



Microbiology Test Report

Customer Details

Report No. WA-R-L-2005-9207

Crystalline Environmental Services



|                       |                               |                     |  |
|-----------------------|-------------------------------|---------------------|--|
| Request No.           | : WA-Q-L-2005-1451            | Sample No.          | : WA-S-L-2005-9004                           |
| Sampling Date/time    | : 13/5/2020 , 12:05           | Report Date.        | : 16/5/2020                                  |
| Analysis Start Date.  | : 13/5/2020                   | Analysis End Date.  | : 15/5/2020                                  |
| Sample Location.      | : Jumeirah Golf Estate, Dubai | Sampled By          | : Shoukth                                    |
| Sample Identification | : Not Applicable              | Sample Submitted as | : Water                                      |
| Sample Certificate No | : 0810                        | Sampling Method     | : APHA 9060 A&B                              |
| Temperature °C        | : 13.1°C                      | Site Observation    | : Clear                                      |
| Sampling Container    | : Sterile Plastic Bottle      | Source of Sample    | : Club House Main Pump<br>Room Chilled Water |
| Sampling Point        | : Not Applicable              | Preservation        | : 4-8°C                                      |
| Sample Description    | : Chilled Water               |                     |  |

| 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 | 10000CFU/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.

Signed for and on behalf of Wimpey Laboratories



Dr. Suresh Murugan Ph.D.  
Senior Microbiologist

Test results relate only to the samples tested.

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Form No: WARF-MB-01 Issue No.:01 Rev No:00 Issued Date:22-01-2020

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## CONSULTING SERVICE REPORT

|                          |  |                                    |
|--------------------------|--|------------------------------------|
| <b>CUSTOMER:</b> TAFAWUQ | <b>To: Mr. Ferdinand Perez</b><br>FM Manager | <b>DATE:</b> 13-05-2020            |
| <b>CUSTOMER ID:</b> 4055 | <b>Copy:</b> TAFAWUQ                         | <b>SITE:</b> JUMEIRAH GOLF ESTATES |

### CHILLED WATER ANALYSIS

| PARAMETER                                | CONTROL LIMITS | CHILLED WATER |  |
|--|----------------|---------------|--|
| pH                                       | 9.0 - 10.5     | 10.14         |  |
| Conductivity, $\mu\text{s}/\text{cm}$    | Max 3500       | 1760          |  |
| TDS, ppm                                 | --             | 1144          |  |
| 'P' Alkalinity, ppm as $\text{CaCO}_3$   | --             |               |  |
| Total Hardness, ppm as $\text{CaCO}_3$   | --             |               |  |
| Calcium Hardness, ppm as $\text{CaCO}_3$ | --             |               |  |
| Chloride, ppm as $\text{Cl}^-$           | --             |               |  |
| Iron, ppm as Fe                          | 0 - 2.0        | 0.26          |  |

#### Treatment Residuals

|              |           |     |  |
|--------------|-----------|-----|--|
| Nitrite, ppm | $\gt$ 800 | 810 |  |
| CaH Balance  |           |     |  |
| Dipslide     | $<10^3$   | ND  |  |

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

#### COMMENTS:

#### ACTION:

|  |                        |
|--|------------------------|
| The pH levels are satisfactory <span style="float: right;"><math>\Rightarrow</math></span>                         | No action recommended. |
| Dissolved iron levels are found within control limits. <span style="float: right;"><math>\Rightarrow</math></span> | No action recommended. |
| Corrosion Inhibitor levels satisfactory <span style="float: right;"><math>\Rightarrow</math></span>                | No action recommended. |

**Kindly add Crystal 5547 & Crystal 9040 to maintain the desired control parameters in the system.**

#### INVENTORY LEVELS

#### DOSAGE SCHEDULE

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

|                          |           |                   |                     |
|--------------------------|-----------|-------------------|---------------------|
| <b>Service Engineer:</b> | MURUGARAJ | <b>Client:</b>    | Mr. Ferdinand Perez |
| <b>Signature:</b>        |           | <b>Signature:</b> |                     |

