



CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: ADDAX TOWER	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (LOW ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER
pH	9.0 - 10.5	10.03
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	2155
TDS, ppm	--	1403
'P' Alkalinity, ppm as CaCO_3	--	
Total Hardness, ppm as CaCO_3	--	
Calcium Hardness, ppm as CaCO_3	--	
Chloride, ppm as Cl^-	--	
Iron, ppm as Fe	0 - 2.0	0.19

Treatment Residuals

Nitrite, ppm	> 800	1240
CaH Balance		
Dipslide	<10 ³	ND

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

COMMENTS:

ACTION:

The pH levels are satisfactory	⇒	No action recommended.
Dissolved iron levels are found within control limits.	⇒	No action recommended.
Corrosion Inhibitor levels are satisfactory	⇒	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

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

Service Engineer:	MURUGARAJ	Client:	MR. TAHA DAKKA
Signature:		Signature:	



CONSULTING SERVICE REPORT

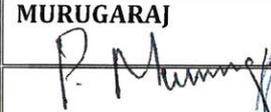
CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: ADDAX TOWER	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (HIGH ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 – 10.5	10.22	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	2199	
TDS, ppm	--	1429	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 – 2.0	0.09	
Treatment Residuals			
Nitrite, ppm	> 800	820	
CaH Balance			
Dipslide	$<10^3$	ND	

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

COMMENTS:	ACTION:
The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	MURUGARAJ		Client:	MR. TAHA DAKKA
Signature:			Signature:	





CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: TAFAWUQ - C2 BUILDING	Copy: TAFAWUQ	LOCATION: CHILLER PLANT ROOM

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	9.34	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1824	
TDS, ppm	--	1184	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	<0.05	

Treatment Residuals

Nitrite, ppm	> 800	810	
CaH Balance			
Dipslide	<10 ³	ND	

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

COMMENTS:

ACTION:

The pH levels are satisfactory	⇒	No action recommended.
Dissolved iron levels are found within control limits.	⇒	No action recommended.
Corrosion Inhibitor levels are satisfactory	⇒	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

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

Service Engineer:	MURUGARAJ	Client:	MR. TAHA DAKKA
Signature:		Signature:	



CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: C3 BUILDING	Copy: TAFAWUQ	LOCATION: CHILLER PLANT ROOM

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	10.44	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1637	
TDS, ppm	--	1064	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	0.08	

Treatment Residuals

Nitrite, ppm	\gt 800	830	
CaH Balance			
Dipslide	$<10^3$	ND	

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

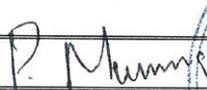
COMMENTS:

ACTION:

The pH and Conductivity/TDS are found satisfactory. \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	MURUGARAJ		Client:	MR. TAHA DAKKA
Signature:			Signature:	



CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: C4 BUILDING	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (LOW ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER
pH	9.0 – 10.5	10.16
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	2199
TDS, ppm	--	1429
'P' Alkalinity, ppm as CaCO_3	--	
Total Hardness, ppm as CaCO_3	--	
Calcium Hardness, ppm as CaCO_3	--	
Chloride, ppm as Cl^-	--	
Iron, ppm as Fe	0 – 2.0	<0.05

Treatment Residuals

Nitrite, ppm	> 800	980
CaH Balance		
Dipslide	<10 ³	ND

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

COMMENTS:

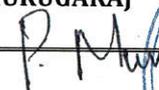
ACTION:

The pH and Conductivity/TDS are found satisfactory. ⇨	No action recommended.
Dissolved iron levels are found within control limits. ⇨	No action recommended.
Corrosion Inhibitor levels are satisfactory ⇨	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

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

Service Engineer:	MURUGARAJ	Client:	MR. TAHA DAKKA
Signature:		Signature:	



CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: C4 - BUILDING	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (HIGH ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	9.98	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1968	
TDS, ppm	--	1279	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	0.08	

Treatment Residuals

Nitrite, ppm	> 800	890	
CaH Balance			
Dipslide	<10 ³	ND	

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

COMMENTS:

ACTION:

The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	MURUGARAJ		Client:	MR. TAHA DAKKA
Signature:			Signature:	



CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: C5 - BUILDING	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (LOW ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	10.41	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1984	
TDS, ppm	--	1289	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	0.14	

Treatment Residuals

Nitrite, ppm	> 800	1020	
CaH Balance			
Dipslide	<10 ³	ND	

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

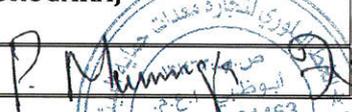
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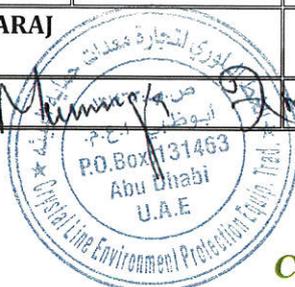
ACTION:

The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	MURUGARAJ		Client:	MR. TAHA DAKKA
Signature:			Signature:	





CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: C5 - BUILDING	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (HIGH ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	10.01	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1965	
TDS, ppm	--	1277	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	<0.05	

Treatment Residuals

Nitrite, ppm	> 800	840	
CaH Balance			
Dipslide	<10 ³	ND	

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

COMMENTS:

ACTION:

The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	MURUGARAJ		Client:	MR. TAHA DAKKA
Signature:			Signature:	



CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: C6 - BUILDING	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (LOW ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	10.19	
Conductivity, $\mu\text{S}/\text{cm}$	Max 3500	2048	
TDS, ppm	--	1331	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	0.06	

Treatment Residuals

Nitrite, ppm	$>$ 800	820	
CaH Balance			
Dipslide	$<10^3$	ND	

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

COMMENTS:

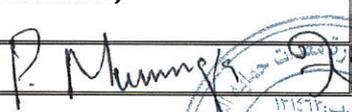
ACTION:

The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

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

Service Engineer:	MURUGARAJ	Client:	MR. TAHA DAKKA
Signature:		Signature:	





CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: C6 - BUILDING	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (HIGH ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	9.98	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1992	
TDS, ppm	--	1294	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	0.06	

Treatment Residuals

Nitrite, ppm	\gt 800	880	
CaH Balance			
Dipslide	$<10^3$	ND	

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

COMMENTS:

ACTION:

The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	MURUGARAJ		Client:	MR. TAHA DAKKA
Signature:			Signature:	



CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: OMEGA	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (LOW ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	10.11	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1983	
TDS, ppm	--	1288	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	0.10	

Treatment Residuals

Nitrite, ppm	> 800	830	
CaH Balance			
Dipslide	<10 ³	ND	

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

COMMENTS:

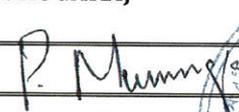
ACTION:

The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

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

Service Engineer:	MURUGARAJ	Client:	MR. TAHA DAKKA
Signature:		Signature:	



CONSULTING SERVICE REPORT

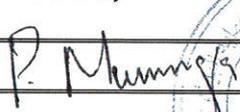
CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: OMEGA	Copy: TAFAWUQ	LOCATION: CHILLER ROOM (HIGH ZONE)

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	10.33	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	2714	
TDS, ppm	--	1764	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	0.09	
Treatment Residuals			
Nitrite, ppm	> 800	870	
CaH Balance			
Dipslide	$< 10^3$	ND	

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

COMMENTS:	ACTION:
The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	MURUGARAJ		Client:	MR. TAHA DAKKA
Signature:			Signature:	





CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: SIGMA 01	Copy: TAFAWUQ	LOCATION: CHILLER PLANT ROOM

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 - 10.5	10.02	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1653	
TDS, ppm	--	1074	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 - 2.0	<0.05	

Treatment Residuals

Nitrite, ppm	➤ 800	820	
CaH Balance			
Dipslide	<10 ³	ND	

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

COMMENTS:

ACTION:

The pH levels are satisfactory	⇒	No action recommended.
Dissolved iron levels are found within control limits.	⇒	No action recommended.
Corrosion Inhibitor levels are satisfactory	⇒	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

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

Service Engineer:	MURUGARAJ	Client:	MR. TAHA DAKKA
Signature:		Signature:	





CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 08-06-2020
SITE: SIGMA - 02	Copy: TAFAWUQ	LOCATION: CHILLER PLANT ROOM

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CHILLED WATER	
pH	9.0 – 10.5	9.98	
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1657	
TDS, ppm	--	1077	
'P' Alkalinity, ppm as CaCO_3	--		
Total Hardness, ppm as CaCO_3	--		
Calcium Hardness, ppm as CaCO_3	--		
Chloride, ppm as Cl^-	--		
Iron, ppm as Fe	0 – 2.0	0.05	

Treatment Residuals

Nitrite, ppm	\gt 800	860	
CaH Balance			
Dipslide	$<10^3$	ND	

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

COMMENTS:

ACTION:

The pH levels are satisfactory \Rightarrow	No action recommended.
Dissolved iron levels are found within control limits. \Rightarrow	No action recommended.
Corrosion Inhibitor levels are satisfactory \Rightarrow	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	MURUGARAJ	Client:	MR. TAHA DAKKA	
Signature:	<i>P. Murugaraaj</i>	Signature:		

