



CONSULTING SERVICE REPORT

CUSTOMER: EFS FACILITIES SERVICES - HEALTHPOINT HOSPITAL, ABU DHABI	To: Mr. ANJANEYA MOORTHI JR. OPERATION MANAGER	DATE: 12-12-2019
CUSTOMER ID: 4003	Copy: EFS FACILITIES SERVICES - HEALTHPOINT	SAMPLE LOCATION: Cooling Tower # 01

COOLING WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Make Up Water - 1	Cooling Tower - 1		
pH	8.5 - 9.5	8.19	8.69		
Conductivity, $\mu\text{s/cm}$	Max 1500	239	947		
TDS, ppm	Max 1000	154	615		
'P' Alkalinity, ppm as CaCO_3	--				
Total Hardness, ppm as CaCO_3	--				
Calcium Hardness, ppm as CaCO_3	200 - 350	44	288		
Chloride, ppm as Cl^-	Max 200	30	154		
Iron, ppm as Fe	0 - 2.0		<0.05		

Treatment Residuals

Cycles of Concentration	5 - 6		5.1		
CaH Balance	0.95 - 1.05		1.2		
Dipslide	<10 ³		10 ²		
Phosphate/Phosphonate	4 - 6		<4		
Free Residual Chlorine as Cl	0.2 - 0.5		Nil		
Cynauric Acid					

All test results expressed in parts per million (ppm) as CaCO_3 except pH and conductivity (μmhos).

COMMENTS:

ACTION:

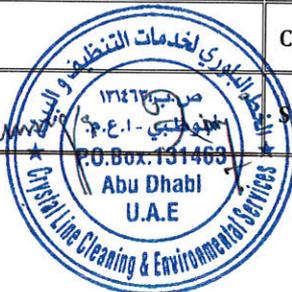
The Conductivity are satisfactory \Rightarrow	No action recommended.
Chloride & Calcium Hardness levels are satisfactory \Rightarrow	No action recommended.
Chemical levels are slightly low \Rightarrow	Please maintain desired control limit

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 9265		Scale/Corrosion		
Crystal 7106		Non-Oxidizing Biocide		
Crystal 1591		Non-Oxidizing Biocide		
Crystal 9079		Biodispersent		
Crystal 7615		Oxidizing Biocide		

Service Engineer:	MURUGARAJ	Client:	Mr. ANJANEYA MOORTHI
Signature:		Signature:	





CONSULTING SERVICE REPORT

**CUSTOMER: EFS FACILITIES SERVICES
- HEALTHPOINT HOSPITAL, ABU
DHABI**

**To: Mr. ANJANEYA MOORTHY
JR. OPERATION MANAGER**

DATE: 12-12-2019

CUSTOMER ID: 4003

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HEALTHPOINT**

**SAMPLE LOCATION: Cooling
Tower # 02**

COOLING WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Make Up Water - 2	Cooling Tower - 2			
pH	8.5 - 9.5	8.24	8.95			
Conductivity, $\mu\text{S}/\text{cm}$	Max 1500	231	1109			
TDS, ppm	Max 1000	150	720			
'P' Alkalinity, ppm as CaCO_3	--					
Total Hardness, ppm as CaCO_3	--					
Calcium Hardness, ppm as CaCO_3	200 - 350	45	308			
Chloride, ppm as Cl^-	Max 200	32	156			
Iron, ppm as Fe	0 - 2.0		<0.05			

Treatment Residuals

Cycles of Concentration	5 - 6		4.8			
CaH Balance	0.95 - 1.05		1.4			
Dipslide	<10 ³		10 ³			
Phosphate/Phosphonate	4 - 6		<4			
Free Residual Chlorine as Cl	0.2 - 0.5		Nil			
Cynauric Acid						

All test results expressed in parts per million (ppm) as CaCO_3 except pH and conductivity (μmhos).

COMMENTS:

ACTION:

The Conductivity are satisfactory \Rightarrow	No action recommended.
Calcium Hardness & Chloride levels are satisfactory \Rightarrow	No action recommended.
Chemical levels are low \Rightarrow	Please maintain desired control limit

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 9265		Scale/Corrosion		
Crystal 7106		Non-Oxidizing Biocide		
Crystal 1591		Non-Oxidizing Biocide		
Crystal 9079		Biodispersent		
Crystal 7615		Oxidizing Biocide		
Service Engineer: MURUGARAJ			Client: Mr. ANJANEYA MOORTHY	
Signature: <i>P. Murugaraaj</i>			Signature:	





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CUSTOMER: EFS FACILITIES SERVICES - HEALTHPOINT HOSPITAL, ABU DHABI	To: Mr. ANJANEYA MOORTHY JR. OPERATION MANAGER	DATE: 12-12-2019
CUSTOMER ID: 4003	Copy: EFS FACILITIES SERVICES - HEALTHPOINT	SAMPLE LOCATION: Cooling Tower # 03

COOLING WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Make Up Water - 3	Cooling Tower - 3		
pH	8.5 - 9.5	8.28	9.18		
Conductivity, μ s/cm	Max 1500	241	1208		
TDS, ppm	Max 1000	156	785		
'P' Alkalinity, ppm as CaCO ₃	--				
Total Hardness, ppm as CaCO ₃	--				
Calcium Hardness, ppm as CaCO ₃	200 - 350	48	294		
Chloride, ppm as Cl ⁻	Max 200	31	168		
Iron, ppm as Fe	0 - 2.0		<0.05		

Treatment Residuals

Cycles of Concentration	5 - 6		5.4		
CaH Balance	0.95 - 1.05		1.12		
Dipslide	<10 ³		10 ²		
Phosphate/Phosphonate	4 - 6		<4		
Free Residual Chlorine as Cl	0.2 - 0.5		Nil		
Cynauric Acid					

All test results expressed in parts per million (ppm) as CaCO₃ except pH and conductivity (μ mhos).

COMMENTS:

ACTION:

The Conductivity are satisfactory \Rightarrow	No action recommended.
Calcium Hardness & Chloride levels are satisfactory \Rightarrow	No action recommended.
Chemical levels are low \Rightarrow	Please maintain desired control limit

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 9265		Scale/Corrosion		
Crystal 7106		Non-Oxidizing Biocide		
Crystal 1591		Non-Oxidizing Biocide		
Crystal 9079		Biodispersent		
Crystal 7615		Oxidizing Biocide		

Service Engineer:	MURUGARAJ	Client:	Mr. ANJANEYA MOORTHY
Signature:		Signature:	





CONSULTING SERVICE REPORT

**CUSTOMER: EFS FACILITIES SERVICES
- HEALTHPOINT HOSPITAL, ABU
DHABI**

**To: Mr. ANJANEYA MOORTHY
JR. OPERATION MANAGER**

DATE: 12-12-2019

CUSTOMER ID: 4003

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HEALTHPOINT**

**SAMPLE LOCATION: Cooling
Tower # 04**

COOLING WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Make Up Water - 4	Cooling Tower - 4		
pH	8.5 - 9.5	8.38	9.09		
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	218	1121		
TDS, ppm	Max 1000	143	728		
'P' Alkalinity, ppm as CaCO_3	--				
Total Hardness, ppm as CaCO_3	--				
Calcium Hardness, ppm as CaCO_3	200 - 350	47	314		
Chloride, ppm as Cl^-	Max 200	33	172		
Iron, ppm as Fe	0 - 2.0		<0.05		

Treatment Residuals

Cycles of Concentration	5 - 6		5.2		
CaH Balance	0.95 - 1.05		1.2		
Dipslide	<10 ³		10 ²		
Phosphate/Phosphonate	4 - 6		<4		
Free Residual Chlorine as Cl	0.2 - 0.5		Nil		
Cynauric Acid					

All test results expressed in parts per million (ppm) as CaCO_3 except pH and conductivity (μmhos).

COMMENTS:

ACTION:

The Conductivity are satisfactory \Rightarrow

No action recommended.

Calcium Hardness & Chloride levels are satisfactory \Rightarrow

No action recommended.

Chemical levels are low \Rightarrow

Please maintain desired control limit

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 9265		Scale/Corrosion		
Crystal 7106		Non-Oxidizing Biocide		
Crystal 1591		Non-Oxidizing Biocide		
Crystal 9079		Biodispersent		
Crystal 7615		Oxidizing Biocide		

Service Engineer: MURUGARAJ

Client:

Mr. ANJANEYA MOORTHY

Signature:

P. Murugaraaj

Signature:





CONSULTIN SERVICE REPORT

CUSTOMER: EFS FACILITIES SERVICES - HEALTHPOINT HOSPITAL, ABU DHABI

**To: Mr. ANJANEYAMOORTHI
JR. OPERATION MANAGER**

DATE: 12 -12-2019

CUSTOMER ID: 4003

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CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLER SAMPLE				
pH	8.5 - 10.5	9.36				
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	968				
TDS, ppm	--	631				
'P' Alkalinity, ppm as CaCO_3	--					
Total Hardness, ppm as CaCO_3	--					
Calcium Hardness, ppm as	--					
Chloride, ppm as Cl^-	--					
Iron, ppm as Fe	0 - 2.0	0.69				

Treatment Residuals

Nitrite, ppm	>800	220				
CaH Balance						
Dip slide	<10 ³	ND				
Phosphate/Phosphonate						
Free Residual Chlorine as Cl	--					
Cynauric Acid						

All test results expressed in parts per million (ppm) as CaCO_3 except pH and conductivity (μmhos).

COMMENTS:

ACTION:

The pH and Conductivity/TDS are found satisfactory.	⇒	No action recommended.
Dissolved iron levels are within the control limits.	⇒	No action recommended.
Corrosion Inhibitor levels are very low	⇒	Please maintain the desired control limit
Bacteria count found satisfactory.	⇒	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	

Service Engineer:	MURUGARAJ	Client:	Mr. ANJANEYA MOORTHY
Signature :		Signature:	

