



## CONSULTING SERVICE REPORT

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

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

**DATE: 17-03-2021**

**CUSTOMER ID: 4003**

**Copy: EFS FACILITIES SERVICES - HEALTHPOINT**

**SAMPLE LOCATION: LEVEL-4  
COOLING TOWER #01**

### COOLING WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Make Up Water - 1	Cooling Tower - 1			
pH	8.5 - 9.5	7.34	8.84			
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	231	1060			
TDS, ppm	Max 1000	153	689			
'P' Alkalinity, ppm as $\text{CaCO}_3$	--					
Total Hardness, ppm as $\text{CaCO}_3$	--					
Calcium Hardness, ppm as $\text{CaCO}_3$	200 - 350	52	134			
Chloride, ppm as $\text{Cl}^-$	Max 200	43	168			
Iron, ppm as Fe	0 - 2.0	<0.05	1.37			

#### Treatment Residuals

Cycles of Concentration	5 - 6		3.9			
CaH Balance	0.95 - 1.05		0.64			
Dipslide	<10 <sup>3</sup>		10 <sup>2</sup>			
Phosphate/Phosphonate	4 - 6		3			
Free Residual Chlorine as Cl	0.2 - 0.5		Nil			
Cynauric Acid						

All test results expressed in parts per million (ppm) as  $\text{CaCO}_3$  except pH and conductivity ( $\mu\text{mhos}$ ).

#### COMMENTS:

#### ACTION:

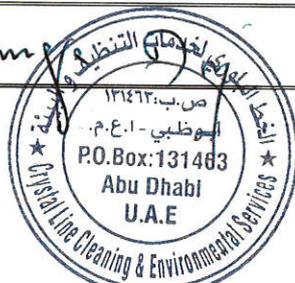
pH and conductivity & TDS levels are satisfactory	⇒	No action recommended
Chloride levels are satisfactory	⇒	No action recommended
Phosphate levels are low	⇒	Please maintain the desired control limit

#### 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:	



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<b>CUSTOMER ID: 4003</b>	<b>Copy: EFS FACILITIES SERVICES - HEALTHPOINT</b>	<b>SAMPLE LOCATION: LEVEL-4 COOLING TOWER # 02</b>

### COOLING WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Make Up Water - 2	Cooling Tower - 2			
pH	8.5 - 9.5	7.13	8.76			
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	218	1130			
TDS, ppm	Max 1000	143	734			
'P' Alkalinity, ppm as $\text{CaCO}_3$	--					
Total Hardness, ppm as $\text{CaCO}_3$	--					
Calcium Hardness, ppm as $\text{CaCO}_3$	200 - 350	56	141			
Chloride, ppm as $\text{Cl}^-$	Max 200	48	154			
Iron, ppm as Fe	0 - 2.0	<0.05	1.31			

#### Treatment Residuals

Cycles of Concentration	5 - 6		3.2			
CaH Balance	0.95 - 1.05		0.78			
Dipslide	<10 <sup>3</sup>		10 <sup>2</sup>			
Phosphate/Phosphonate	4 - 6		3			
Free Residual Chlorine as Cl	0.2 - 0.5		Nil			
Cynauric Acid						

All test results expressed in parts per million (ppm) as  $\text{CaCO}_3$  except pH and conductivity ( $\mu\text{mhos}$ ).

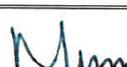
#### COMMENTS:

#### ACTION:

pH and conductivity & TDS levels are satisfactory	⇒	No action recommended
Chloride levels are satisfactory	⇒	No action recommended
Phosphate levels are low	⇒	Please maintain the 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:	



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<b>CUSTOMER: EFS FACILITIES SERVICES - HEALTHPOINT HOSPITAL, ABU DHABI</b>	<b>To: Mr. ANJANEYA MOORTHY JR. OPERATION MANAGER</b>	<b>DATE: 14-02-2021</b>
<b>CUSTOMER ID: 4003</b>	<b>Copy: EFS FACILITIES SERVICES - HEALTHPOINT</b>	<b>SAMPLE LOCATION: LEVEL-4 COOLING TOWER # 03</b>

### COOLING WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Make Up Water - 3	Cooling Tower - 3		
pH	8.5 - 9.5	7.27	8.63		
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	234	1075		
TDS, ppm	Max 1000	152	698		
'P' Alkalinity, ppm as $\text{CaCO}_3$	--				
Total Hardness, ppm as $\text{CaCO}_3$	--				
Calcium Hardness, ppm as $\text{CaCO}_3$	200 - 350	51	126		
Chloride, ppm as Cl <sup>-</sup>	Max 200	46	152		
Iron, ppm as Fe	0 - 2.0	<0.05	1.30		

#### Treatment Residuals

Cycles of Concentration	5 - 6		3.3		
CaH Balance	0.95 - 1.05		0.72		
Dipslide	<10 <sup>3</sup>		10 <sup>2</sup>		
Phosphate/Phosphonate	4 - 6		3		
Free Residual Chlorine as Cl	0.2 - 0.5		Nil		
Cynauric Acid					

All test results expressed in parts per million (ppm) as  $\text{CaCO}_3$  except pH and conductivity ( $\mu\text{mhos}$ ).

#### COMMENTS:

#### ACTION:

pH and conductivity & TDS levels are satisfactory	⇨	No action recommended
Chloride levels are satisfactory	⇨	No action recommended
Phosphate levels are low	⇨	Please maintain the 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:	





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<b>CUSTOMER ID: 4003</b>	<b>Copy: EFS FACILITIES SERVICES - HEALTHPOINT</b>	<b>SAMPLE LOCATION: LEVEL-4 COOLING TOWER # 04</b>

### COOLING WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Make Up Water - 4	Cooling Tower - 4		
pH	8.5 - 9.5	7.08	8.76		
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	227	1110		
TDS, ppm	Max 1000	1147	712		
'P' Alkalinity, ppm as $\text{CaCO}_3$	--				
Total Hardness, ppm as $\text{CaCO}_3$	--				
Calcium Hardness, ppm as $\text{CaCO}_3$	200 - 350	53	146		
Chloride, ppm as Cl	Max 200	45	152		
Iron, ppm as Fe	0 - 2.0	<0.05	1.30		

#### Treatment Residuals

Cycles of Concentration	5 - 6		3.3		
CaH Balance	0.95 - 1.05		0.81		
Dipslide	<10 <sup>3</sup>		10 <sup>2</sup>		
Phosphate/Phosphonate	4 - 6		3		
Free Residual Chlorine as Cl	0.2 - 0.5		Nil		
Cynauric Acid					

All test results expressed in parts per million (ppm) as  $\text{CaCO}_3$  except pH and conductivity ( $\mu\text{mhos}$ ).

#### COMMENTS:

#### ACTION:

pH and conductivity & TDS levels are satisfactory	⇨	No action recommended
Chloride levels are satisfactory	⇨	No action recommended
Phosphate levels are low	⇨	Please maintain the desired control limit

#### INVENTORY LEVELS

#### DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 9265		Scale/Corrosion		
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