ENVIRONMENTAL DATA TPS MUZAFFARGARH

(Effluent Water & Stack Emissions)

for the month of February, 2013

A) EFFLUENT WATER

Sr. No.	Parameters	Units	Max Limits As per EPA standards	Plant Waste Water	Remarks
92.	Temperature	°C	40	22	
93.	pH	-	6~10	<7.5	
94.	Conductivity	µs/cm	4300	3280	
95.	TDS	mg/l	3500	2460	*Every Parameter*
96.	TSS	mg/l	150	0.00110	*Within Limits*
97.	COD	mg/l	-	4.8	
98.	Oil/Grease	mg/l	10	0.0013	
99.	Chlorides	mg/l	1000	28	
100	Sulphate	mg/l	600	430	
101	Total Chlorine	mg/l	1.0	Nil	
102	Total Alkalinity	mg/l	-	40	
103	Total Hardness	mg/l	-	700	
104	Ca-H	mg/l	-	260	

B) STACK EMISSIONS

Sr.No.	Parameters	Units	Max. limits as per EPA	Testing Results Unit #1	Testing Results Unit #2	Testing Results Unit #3	Testing Results Unit #4	Testing Results Unit #5	Testing Results Unit #6	Remarks
71.	Ambient Temperature	°F	-	USD	25.9	25.0	USD	25.4	USD	
72.	Stack Temperature	°F	-	-	148.6	136.9	-	157.8	-	
73.	Oxygen	%	-	-	8.59	8.92	-	9.74	-	
74.	NO_x	mg/Nm³	400	-	238	227	-	94	-	*Every Parameter*
75.	SO_2	mg/Nm³	1700	-	879	869	-	795	-	*Within Limits*
76.	CO	mg/Nm³	800	-	590	74	-	0	-	
77.	CO_2	%	-	-	9.34	9.09	-	8.47	-	
78.	Combustibles	%	-	-	-	-	-	-	-	
79.	Excess Air	%	-	-	-	-	-	-	-	
80.	Combustion Efficiency	%	-	-	91.5	92.3	-	90.8	-	

C) MISCELLANEOUS FACATORS.

Drainage of Neutralization Tank at pH	7.6	Any oil Leakage in Sump Pit/Rain Water Channel	No
Spillage of Acid at Demin Plant	No	Any Chemical Leakage from Cooling Tower Dozing Skid	No
Spillage of Acid at Cooling Tower	No	Any Chemical Leakage from Boiler/Cond. Dozing Skid	No
Spillage of Caustic at Demin Plant	No	Any Operational Abnormality at Sewage Plant	No
Spillage of Fuel Oil	No	Any Hazardous Chemical Spillage in Waste Water	No

(Add. Senior Chemist)

(Add. Director Chemical)

ENVIRONMENTAL DATA TPS MUZAFFARGARH

(Effluent Water & Stack Emissions)

for the month of January, 2013

A) EFFLUENT WATER

Sr. No.	Parameters	Units	Max Limits As per EPA standards	Plant Waste Water	Remarks
79.	Temperature	°C	40	16	
80.	pH	-	6-10	7.98	
81.	Conductivity	µs/cm	4300	3690	
82.	TDS	mg/l	3500	2767.5	*Every Parameter*
83.	TSS	mg/l	150	0.00105	*Within Limits*
84.	COD	mg/l	-	4.8	
85.	Oil/Grease	mg/l	10	0.0042	
86.	Chlorides	mg/l	1000	32	
87.	Sulphate	mg/l	600	440	
88.	Total Chlorine	mg/l	1.0	Nil	
89.	Total Alkalinity	mg/l	-	75	
90.	Total Hardness	mg/l	-	550	
91.	Ca-H	mg/l	-	265	

B) STACK EMISSIONS

Sr.No.	Parameters	Units	Max. limits as per EPA	Testing Results Unit #1	Testing Results Unit #2	Testing Results Unit #3	Testing Results Unit #4	Testing Results Unit #5	Testing Results Unit #6	Remarks
61.	Ambient Temperature	°F	-	26.7	27.6	26.4	USD	12.3	12.4	
62.	Stack Temperature	°F	-	155.52	139.8	145.5	-	139.7	154.4	
63.	Oxygen	%	-	7.69	7.74	6.86	-	10.37	8.67	
64.	NO_x	mg/Nm³	400	173	251	207	-	71	77	*Every Parameter*
65.	SO_2	mg/Nm³	1700	1041	1054	1101	-	736	858	*Within Limits*
66.	CO	mg/Nm³	800	140	499	1043	-	0	229	
67.	CO_2	%	-	10.02	9.98	10.64	-	8.0	8.5	
68.	Combustibles	%	-	-	-	-	-	-	-	
69.	Excess Air	%	-	-	-	-	-	-	-	
70.	Combustion Efficiency	%	-	91.9	92.6	92.4	-	90.2	89.4	

C) MISCELLANEOUS FACATORS.

Drainage of Neutralization Tank at pH	7.6	Any oil Leakage in Sump Pit/Rain Water Channel	No
Spillage of Acid at Demin Plant	No	Any Chemical Leakage from Cooling Tower Dozing Skid	No
Spillage of Acid at Cooling Tower	No	Any Chemical Leakage from Boiler/Cond. Dozing Skid	No
Spillage of Caustic at Demin Plant	No	Any Operational Abnormality at Sewage Plant	No
Spillage of Fuel Oil	No	Any Hazardous Chemical Spillage in Waste Water	No

(Add. Senior Chemist)

(Add. Director Chemical)

Attention: Mr. Ghulam Abbas USAID (EPP) Fara project.
From:- Mr. Mohammad Ilyas Add. Director chemical MTPS.

ENVIRONMENTAL DATA TPS MUZAFFARGARH

(Effluent Water & Stack Emissions)

for the month of December, 2012

A) EFFLUENT WATER

Sr. No.	Parameters	Units	Max Limits As per EPA standards	Plant Waste Water	Remarks
66.	Temperature	°C	40	22	
67.	pH	-	6~10	>7.0	
68.	Conductivity	µs/cm	4300	2480	
69.	TDS	mg/l	3500	1860	*Every Parameter*
70.	TSS	mg/l	150	0.00110	*Within Limits*
71.	COD	mg/l	-	3.2	
72.	Oil/Grease	mg/l	10	0.0024	
73.	Chlorides	mg/l	1000	24	
74.	Sulphate	mg/l	600	395.4	
75.	Total Chlorine	mg/l	1.0	Nil	
76.	Total Alkalinity	mg/l	-	30	
77.	Total Hardness	mg/l	-	320	
78.	Ca-H	mg/l	-	200	

B) STACK EMISSIONS

Sr.No.	Parameters	Units	Max. limits as per EPA	Testing Results Unit #1	Testing Results Unit #2	Testing Results Unit #3	Testing Results Unit #4	Testing Results Unit #5	Testing Results Unit #6	Remarks
51.	Ambient Temperature	°F	-	USD	18.8	25.4	24.6	USD	USD	
52.	Stack Temperature	°F	-	-	143.5	134.4	144.3	-	-	
53.	Oxygen	%	-	-	7.85	8.05	9.92	-	-	
54.	NO_x	mg/Nm³	400	-	203	251	89	-	-	*Every Parameter Within Limits*
55.	SO_2	mg/Nm³	1700	-	1138	1108	857	-	-	
56.	CO	mg/Nm³	800	-	73	373	53	-	-	
57.	CO_2	%	-	-	9.89	9.75	8.34	-	-	
58.	Combustibles	%	-	-	-	-	-	-	-	
59.	Excess Air	%	-	-	-	-	-	-	-	
60.	Combustion Efficiency	%	-	-	92.0	92.8	91.2	-	-	

C) MISCELLANEOUS FACATORS.

Drainage of Neutralization Tank at pH	7.45	Any oil Leakage in Sump Pit/Rain Water Channel	No
Spillage of Acid at Demin Plant	No	Any Chemical Leakage from Cooling Tower Dozing Skid	No
Spillage of Acid at Cooling Tower	No	Any Chemical Leakage from Boiler/Cond. Dozing Skid	No
Spillage of Caustic at Demin Plant	No	Any Operational Abnormality at Sewage Plant	No
Spillage of Fuel Oil	No	Any Hazardous Chemical Spillage in Waste Water	No

(Add. Senior Chemist)

(Add. Director Chemical)