.38	31.46	27.15
21/01/2016	84.36	45.4	0.56	BDL*	BDL*	BDL*	0.5	BDL*	35.71	17.72	33.51	30.19
25/01/2016	70.69	39.68	0.53	BDL*	BDL*	10.54	0.4	BDL*	48.74	13.77	19.61	23.5
28/01/2016	84.62	46.66	BDL*	BDL*	BDL*	BDL*	0.34	BDL*	21.77	19.44	34.23	21.31
01/02/2016	70.56	29.42	BDL*	BDL*	BDL*	BDL*	0.53	BDL*	18.52	16.45	30.53	23.41
04/02/2016	90.45	55.72	0.52	BDL*	BDL*	BDL*	0.44	BDL*	32.82	21.72	41.56	30.11
08/02/2016	73.78	40.35	BDL*	BDL*	BDL*	BDL*	0.41	BDL*	29.57	18.72	38.51	20.2
11/02/2016	84.9	48.76	BDL*	BDL*	BDL*	BDL*	0.21	BDL*	22.47	6.57	33.36	28.34
15/02/2016	76.54	38.67	BDL*	BDL*	BDL*	10.01	0.36	BDL*	37.55	15.55	26.76	24.21
18/02/2016	86.49	23.54	0.62	BDL*	BDL*	BDL*	0.45	BDL*	46.48	13.6	35.27	21.51
22/02/2016	77.79	36.72	BDL*	BDL*	BDL*	BDL*	0.55	BDL*	25.67	8.67	31.5	29.59
25/02/2016	88.62	39.51	0.54	BDL*	BDL*	BDL*	0.48	BDL*	39.64	11.69	17.42	25.88
29/02/2016	94.28	54.64	0.68	BDL*	BDL*	BDL*	0.22	BDL*	20.93	7.41	28.69	27.46
03/03/2016	91.56	44.55	0.52	BDL*	BDL*	10.22	0.52	BDL*	37.37	11.76	32.44	19.73
07/03/2016	80.66	39.68	BDL*	BDL*	BDL*	BDL*	0.39	BDL*	26.64	23.59	37.62	26.64
10/03/2016	79.55	43.71	BDL*	BDL*	BDL*	BDL*	0.45	BDL*	16.57	16.48	24.85	28.54
14/03/2016	93.53	50.44	0.56	BDL*	BDL*	10.46	0.47	BDL*	38.48	20.49	42.39	25.47
17/03/2016	86.7	45.4	BDL*	BDL*	BDL*	BDL*	0.37	BDL*	24.01	15.27	31.28	29.49
21/03/2016	64.51	29.42	BDL*	BDL*	BDL*	BDL*	0.49	BDL*	19.39	7.75	27.84	23.45
24/03/2016	72.62	32.5	BDL*	BDL*	BDL*	BDL*	0.42	BDL*	31.19	19.63	35.55	27.62
28/03/2016	94.62	47.5	0.64	BDL*	BDL*	10.64	0.18	BDL*	18.52	13.52	38.25	20.1
31/03/2016	82.31	38.67	BDL*	BDL*	BDL*	BDL*	0.32	BDL*	46.48	14.7	34.55	30.12

BDL*: Below Detection Limit, Minimum Detection Limit, Lead as Pb (µg/m³):0.5, Benzo (a) Pyrene (BaP) - particulate phase only (ng/m³): 0.5, Nickel as Ni (ng/m³):10, Arsenic as As (ng/m³):2, Benzene as C₆H₆ (µg/m³): 2

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