



CONSULTING SERVICE REPORT

CUSTOMER: SERCO FACILITY MANAGEMENT.	To: MR. MUHAMMED AFSHAR OPERATIONS ENGINEER	DATE: 09-07-2020
SITE: ZAYED UNIVERSITY	COPY: SERCO	LOCATION: Convention Center, Water Feature # 01

WATER FEATURE ANALYSIS

PARAMETER	CONTROL LIMITS	Water Feature -01			
pH	7.2 - 7.6	7.36			
Conductivity, $\mu\text{s}/\text{cm}$		465			
TDS, ppm	Max 1500	302			
'P' Alkalinity, ppm as CaCO_3	80 - 120	92			
Total Hardness, ppm as CaCO_3					
Calcium Hardness, ppm as CaCO_3	100 - 500	124			
Chloride, ppm as Cl^-					
Iron, ppm as Fe					

Treatment Residuals

Silica, ppm					
CaH Balance					
Dipslide	<10 ³	ND			
Phosphate/Phosphonate					
Free Residual Chlorine as Cl	1.0 - 2.0	1.23			
Cyanuric Acid	20 - 60	28			

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.
Chlorine levels & Cyanuric acid levels are satisfactory	⇒	No Action Recommended.
Calcium hardness satisfactory	⇒	No Action Recommended.

Kindly add chlorine and pool acid to maintain the desired control parameters in the water feature.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Chlorine Tablets			--	
Pool Acid			--	
Crystal Care			--	

Service Engineer:	Murugaraaj	Client:	Mr. Muhammed Afshar
Signature:		Signature:	





CONSULTING SERVICE REPORT

CUSTOMER: SERCO FACILITY MANAGEMENT.	To: MR. MUHAMMED AFSHAR OPERATIONS ENGINEER	DATE: 09-07-2020
SITE: ZAYED UNIVERSITY	COPY: SERCO	LOCATION: Courtyard Water Fountain # 02

WATER FEATURE ANALYSIS

PARAMETER	CONTROL LIMITS	Water Fountain			
pH	7.2 - 7.6	7.49			
Conductivity, $\mu\text{s}/\text{cm}$		541			
TDS, ppm	Max 1500	351			
'P' Alkalinity, ppm as CaCO_3	80 - 120	84			
Total Hardness, ppm as CaCO_3					
Calcium Hardness, ppm as CaCO_3	100 - 500	132			
Chloride, ppm as Cl^-					
Iron, ppm as Fe					

Treatment Residuals

Silica, ppm					
CaH Balance					
Dipslide	$<10^3$	ND			
Phosphate/Phosphonate					
Free Residual Chlorine as Cl	1.0 - 2.0	1.28			
Cyanuric Acid	20 - 60	29			

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.
Chlorine levels & Cyanuric acid levels are satisfactory	⇒	No Action Recommended.
Calcium hardness satisfactory	⇒	No Action Recommended.

Kindly add chlorine and pool acid to maintain the desired control parameters in the water feature.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Chlorine Tablets			--	
Pool Acid			--	
Crystal Care			--	
Service Engineer:	Murugaraaj		Client:	Mr. Muhammed Afshar
Signature:			Signature:	





CONSULTING SERVICE REPORT

CUSTOMER: SERCO FACILITY MANAGEMENT.	To: MR. MUHAMMED AFSHAR OPERATIONS ENGINEER	DATE: 09-07-2020
SITE: ZAYED UNIVERSITY	COPY: SERCO	LOCATION: Courtyard Water Fountain # 03

WATER FEATURE ANALYSIS

PARAMETER	CONTROL LIMITS	Water Fountain			
pH	7.2 - 7.6	7.46			
Conductivity, $\mu\text{s}/\text{cm}$		495			
TDS, ppm	Max 1500	322			
'P' Alkalinity, ppm as CaCO_3	80 - 120	84			
Total Hardness, ppm as CaCO_3					
Calcium Hardness, ppm as CaCO_3	100 - 500	124			
Chloride, ppm as Cl^-					
Iron, ppm as Fe					

Treatment Residuals

Silica, ppm					
CaH Balance					
Dipslide	<10 ³	ND			
Phosphate/Phosphonate					
Free Residual Chlorine as Cl	1.0 - 2.0	1.22			
Cyanuric Acid	20 - 60	27			

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.
Chlorine levels & Cyanuric acid levels are satisfactory	⇒	No Action Recommended.
Calcium hardness satisfactory	⇒	No Action Recommended.

Kindly add chlorine and pool acid to maintain the desired control parameters in the water feature.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Chlorine Tablets			--	
Pool Acid			--	
Crystal Care			--	
Service Engineer:	Murugaraaj		Client:	Mr. Muhammed Afshar
Signature:			Signature:	





Legionella Test Report

Customer Details

Report No. WA-R-L-2007-13965

Crystalline Cleaning & Environmental Services

P.O.Box: 131463 Warehouse no: 84, M-45. Mussafah, Abu Dhabi, UAE.



Request No. : WA-Q-L-2007-02072

Sample No. : WA-S-L-2007-13491

Sampling Date	: 09/07/2020	Report Date.	: 20/07/2020
Analysis Start Date.	: 09/07/2020	Analysis End Date.	: 19/07/2020
Sample Location.	: Zayed University	Sampled By	: Amin ullah
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 1093	Sampling Method	: BS 7592
Temperature °C	: 33	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Court Yard
Sampling Point	: Water Fountain # 03	Preservation	: 10°C
Sample Description	: Water	Client Reference	: N/A

Parameters	Test Methods	Units	Results	Specification
Legionella	ISO 11731: 2017	CFU/L	Not Detected	<1CFU/L

Note : Limit of Detection=<1CFU/L

Procedure: WSOP-MB-0051 Direct Placing of Membrane on BCYE+L-Cysteine/Membrane Filter Followed by Washing Procedure in Funnel.

Limit based on DM. Rev2.Dated 6/2010 for guidelines for control of legionella in water system. Public Safety Department.

Remarks :The tested result of the sample is found to be satisfactory within the specified limits.

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; BS-British Standard; ISO-International Organization for Standardization.

Signed for and on behalf of Wimpey Laboratories



Dr. Suresh Murugan Ph.D

Senior Microbiologist

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Legionella Test Report

Customer Details

Report No. WA-R-L-2007-13964

Crystalline Cleaning & Environmental Services

P.O.Box: 131463 Warehouse no: 84, M-45. Mussafah, Abu Dhabi, UAE.



Request No. : WA-Q-L-2007-02072

Sample No. : WA-S-L-2007-13490

Sampling Date	: 09/07/2020	Report Date.	: 20/07/2020
Analysis Start Date.	: 09/07/2020	Analysis End Date.	: 19/07/2020
Sample Location.	: Zayed University	Sampled By	: Amin ullah
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 1093	Sampling Method	: BS 7592
Temperature °C	: 35	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Court Yard
Sampling Point	: Water Fountain # 02	Preservation	: 10°C
Sample Description	: Water	Client Reference	: N/A

Parameters	Test Methods	Units	Results	Specification
Legionella	ISO 11731: 2017	CFU/L	Not Detected	<1CFU/L

Note : Not Detected=<1CFU/L

Procedure: WSOP-MB-0051 Direct Placing of Membrane on BCYE+L-Cysteine/Membrane Filter followed by Washing Procedure in Funnel.

Limit based on DM.Rev2.Dated 6/2010 for guidelines for control of legionella in water system. Public Safety Department.

Remarks :The tested result of the sample is found to be satisfactory within the specified limits.

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; BS-British Standard; ISO-International Organization for Standardization.

Signed for and on behalf of Wimpey Laboratories



Dr. Suresh Murugan Ph.D

Senior Microbiologist

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Legionella Test Report

Customer Details

Report No. WA-R-L-2007-13963

Crystalline Cleaning & Environmental Services

P.O.Box: 131463 Warehouse no: 84, M-45. Mussafah, Abu Dhabi, UAE.



Request No. : WA-Q-L-2007-02072

Sample No. : WA-S-L-2007-13489

Sampling Date	: 09/07/2020	Report Date.	: 20/07/2020
Analysis Start Date.	: 09/07/2020	Analysis End Date.	: 19/07/2020
Sample Location.	: Zayed University	Sampled By	: Amin ullah
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 1093	Sampling Method	: BS 7592
Temperature °C	: 34	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Convention Center
Sampling Point	: Water Feature # 01	Preservation	: 10°C
Sample Description	: Water	Client Reference	: N/A

Parameters	Test Methods	Units	Results	Specification
Legionella	ISO 11731: 2017	CFU/L	Not Detected	<1CFU/L

Note : Not Detected=<1CFU/L

Procedure: WSOP-MB-0051 Direct Placing of Membrane on BCYE+L-Cysteine/Membrane Filter followed by Washing Procedure in Funnel.

Limit based on DM.Rev2.Dated 6/2010 for guidelines for control of legionella in water system. Public Safety Department.

Remarks :The tested result of the sample is found to be satisfactory within the specified limits.

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; BS-British Standard; ISO-International Organization for Standardization.

Signed for and on behalf of Wimpey Laboratories



Dr. Suresh Murugan Ph.D

Senior Microbiologist

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Microbiology Test Report

Customer Details

Crystalline Cleaning & Environmental Services

P.O.Box: 131463 Warehouse no: 84, M-45. Mussafah, Abu Dhabi, UAE.

Report No. WA-R-L-2007-13950



Request No. : WA-Q-L-2007-02072

Sample No. : WA-S-L-2007-13476

Sampling Date	: 09/07/2020	Report Date.	: 13/07/2020
Analysis Start Date.	: 09/07/2020	Analysis End Date.	: 12/07/2020
Sample Location.	: Zayed University	Sampled By	: Amin ullah
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 1093	Sampling Method	: APHA 9060 A & B
Temperature °C	: 33	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Court Yard
Sampling Point	: Water Fountain # 03.	Preservation	: 4-8°C
Sample Description	: Water	Client Reference	: N/A

Parameters	Test Methods	Units	Results	Specification
Escherichia Coli	APHA 9222 B,H& I 23rd Ed. 2017	CFU/100ml	Not Detected	--
Faecal Coliforms	APHA 9222 D 23rd Ed. 2017	CFU/100ml	Not Detected	--
Heterotrophic plate count	APHA 9215 B 23rd Ed. 2017	CFU/ml	Not Detected	500CFU/ml
Pseudomonas aeruginosa	CCFRA 2.5.2 5th Ed. 2007	CFU/250ml	Not Detected	--
Total Coliforms	APHA 9222 B 23rd Ed. 2017	CFU/100ml	Not Detected	--

Note : Not Detected=<1CFU

Limit based on DM. Rev2.Dated 6/2010 for guidelines for control of legionella in water system. Public Safety Department.

Remarks :The tested results of the sample are found to be satisfactory within the specified limits.

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; APHA-American Public Health Association; CCFRA-Campden Chorleywood Food Research Association.



Microbiology Test Report

Report No. : WA-R-L-2007-13950

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Dr. Suresh Murugan Ph.D

Senior Microbiologist

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Microbiology Test Report

Customer Details

Crystalline Cleaning & Environmental Services

P.O.Box: 131463 Warehouse no: 84, M-45. Mussafah, Abu Dhabi, UAE.

Report No. WA-R-L-2007-13949



Request No. : WA-Q-L-2007-02072

Sample No. : WA-S-L-2007-13475

Sampling Date	: 09/07/2020	Report Date.	: 13/07/2020
Analysis Start Date.	: 09/07/2020	Analysis End Date.	: 12/07/2020
Sample Location.	: Zayed University	Sampled By	: Amin ullah
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 1093	Sampling Method	: APHA 9060 A & B
Temperature °C	: 35	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Court Yard
Sampling Point	: Water Fountain # 02	Preservation	: 4-8°C
Sample Description	: Water	Client Reference	: N/A

Parameters	Test Methods	Units	Results	Specification
Escherichia Coli	APHA 9222 B,H& I 23rd Ed. 2017	CFU/100ml	Not Detected	--
Faecal Coliforms	APHA 9222 D 23rd Ed. 2017	CFU/100ml	Not Detected	--
Heterotrophic plate count	APHA 9215 B 23rd Ed. 2017	CFU/ml	Not Detected	500CFU/ml
Pseudomonas aeruginosa	CCFRA 2.5.2 5th Ed. 2007	CFU/250ml	Not Detected	--
Total Coliforms	APHA 9222 B 23rd Ed. 2017	CFU/100ml	Not Detected	--

Note : Not Detected=<1CFU

Limit based on DM.Rev2.Dated 6/2010 for guidelines for control of legionella in water system. Public Safety Department

Remarks :The tested results of the sample are found to be satisfactory within the specified limits.

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; APHA-American Public Health Association; CCFRA-Campden Chorleywood Food Research Association.



Microbiology Test Report

Report No. : WA-R-L-2007-13949

Signed for and on behalf of Wimpey Laboratories



Dr. Suresh Murugan Ph.D

Senior Microbiologist

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Microbiology Test Report

Customer Details

Report No. WA-R-L-2007-13948

Crystalline Cleaning & Environmental Services

P.O.Box: 131463 Warehouse no: 84, M-45. Mussafah, Abu Dhabi, UAE.



Request No. : WA-Q-L-2007-02072

Sample No. : WA-S-L-2007-13474

Sampling Date	: 09/07/2020	Report Date.	: 13/07/2020
Analysis Start Date.	: 09/07/2020	Analysis End Date.	: 12/07/2020
Sample Location.	: Zayed University	Sampled By	: Amin ullah
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 1093	Sampling Method	: APHA 9060 A & B
Temperature °C	: 34	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Convention Center
Sampling Point	: Water Feature # 01	Preservation	: 4-8°C
Sample Description	: Water	Client Reference	: N/A

Parameters	Test Methods	Units	Results	Specification
Escherichia Coli	APHA 9222 B,H& I 23rd Ed. 2017	CFU/100ml	Not Detected	--
Faecal Coliforms	APHA 9222 D 23rd Ed. 2017	CFU/100ml	Not Detected	--
Heterotrophic plate count	APHA 9215 B 23rd Ed. 2017	CFU/ml	Not Detected	500CFU/ml
Pseudomonas aeruginosa	CCFRA 2.5.2 5th Ed. 2007	CFU/250ml	Not Detected	--
Total Coliforms	APHA 9222 B 23rd Ed. 2017	CFU/100ml	Not Detected	--

Note : Not Detected=<1CFU

Limit based on DM.Rev2.Dated 6/2010 for guidelines for control of legionella in water system. Public Safety Department

Remarks :The tested results of the sample are found to be satisfactory within the specified limits.

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; APHA-American Public Health Association; CCFRA-Campden Chorleywood Food Research Association.



Microbiology Test Report

Report No. : WA-R-L-2007-13948

Signed for and on behalf of Wimpey Laboratories



Dr. Suresh Murugan Ph.D

Senior Microbiologist

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