



EPTRI
CPCB & DSIR
Recognized Laboratory

Environment Protection Training and Research Institute (EPTRI)
#91/4, Gachibowli, Hyderabad - 500 032, INDIA.
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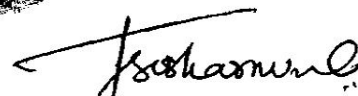


NABL ACCREDITED
No: T-0612 & T-1451
As per ISO/IEC 17025:2005

ANALYSIS REPORT

Page 1 of 2

Registration Number : 12/WWC-111 **Issue date** : 20.11.2012
Sample received : 31.10.2012 **Customer ref** : HY/CW/2012/EFF.TEST/
Date of Commencement : 31.10.2012 101
Date of Completion : 20.11.2012 **and date** : 29.10.2012
Name & Address of the customer : Sri S.K. Bandyopadhyay,
 Sr. Dy. General Manager,
 Common Work
 28 Block,
 Bharat Heavy Electricals Limited,
 Hyderabad - 502032.
Sample Particulars : Wastewater
Qty-received : ~ 5 Ltrs + 5 Ltrs
Type of Sampling : Grab Sample
Sample condition : Suitable for analysis. Samples were submitted in plastic containers.
Sampling Procedure : Samples Collected and submitted by the customer
Sample Code : **Sample Location**
 WW-1 : Acid/Alkali Effluent
Date of Sampling : 31.10.2012
Sampled by : Customer
Industry representative : Sri S.K. Bandyopadhyay, Sr. Dy. General Manager.
Sub-Contracting : N.A.
Deviation from Standard methods : N.A.
Sample Tested : As per the Standard Method for the Examination of water &
 Wastewater by APHA, AWWA, 21st Ed
Remarks : N.A.


Authorized Signatory
 Dr. U. Sesa Srinivas
 Sr. Scientist - Laboratory



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ANALYSIS REPORT

Encl. report no.12/WWC-111

TEST RESULT

Page 2 of 2

S.No	Test Parameter(s)	Unit	IS: 10500 Desirable Limits	IS: 10500 Permissi- ble Limits	Test Method	Result
						WW -1
1.	pH	--	6.5 to 8.5	No relaxation	4500-H*B	5.4
	Temperature	°C				25.2
2.	Turbidity	NTU	5		2130. B	6.7
3.	Chlorides as Cl ⁻	mg/L	250	500	4500-Cl*.B	212
4.	Fluoride as F ⁻	mg/L	1	5	4500-F*.C	2.92
5.	Total Dissolved Solids at 180°C	mg/L		2000	2540. C	1020
6.	Sulphates as SO ₄	mg/L	50	400	4500-SO ₄ ²⁻ .E	391
7.	Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	5530-D	0.43
8.	Mercury as Hg	µg/L	0.001	No relaxation	3500-Hg.B	BDL
9.	Cyanide as CN ⁻	mg/L	0.05	No relaxation	4500-CN*.F	BDL
10.	Hexavalent Chromium as Cr ⁺⁶	mg/L	0.05	No relaxation	3500-Cr ⁺⁶ .B	2.71
11.	Copper as Cu	mg/L	0.05	1.5	3120-B	3.62
12.	Manganese as Mn	mg/L	0.1	0.3	3120-B	8.24
13.	Cadmium as Cd	mg/L	0.01	No relaxation	3120-B	0.08
14.	Selenium as Se	mg/L	0.01	No relaxation	3120-B	7.38
15.	Arsenic as As	mg/L	0.05	No relaxation	3120-B	BDL
16.	Lead as Pb	mg/L	0.05	No relaxation	3120-B	BDL
17.	Zinc as Zn	mg/L	5	15	3120-B	1.4
18.	Aluminum as Al	mg/L	0.03	0.2	3120-B	BDL
19.	Boron as B	mg/L	1		3120-B	0.21
20.	Iron as Fe	mg/L	0.3		3120-B	0.30

Opinion and Interpretation: Not Applicable

BDL - Below Detection Limit

Minimum Detection Limit - Hg - 20 µg/L, CN - 0.05 mg/L, As - 0.04 mg/L, Pb - 0.04 mg/L, Al - 0.04 mg/L

Note: The test result relates to the only item tested.


Authorized Signatory
Dr. J. Sesha Srinivas
Sr. Scientist - Laboratory




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ANALYSIS REPORT

Page 1 of 2

Registration Number : 12/WWC-111 **Issue date** : 20.11.2012
Sample received : 31.10.2012 **Customer ref** : HY/CW/2012/EFF.TEST/
Date of Commencement : 31.10.2012 101
Date of Completion : 20.11.2012 **and date** : 29.10.2012
Name & Address of the customer : Sri S.K. Bandyopadhyay
Sr. Dy. General Manager
Common Work
Block,
at Hyderabad Limited,
Hyderabad - 502032.
Sample Particulars : Wastewater
Qty-received : ~ 5 Ltrs + 5 Ltrs
Type of Sampling : Grab Sample
Sample condition : Suitable for analysis. Samples were submitted in plastic containers.
Sampling Procedure : Samples Collected and submitted by the customer
Sample Code **Sample Location**
WW-1 : Acid/Alkali Effluent
Date of Sampling : 31.10.2012
Sampled by : Customer
Industry representative : Sri S.K. Bandyopadhyay, Sr. Dy. General Manager.
Sub-Contracting : Yes
Deviation from Standard methods : A.
Sample Tested : The Standard Method for the Examination of water & Wastewater, C17.1, AWWA, 21st Ed
Remarks : N.A.


Authorized Signatory
Dr. J. Sesha Srinivas
Sr. Scientist - Laboratory



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ANALYSIS REPORT

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TEST RESULT

Page 2 of 2

S.No	Test Parameter(s)	Unit	IS: 10500 Desirable Limits	IS: 10500 Permissi- ble Limits	Test Method	Result
						WW -1
1.	Colour	Pt. co	5	25	2120. B	15
2.	Odour	TON	Unobjectionable	--	2150. B	1
3.	Taste#	--	--	--	--	NP
4.	Total Hardness as CaCO ₃	mg/L	300		2340.C	229
5.	Residual free Chlorine				4500-Cl.B	BDL
6.	Calcium as Ca	mg/L		200	3500-Ca.B	17
7.	Magnesium as Mg	mg/L	50	100	3500-Mg.B	46
8.	Nitrates as NO ₃ ⁻	mg/L	45	100	PDA	1.36
9.	Anionic Detergents	mg/L	0.2	1.0	IS:13428:2005, Annex K	<0.2
10.	Mineral Oil*	mg/L	0.01	0.03	IS:3025 (part 39)	Absent
11.	Total Alkalinity as CaCO ₃	mg/L	200	600	2320.B	56
12.	Polyaromatic Hydrocarbons (PAH's): Acenaphthene, Acenaphthylene, Anthracene, B(a)A, B(a)P, B(b)F, B(k)F, Pyrene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene 1. Methyl Naphthalene 2. Methyl Naphthalene	µg/L	--	--	6440.C	ND

Opinion and Interpretation: Not Applicable

Not performed

* Out sourcing

TON - Threshold Odour Number

BDL:- Below Detection Limit.

Detection Limit - Residual free chlorine - 1 mg/L;

ND - Not detected; Detection Limit - PAHs - 1 ppm.

Note: The test result relates to the only items tested.

Authorized Signatory
Dr. J. Sesa Srinivas
Sr. Scientist - Laboratory



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ANALYSIS REPORT


Page 1 of 1

Registration Number : 12/WWC-111 **Issue date** : 20.11.2012
Sample received : 31.10.2012 **Customer ref** : HY/CW/2012/EFF.TEST/
Date of Commencement : 01.11.2012 101
Date of Completion : 02.11.2012 **and date** : 29.10.2012
Name & Address of the customer : Sri S.K. Bandyopadhyay,
 Sr. Dy. General Manager,
 Common Workshop,
 08 Block,
 Bharat Heavy Electricals Limited,
 Ramachandrapuram,
 Hyderabad
Sample Particulars : **Qty-received** : **Type of Sampling** : Grab
Sample condition : Suitable for analysis. Sample was submitted in glass bottle.
Sampling Procedure : Sample Collected and submitted by the customer
Sample Code : **Sample Location**
WW-1 : Acid/ Alkali Effluent
Date of Sampling : 31.10.2012
Sampled by : Customer
Industry representative : Sri S.K. Bandyopadhyay, Sr. Dy. General Manager.
Sub-Contracting : N.A.
Deviation from Standard methods : N.A.
Sample Tested : As per the Standard Methods for the Examination of water & wastewater by APHA, WEF, & AWWA, 21st Ed
Remarks : N.A.

TEST RESULT

S. No	Test Parameter	IS: 10500 Detection Limit	Test Method	Result
				WW-1
1	Pesticides: [α-BHC, β-BHC, γ-BHC, δ-BHC, Heptachlor, Heptachlor epoxide, Endosulfan, p,p'-DDE, p,p'-DDD, Endrin, p,p'-DDT, Aldrin, Dieldrin, Endrin aldehyde, Endosulfan sulfate]	µg/l	APHA-6630-D	ND

Opinion and Interpretation: Not Applicable.
 ND - Not detected. Detection Limit - Pesticides - 0.1 ppm
 NOTE : The test result relates to the only item tested.


 Authorized Signatory
 C. Satish
 Project Faculty - Laboratory