

# Schedule

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Certificate No. : LA-2015-0595-F-1  
Issue No. : 7  
Date : 29 September 2021  
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FIELD OF TESTING : Environmental Testing

| MATERIALS / PRODUCTS TESTED  | TESTS / PROPERTIES                                 | STANDARD METHODS / TECHNIQUES / EQUIPMENT                      | SIGNATORIES        |
|--|--|--|--------------------|
| <b>A. WATER ANALYSIS</b> <ul style="list-style-type: none"> <li>• Drinking water (Potable)</li> <li>• Non-potable water</li> <li>• Fresh water</li> <li>• Industrial water</li> <li>• Wastewater, Trade effluent</li> <li>• Ground water</li> <li>• RO water</li> <li>• DI water</li> <li>• Swimming pool water</li> <li>• Cooling tower water</li> <li>• Sea water</li> </ul> |  | <u>APHA Methods are based on 23<sup>rd</sup> Edition: 2017</u> |                    |
|  | 1. Detergents (MBAS)                               | APHA 5540C   | WPH, TTP, UFG, LYH |
|  | 2. Oil & Grease                                    | USEPA 1664: 2010   | WPH, TTP, UFG, LYH |
|  | 3. Oil & Grease (Hydrocarbon)                      | APHA 5520F   | WPH, TTP, UFG, LYH |
|  | 4. Oil & Grease (Total) by Gravimetric             | APHA 5520B   | WPH, TTP, UFG, LYH |
|  | 5. Total Dissolved Solids                          | APHA 2540C   | WPH, TTP, UFG, LYH |
|  | 6. Total Solids                                    | APHA 2540B   | WPH, TTP, UFG, LYH |
|  | 7. Total Suspended Sediments Concentration (HCTSS) | In-house method<br>MLS-SOP-SED-004 Rev 0                       | WPH, TTP, UFG, LYH |
|  | 8. Total Suspended Solids                          | APHA 2540D   | WPH, TTP, UFG, LYH |
|  | 9. Total Volatile Solids                           | APHA 2540E   | WPH, TTP, UFG, LYH |
| <b>B. FINE AGGREGATE / SOIL / SEDIMENT</b>   | 1. Carbonate                                       | BS 1377-3: 2018  | WPH, TTP, UFG      |
|  | 2. Density by Linear Measurement                   | BS 1377-2: 1990<br>Section 7.2                                 | WPH, TTP, UFG      |
|  | 3. Mass Loss on Ignition (440°C)                   | BS 1377-3: 2018  | WPH, TTP           |

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| <b>C. SOURCE EMISSION</b>   | 4. Moisture   | BS 1377-2: 1990                           | WPH, TTP      |
|   | 5. Oil and Grease   | USEPA 9071B: 1998                         | WPH, TTP, UFG |
|   | 6. pH   | BS 1377-3: 2018                           | WPH, TTP      |
|   | 1. Sampling and Velocity Traverse for Stationary Sources  | USEPA Method 1 (Apr 2020)                 | WPH, TTY      |
|   | 2. Determination of Stack Gas Velocity and Volumetric Flow Rate   | USEPA Method 2 (Aug 2017)                 | WPH, TTY      |
|   | 3. Determination of Oxygen and Carbon Dioxide Concentrations in Emissions From Stationary Sources (Instrumental Analyzer Procedure) | USEPA Method 3A (Aug 2017)                | WPH, TTY      |
|   | 4. Determination of Moisture Content in Stack Gases   | USEPA Method 4 (Oct 2020)                 | WPH, TTY      |
|   | 5. Determination of Particulate Matter Emission from Stationary Sources   | USEPA Method 5 (Jan 2019)                 | WPH, TTY      |
| 6. Determination of Sulfur Dioxide Emission from Stationary Sources by Gas Analyser     | USEPA Method 6C (Aug 2017)  | WPH, TTY                                  |               |
| 7. Determination of Oxides of Nitrogen Emission from Stationary Sources by Gas Analyser | USEPA Method 7E (Oct 2020)  | WPH, TTY                                  |               |

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|                              | 8. Determination of Carbon Monoxide Emission from Stationary Sources by Gas Analyser                 | USEPA Method 10 (Aug 2017)                  | WPH, TTY    |
|                              | 9. Sampling for Determination of Dioxin and Furan from Stationary Sources                            | USEPA Method 23 (Aug 2017) (Sampling only)  | WPH, TTY    |
|                              | 10. Determination of Hydrogen Halide and Halogen Emissions From Stationary Sources Isokinetic Method | USEPA Method 26a (Oct 2020) (Sampling only) | WPH, TTY    |
|                              | 11. Determination of Metals Emissions From Stationary Sources  | USEPA Method 29 (Aug 2017) (Sampling only)  | WPH, TTY    |
| <b>D. WATER SAMPLING</b>     | 1. In-situ Measurements:   | In-house method                             | WPH, TTY    |
| • Drinking water (Potable)   | • Conductivity   | MLS-SOP-ES-004 Rev 3                        |             |
| • Non-potable water          | • Dissolved Oxygen (DO)  | (using Multi-parameter Instrument)          |             |
| • Fresh water                | • Oxidation Reduction  |   |             |
| • Industrial water           | • pH   |   |             |
| • Wastewater, Trade Effluent | • Potential (ORP)  |   |             |
| • Ground water               | • Salinity   |   |             |
| • RO water                   | • Temperature  |   |             |
| • DI water                   | • Turbidity  |   |             |
| • Swimming pool water        | 2. Sampling of Ground Water Samples  | In-house method                             | WPH, TTY    |
| • Cooling tower water        |  | MLS-SOP-ES-023 Rev 1                        |             |
| • Sea water                  |  | (adapted from ISO 5667-11)                  |             |
|                              | 3. Sampling of Water Samples   | In-house method                             | WPH, TTY    |
|                              |  | MLS-SOP-ES-001 Rev 4                        |             |
|                              | 4. Sampling of Water Sample using Remote Autosampler Unit (RAU)                                      | In-house method                             | WPH, TTY    |
|                              |  | MLS-SOP-ES-001 Rev 4                        |             |

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| <b>E. WASTEWATER (GREASE TRAP)</b> | 1. Sampling of Grease Trap  | In-house method<br>MLS-SOP-ES-013 Rev 1   | WPH, TTY    |
| <b>F. AMBIENT AIR QUALITY</b>      | 1. <ul style="list-style-type: none"><li>• Particulate Matter (PM10)</li><li>• Particulate Matter (PM2.5)</li></ul> | In-house method<br>MLS-SOP-ES-022 Rev 2   | WPH, TTY    |
| <b>G. NOISE MEASUREMENT</b>        | 1. Boundary Noise Measurement   | In-house method<br>MLS-SOP-ES-014 Rev 3   | WPH, TTY    |

## Approved Signatories

| S/N | Names                        | Initials |
|-----|------------------------------|----------|
| 1.  | Mr Wong Pik Hung             | WPH      |
| 2.  | Mr Tan Thuan Piang           | TTP      |
| 3.  | Mr Toh Teck Yeow             | TTY      |
| 4.  | Ms Umalia Flordelina Gabriel | UFG      |
| 5.  | Mr Lim Yeu How               | LYH      |

## Note:

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025. A laboratory's fulfilment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid test results. The **management system requirements** in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001.