usha martin
Usha Martin Limited
(Wire Ropes & Speciality Products Division)

Works: Tatisilwai, 835103, Ranchi, Jharkhand, India
Ph: (00 91 651) 3051 400 / 2265241
Fax: (00 91 651)3051 409 / 410
CIN: L31400WB1986PLC091621
Website: www.ushamartin.com,
e-mail: feedback@ushamartin.co.in

Ref. UML/CPP/JSPCB/ES/17/009 /01 **19th Sept, 2017**

To
The Member Secretary
Jharkhand State Pollution Control Board
T.A building , Ground floor
HEC complex , P.O Dhurwa
Ranchi - 834004

Subject: **Environment Statement for M/S Usha Martin Limited (2X10 MW Captive Power Plant),Tatisilwai for the financial year 2016 – 17 in Form – V as required under the Environment(Protection) Act, 1986.**

Dear Sir,

Please find enclosed herewith the Environment Statement for the financial year 2016-17 in Form - V as required under the Environment Protection Act, 1986.

Trust you will find this in order.

Thanking you,
Yours Sincerely,
For **Usha Martin Limited**
(2X10MW Captive Power Plant)

CPP (2 X 10MW)
USHAMARTIN LTD.
TATISIL WAI, RANCHI
JHARKHAND. PIN-835103

Rec'd
Bedabi Narayan
26/9/17

JHARKHAND STATE POLLUTION CONTROL BOARD RANCHI

Encl: Duly filled up Form - V (Environmental Statement)

Copy to:
The Regional Officer
Jharkhand State Pollution Control Board
Tupudana Industrial Area
Ranchi - 834003

Received
26.9.17

क्षेत्रीय कार्यालय
झा. रा. प्र. नि. पर्षद
सी.टी.आई. कॉलोनी, कक्ष नं.-ई-1
ई.सी., धुर्वा,

[FORM – V]

(See Rule 14)

Environmental Statement for the financial year ending the 31st March 2017

PART – A

(i)	Name & address of the owners / occupier of the industry / operation / process	Mr P.K.JAIN Occupier Usha Martin Wire Private Limited Tatisilwai, Ranchi- 835103
(ii)	Industry Category : Primary (STC code), Secondary (SIC code)	Secondary SIC code:
(iii)	Production capacity : Units	2 x 10 MW
(iv)	Year of establishment	2012
(v)	Date of last environmental statement submitted	12.07.2016 (Ref. UML/CPP/JSPCB/ES/16/007)

PART – B

WATER & RAW MATERIAL CONSUMPTION

i. Water consumption m^3/d : **2016 –2017**

Process : 277.8 m^3/d

Cooling : 47.3 m^3/d

Domestic : 11.7 m^3/d

Name of products	Process water consumption per unit of product output	
	During the previous financial year	During the current financial year
	(1)	(2)
Electrical power	0.0011 KL/unit	0.00104 KL/unit

(1) RAW MATERIAL CONSUMPTION

Name of raw materials	Name of products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial year
Metal & Alloy	Electrical power	NIL	NIL
Chemicals		0.000185 kg/unit	0.000206 kg/unit
Fuel (Coal)		1.028 kg/unit	1.062 kg/unit
Lubricant / Grease		0.00000447 Ltr/unit	0.00000571 Ltr/unit

PART – C

Pollutants discharges to environment / unit of output
(Parameters as specified in the consent issued)

(i) Pollutants: Quantity of pollutants, concentration of pollutants, % of variation, discharge, mass in discharge (mass/volume) from prescribed with reasons.

The reports of Stack monitoring, Water Analysis, Effluent analysis & Ambient Air Monitoring is enclosed as Annex-1

CPP (2 X 10MW)
USHAMARTIN LTD.
TATISIL WAI, RANCHI
JHARKHAND. PIN-835103

PART – D

HAZARDOUS WASTES

(As specified under Hazardous waste / management & handling Rules 1989 & amended Rules)

Hazardous wastes	Total Quantity	
	During the previous financial year	During the current financial year 2016-17
(a) From process Spent/ waste Oil	Nil	NIL
(b) From pollution control facilities a) Waste oil b) Sludge	Nil	NIL

PART – E

SOLID WASTES

Solid wastes	Total Quantity (MT)	
	During the previous financial year	During the current financial year
(a) From process, fly ash	36688.02MT	42263.47 MT
(b) From pollution control facility - **ETP Sludge**	2.6 MT	2.7 MT
(c) (1) Quantity recycled or re-utilized within the unit	40119.7 MT	43631.2 MT**
(2)Sold	NIL	
(3)Disposal	Kept in Secured retention Tanks meant for the purpose	

**** Unutilized from the previous year is also being utilized in FY 16-17**

PART – F

Please specify the characteristics (in terms of composition & quantum) of Hazardous as well as solid wastes & indicate disposal practice adopted for both these categories of wastes.

A. Hazardous Waste: NO hazardous waste is generated

B. Solid Waste: Most of generated Fly ash has been utilized at our brick plant & rest is given to third party mainly Cement & brick manufacturers as per FOC basis

ETP sludge is disposed off to secure Land fill.

CPP (2 X 10MW)
USHAMARTIN LTD.
TATISIL WAI, RANCHI
JHARKHAND, PIN-835103

PART – G

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

Installation of ETP/STP for treatment of waste water and reuse of treated waste water has positive impact on environment. Reuse of treated wastewater in fly ash brick making also considerably reduced the fresh water requirement.

Construction & implementation of rain water harvesting system augmented the ground water availability and also caters to water requirement during lean season.

Development of green belt by way of tree plantation within plant premises in phased manner contributes to minimize air pollution impacts and also improves the aesthetic beauty of the plant.

PART – H

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

1. ESP has been installed to limit the SPM
2. Bag filters has been installed
3. Online monitoring system has been installed.
4. Maintain ZERO discharge from CPP
5. Large numbers of new pant has planted in FY 16-17.More trees Plantation in coming years is proposed.
6. Water sprinkling system has been installed in different places in CPP

PART – I

Any other particulars for improving the quality of the environment. –

1. More greenbelt development is being undertaken.
2. Very good housekeeping is being maintained inside the CPP
3. Ash is being fully utilized.103 % in FY 16-17
4. Treated effluent is being used in brick plant

Mahabal Enviro Engineers Pvt. Ltd.

Branch Office:
At Booty, Near PHED Colony, Behind Pump House, PO – RMCC, District – Ranchi 834009,
Mobile No: +91 9431.102.102 / +91 9955.358.262,
E-mail:mahabalranchi@gmail.com , kumar.vkp77@gmail.com

(In Association with Eco Ventures Pvt. Ltd.)

Report no: MEEPL/JAN0104/2016-17 **Date:** 21st January, 2017

Sample described as: STACK EMISSION

Client Name: Usha Martin Ltd. (CPP)

Client Address: Tatisilwai, Dist. Ranchi, **Postal Code:** 835103, **State:** Jharkhand

Date of Sampling: 10.01.2017

Stack Location : CPP – 2 X 10 MV

A. General Information about Stack

- Stack connected to: --

B. Physical characteristics of stack

- **Diameter of the Stack (m):** 1.485

C. Analysis/Characteristic of Stack

- **Fuel used: Coal**
- **Fuel Consumption: -**

D. Analysis Report

S.No	PARAMETERS	PROTOCOL	RESULTS
1.	Temperature of Emission (°C)	EPA – 2	105
2.	Velocity of Gas (m/sec)	EPA – 2	21.6
3.	Quantity of Gas flow (Nm^3/hr)	EPA – 2	104167
4.	Concentration of CO_2 (% v/v)	IS 113270 :1992, (REAF – 2009)	30.4
5.	Concentration of CO (% v/v)	IS 113270 :1992, (REAF – 2009)	<0.2
6.	Concentration of SO_2 (mg/Nm^3)	EPA – 6	185
7.	Concentration of NO_2 (mg/Nm^3)	EPA – 7	81
8.	Concentration of Particulate Matters (mg/Nm^3)	EPA - 5	42.7

E. Remarks: - Results are within the limit.

For Mahabal Enviro Engineers Pvt. Ltd.

For Mahabal Enviro Eng. Pvt. Ltd.

Vijay Pandey
SENIOR EXECUTIVE

Authorised Signatory

Mahabal Enviro Eng. Pvt. Ltd. Ranchi

Mahabal Enviro Engineers Pvt. Ltd.

Branch Office:
At Booty, Near PHED Colony, Behind Pump House, PO – RMCC, District – Ranchi 834009,
Mobile No: +91 9431.102.102 / +91 9955.358.262,
E-mail:mahabalranchi@gmail.com , kumar.vkp77@gmail.com

(In Association with Eco Ventures Pvt. Ltd.)

Report no: MEEPL/JAN0103/2016-17 **Date:** 21st January, 2017

Sample Description: Measurement of Noise

Client Name: Usha Martin Ltd. (CPP)
Client Address: Tatisilwai, Dist. Ranchi
Postal Code: 835103
State: Jharkhand
Country: India
Sampling Method: Instrumental, Using Sound level Meter
Data Collection Date: 10.01.2017

NOISE MONITORING

MONITORING DATE ⟶		10/01/2017	
LOCATION		Leq, Noise Levels dB(A)	
		DAY TIME	NIGHT TIME
1. Near SLF Area		61.2	53.9
2. Near Colony (A) Block		59.5	44.7
3. Near Colony (B) Block		60.8	49.3
4. Near Material Gate		62.1	44.9
NOISE : (AMBIENT STANDARDS)			
AREA CODE	CATEGORY OF AREA	Leq, Noise Levels dB(A)	
		DAY TIME	NIGHT TIME
A	INDUSTRIA AREA	75	70
B	COMMERCIAL AREA	65	55
C	RESIDENTIAL AREA	55	45
D	SILENCE ZONE	50	40

For Mahabal Enviro Engineers Pvt. Ltd.

For Mahabal Enviro Eng. Pvt. Ltd.

Authorised Signatory

Vijay Pandey
SENIOR EXECUTIVE

Mahabal Enviro Eng. Pvt. Ltd. Ranchi

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E-mail:mahabalranchi@gmail.com , kumar.vkp77@gmail.com

(In Association with Eco Ventures Pvt. Ltd.)

Report no: MEEPL/JAN0102/2016-17 **Date:** 21st January, 2017

Sample type: AMBIENT AIR QUALITY MONITORING

Client Name: Usha Martin Ltd. (CPP)
Client Address: Tatisilwai, Dist. Ranchi
Postal Code: 835103
State: Jharkhand
Country: India
Marks on Sample: Location: Near SLF Area
Sample collected on: 11.01.2017

AMBIENT AIR QUALITY

Sl. No.	PARAMETERS	UNIT	Concentration
01.	Particulate Matter (size less than 10 µm) PM_{10}	µg/m³	**76.2**
02.	Particulate Matter (size less than 2.5 µm) $PM_{2.5}$	µg/m³	**27**
03.	Sulphur Dioxide (SO_2)	µg/m³	**8.1**
04.	Nitrogen Dioxide (NO_2)	µg/m³	**20.6**
05.	Carbon Monoxide (CO)	mg/m³	**0.32**

For Mahabal Enviro Engineers Pvt. Ltd.

For Mahabal Enviro Eng. Pvt. Ltd.

Vijay Pandey Authorised Signatory
SENIOR EXECUTIVE

Mahabal Enviro Eng. Pvt. Ltd. Ranchi

Mahabal Enviro Engineers Pvt. Ltd.

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At Booty, Near PHED Colony, Behind Pump House, PO – RMCC, District – Ranchi 834009,
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E-mail:mahabalranchi@gmail.com , kumar.vkp77@gmail.com

(In Association with Eco Ventures Pvt. Ltd.)

Report no: MEEPL/JAN0101/2016-17	**Date:** 21st January, 2017
Sample type: AMBIENT AIR QUALITY MONITORING	
Client Name: Usha Martin Ltd. (CPP) **Client Address:** Tatisilwai, Dist. Ranchi **Postal Code:** 835103 **State:** Jharkhand **Country:** India **Marks on Sample: Location: Near Power Plant Security Gate No. 2** **Sample collected on:** 11.01.2017	

AMBIENT AIR QUALITY

Sl. No.	PARAMETERS	UNIT	Concentration
01.	Particulate Matter (size less than 10 µm) PM_{10}	µg/m³	**85.1**
02.	Particulate Matter (size less than 2.5 µm) $PM_{2.5}$	µg/m³	**21.5**
03.	Sulphur Dioxide (SO_2)	µg/m³	**10.2**
04.	Nitrogen Dioxide (NO_2)	µg/m³	**22.0**
05.	Carbon Monoxide (CO)	mg/m³	**0.26**

For Mahabal Enviro Engineers Pvt. Ltd.

For Mahabal Enviro Eng. Pvt. Ltd.

Authorised Signatory

Vijay Pandey
SENIOR EXECUTIVE

Mahabal Enviro Eng. Pvt. Ltd. Ranchi

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E-mail:mahabalranchi@gmail.com , kumar.vkp77@gmail.com

(In Association with Eco Ventures Pvt. Ltd.)

Report no: MEEPL/JAN0100/2016-17 **Date:** 21st January, 2017

Sample type: AMBIENT AIR QUALITY MONITORING

Client Name: Usha Martin Ltd. (CPP)
Client Address: Tatisilwai, Dist. Ranchi
Postal Code: 835103
State: Jharkhand
Country: India
Marks on Sample: Location: Near Power Plant Security Gate No. 1
Sample collected on: 11.01.2017

AMBIENT AIR QUALITY

Sl. No.	PARAMETERS	UNIT	Concentration
01.	Particulate Matter (size less than 10 µm) PM_{10}	µg/m³	81.5
02.	Particulate Matter (size less than 2.5 µm) $PM_{2.5}$	µg/m³	23.4
03.	Sulphur Dioxide (SO_2)	µg/m³	9.7
04.	Nitrogen Dioxide (NO_2)	µg/m³	21.2
05.	Carbon Monoxide (CO)	mg/m³	0.29

For Mahabal Enviro Engineers Pvt. Ltd.
For Mahabal Enviro Eng. Pvt. Ltd.

Vijay Pandey Authorised Signatory
SENIOR EXECUTIVE

Mahabal Enviro Eng. Pvt. Ltd. Ranchi

मेकॉन लिमिटेड, राँची - 834002
MECON LIMITED, RANCHI - 834002

No: 11:82.Q78Y.02.2.02

Annexure-II
Sheet 1 of 1

EFFLUENT WATER ANALYSIS REPORT

Project : **M/s Usha Martin Limited (CPP), Tatisilwai**
Date of Sampling : **25.05.2016**
Type of Sample : **Treated Effluent from CPP (E40)**

Sl. No.	Parameter	General Standards*	Results
1.	pH	5.5 – 9.0	7.5
2.	Total suspended solids, mg/l	100	26
3.	Oil & Grease, mg/l	10	<2
4.	Lead (as Pb), mg/l	0.1	0.015
5.	Zinc (as Zn), mg/l	5.0	0.11
6.	Phosphates (as P), mg/l	5.0	6.15
7.	Chloride (as Cl), mg/l	-	178
8.	BOD, 3 days at 27 ^{0}C, mg/l	30	8
9.	COD, mg/l	250	36
10.	Iron (as Fe), mg/l	3.0	0.28
11.	Manganese (as Mn), mg/l	2.0	0.80
12.	Total Dissolved Solids, mg/l	-	733
13.	Cyanide, mg/l	0.2	<0.01

Note: *General standards for discharge of environmental pollutants vide Ministry of Env. and Forests notification dated 19th May, 1993 and amendment dated 31st December, 1993.

Sunil Kumar

मेकॉन लिमिटेड, राँची - 834002
MECON LIMITED, RANCHI - 834002

No.11.S2.Q78Y.02.2.02

Annexure-I
Sheet 1 of 1

RESULTS OF DRINKING WATER ANALYSIS

Project : **Usha Martin Limited (CPP), Tatisilwai**
Date of sampling : **25.05.2016**
Location : **Drinking water from CPP (DW-49)**

Sl. No.	Parameters	Norms*		Results
		Requirement (desirable limits)	Permissible limits in the absence of alternate source	DW-49
1	Colour, Hazen Units	5	25	<5
2	Odour	Agreeable	Agreeable	Agreeable
3	pH value	6.5 to 8.5	No Relaxation	6.7
4	Taste	Agreeable	Agreeable	Agreeable
5	Turbidity, NTU, Max.	1	5	<0.02
6	Free residual chlorine, mg/l, Min	0.2	1	nil
7	Total Dissolved Solids, mg/l, max.	500	2000	138
8	Aluminium (as Al), mg/l	0.03	0.2	<0.005
9	Boron (as B), mg/l, max.	0.5	1	0.34
10	Calcium (as Ca), mg/l, max.	75	200	1.6
11	Chloride (as Cl), mg/l, max.	250	1000	41
12	Copper (as Cu), mg/l, max.	0.05	1.5	<0.005
13	Fluoride (as F), mg/l, max.	1.0	1.5	0.82
14	Iron (as Fe), mg/l, max.	0.3	No Relaxation	0.02
15	Magnesium (as Mg), mg/l, max.	30	100	2.9
16	Manganese (as Mn), mg/l, max.	0.1	0.3	0.12
17	Nitrate (as NO_3), mg/l, max.	45	No Relaxation	18
18	Phenolic compounds (as C_6H_5OH), mg/l, max.	0.001	0.002	<0.001
19	Sulphate (as SO_4), mg/l, max.	200	400	<4.0
20	Total alkalinity(as $CaCO_3$), mg/l	200	600	12
21	Total hardness(as $CaCO_3$), mg/l, max	200	600	16
22	Zinc (as Zn), mg/l, max.	5	15	<0.03
23	Cadmium (as Cd), mg/l, max.	0.003	No relaxation	<0.005
24	Cyanide (as CN), mg/l, max.	0.05	No relaxation	<0.01
25	Lead (as Pb), mg/l, max.	0.01	No relaxation	<0.01
26	Mercury.(as Hg), mg/l, max.	0.001	No relaxation	<0.0005
27	Nickel (as Ni), mg/l, max.	0.02	No relaxation	<0.005
28	Total chromium (as Cr), mg/l, Max.	0.05	No relaxation	<0.005
29	Coliform organisms, MPN/100ml	0	-	<1.1

*IS: 10500 (2012): Drinking water-Specification

Anil Kumar

मेकॉन लिमिटेड, राँची - 834002
MECON LIMITED, RANCHI - 834002

No.11.S2.Q78Y.02.2.02

RESULTS OF DRINKING WATER ANALYSIS

Project : **Usha Martin Limited (CPP), Tatisilwai**
Date of sampling : **04.06.2016**
Location : **Ground water from Ajad Basti (GW-7) and Aara Gate (GW-8)**

Sl. No.	Parameters	Norms*		Results	
		Requirement (desirable limits)	Permissible limits in the absence of alternate source	GW-7	GW-8
1	Colour, Hazen Units	5	25	<5	<5
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable
3	pH value	6.5 to 8.5	No Relaxation	6.6	7.1
4	Taste	Agreeable	Agreeable	Agreeable	Agreeable
5	Turbidity, NTU, Max.	1	5	<0.02	<0.02
6	Free residual chlorine, mg/l, Min	0.2	1	nil	nil
7	Total Dissolved Solids, mg/l, max.	500	2000	245	262
8	Aluminium (as Al), mg/l	0.03	0.2	<0.005	0.18
9	Boron (as B), mg/l, max.	0.5	1	<0.05	0.19
10	Calcium (as Ca), mg/l, max.	75	200	24	27
11	Chloride (as Cl), mg/l, max.	250	1000	37	43
12	Copper (as Cu), mg/l, max.	0.05	1.5	<0.005	<0.005
13	Fluoride (as F), mg/l, max.	1.0	1.5	0.57	0.38
14	Iron (as Fe), mg/l, max.	0.3	No Relaxation	0.25	0.30
15	Magnesium (as Mg), mg/l, max.	30	100	14	13
16	Manganese (as Mn), mg/l, max.	0.1	0.3	0.55	0.10
17	Nitrate (as NO_3), mg/l, max.	45	No Relaxation	<1.0	<1.0
18	Phenolic compounds (as C_6H_5OH), mg/l, max.	0.001	0.002	<0.001	<0.001
19	Sulphate (as SO_4), mg/l, max.	200	400	41	19
20	Total alkalinity(as $CaCO_3$), mg/l	200	600	72	112
21	Total hardness(as $CaCO_3$), mg/l, max	200	600	116	120
22	Zinc (as Zn), mg/l, max.	5	15	1.34	0.05
23	Cadmium (as Cd), mg/l, max.	0.003	No relaxation	<0.005	<0.005
24	Cyanide (as CN), mg/l, max.	0.05	No relaxation	<0.01	<0.01
25	Lead (as Pb), mg/l, max.	0.01	No relaxation	<0.01	<0.01
26	Mercury,(as Hg), mg/l, max.	0.001	No relaxation	<0.0005	<0.0005
27	Nickel (as Ni), mg/l, max.	0.02	No relaxation	<0.005	<0.005
28	Total chromium (as Cr), mg/l, Max.	0.05	No relaxation	<0.005	<0.005
29	Coliform organisms, MPN/100ml	0	-	<1.1	<1.1

*IS: 10500 (2012): Drinking water-Specification

ENVIRONMENTAL LABORATORY
MECON 834002

Anil Kumar

मेकॉन लिमिटेड, राँची - 834002
MECON LIMITED, RANCHI - 834002

No.11.S2.Q78Y.02.2.02

Annexure-I
Sheet 1 of 2

RESULTS OF DRINKING WATER ANALYSIS

Project : Usha Martin Limited (CPP), Tatisilwai
Date of sampling : 04.06.2016
Location : Ground water from CPP near Material gate (GW-5) and Tatisilwai Village near New Tool Room (GW-6)

Sl. No.	Parameters	Norms*		Results	
		Requirement (desirable limits)	Permissible limits in the absence of alternate source	GW-5	GW-6
1	Colour, Hazen Units	5	25	<5	<5
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable
3	pH value	6.5 to 8.5	No Relaxation	7.4	7.0
4	Taste	Agreeable	Agreeable	Agreeable	Agreeable
5	Turbidity, NTU, Max.	1	5	<0.02	<0.02
6	Free residual chlorine, mg/l, Min	0.2	1	nil	nil
7	Total Dissolved Solids, mg/l, max.	500	2000	435	476
8	Aluminium (as Al), mg/l	0.03	0.2	<0.005	<0.005
9	Boron (as B), mg/l, max.	0.5	1	<0.05	<0.05
10	Calcium (as Ca), mg/l, max.	75	200	24	54
11	Chloride (as Cl), mg/l, max.	250	1000	69	18
12	Copper (as Cu), mg/l, max.	0.05	1.5	<0.005	<0.005
13	Fluoride (as F), mg/l, max.	1.0	1.5	0.37	0.41
14	Iron (as Fe), mg/l, max.	0.3	No Relaxation	0.24	0.19
15	Magnesium (as Mg), mg/l, max.	30	100	6	18
16	Manganese (as Mn), mg/l, max.	0.1	0.3	0.12	0.11
17	Nitrate (as NO_3), mg/l, max.	45	No Relaxation	<1.0	<1.0
18	Phenolic compounds (as C_6H_5OH), mg/l, max.	0.001	0.002	<0.001	<0.001
19	Sulphate (as SO_4), mg/l, max.	200	400	14	21
20	Total alkalinity(as $CaCO_3$), mg/l	200	600	152	192
21	Total hardness(as $CaCO_3$), mg/l, max	200	600	84	212
22	Zinc (as Zn), mg/l, max.	5	15	0.39	1.66
23	Cadmium (as Cd), mg/l, max.	0.003	No relaxation	<0.005	<0.005
24	Cyanide (as CN), mg/l, max.	0.05	No relaxation	<0.01	<0.01
25	Lead (as Pb), mg/l, max.	0.01	No relaxation	<0.01	<0.01
26	Mercury,(as Hg), mg/l, max.	0.001	No relaxation	<0.0005	<0.0005
27	Nickel (as Ni), mg/l, max.	0.02	No relaxation	<0.005	<0.005
28	Total chromium (as Cr), mg/l, Max.	0.05	No relaxation	<0.005	<0.005
29	Coliform organisms, MPN/100ml	0	-	<1.1	<1.1

*IS: 10500 (2012): Drinking water-Specification