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| DMCC Office, 13E, Thirteenth Floor, Almas Towers, Jumeirah Lakes Tower, Dubai, United Arab Emirates | Phone: +971 58 595 2817Email: ceo.aftradedmcc@gmail.com |



***Check-list (Waste management)***

1. **Proposed Site Map**

1.1 General description of site location and plant area, ash disposal area, water intake etc.

* 1. The topographic map with 1:1000 or 1:2000 scales used for general layout drawings.
	2. The topographic map of ash disposal area and water intake.
1. **Access to Site**

2.1 The fuel and limestone transportation ways which need to be specified by drawings or descriptions (if it’s transported by trucks, the loading capacity of the truck and the access load condition should be submitted).

* 1. The oversize equipment transportation ways which need to be specified by drawings or descriptions.
	2. The existing transportation conditions round the proposed site including road, railway, airport, river ways.
1. **Site Conditions**

3.1 Topographical condition and elevation.

* 1. Geological conditions, Soil physic-mechanical features.
	2. Seismology.
1. **General Climate Conditions**

The ambient climatic conditions are as follows:

* Barometric pressure, mbar:
* Mean:
* Maximum:
* Minimum:
* Ambient temperature, ºC: Mean (yearly):
* Maximum:
* Minimum:
* Relative humidity, %:
* Mean (yearly):
* Maximum:
* Minimum:
* Wind speed, m/s:
* Mean (yearly):
* Maximum:
* Maximum wind direction:
* Main wind direction:
* Rainfall, mm:
* Mean total (yearly):
* Maximum (daily):
* Highest mean total (monthly):
* Total number of snowfall days (yearly):
* Maximum snow thickness (cm) :
* Total number of days with hail (yearly):
* Total number of frosty days (yearly):
* Total number of days with thunderstorm (yearly):
1. **Cooling Water Source Information**

5.1 What kind of cooling water source will be used for the power plant, river (lake) or underground water?

* 1. The highest water level or flood level, the average and the lowest water lever.
	2. The minimum water flow in whole year. The average and min. flow.
	3. The maximum, average and minimum water temperature.
	4. If the underground water will be the cooling water source, please provide the quantity and quality of underground water.
1. **Water Conditions**

Please provide the information on the preliminary water quality for the power plant, referring to the following yellow highlighted blanks. If possible, please fill in the table mentioned below:

sampling position ： sampling date： analysis date： sampling temperature:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| unititem |  mg/L | mg/L(CaCO3) | mmol/L |  |  unititem | mg/L | mg/L(CaCO3) | mmol/L |
| cation | K+ |  |  |  |  | Hardness | Total hardness |  |  |  |
| Na+ |  |  |  | Non-carbonate hardness |  |  |  |
| Ca2+ |  |  |  | carbonate hardness |  |  |  |
| Mg2+ |  |  |  | Negative carbonate hardness |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fe2＋ |  |  |  |  | Acidity and Alkalinity | M Alkalinity |  |  |  |
| Fe3+ |  |  |  | P Alkalinity |  |  |  |
| Al3+ |  |  |  | acidity |  |  |  |
| NH4+ |  |  |  | pH |  |  |  |
| Ba2+ |  |  |  | Others | N-NH3 |  |  |  |
| Sr2+ |  |  |  | Free carbon dioxide |  |  |  |
| Σ |  |  |  | CODMn/Cr |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | BOD5 |  |  |  |
| Anion | Cl- |  |  |  | Dissolved solids |  |  |  |
| SO42- |  |  |  | Total solids |  |  |  |
| HCO3- |  |  |  | Suspended solids |  |  |  |
| CO32- |  |  |  | bacillus |  |  |  |
| NO3- |  |  |  | Total silica（SiO2） |  |  |  |
| NO2- |  |  |  | Non-activated silica（SiO2） |  |  |  |
| OH- |  |  |  | TOC |  |  |  |
| Σ |  |  |  |  | Conductivity（25 °C） |  |  |  |

1. **MSW**

7.1 please provide transport information of MSW to plant. Including cars and size.

 7.2 MSW specification

Please provide MSW physical component analysis, proximate analysis and ultimate analysis. If you cannot provide all the information, at least physical component analysis and ultimate analysis should be provided.

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| --- |
| **Table for MSW Analysis** |
| **Item** | **Design** |  **Range** |
| **Physical Component Analysis ( As Received)** |
| Wood (% By Weight)  |  |  |
| Paper (% By Weight)  |  |  |
| Plastic (% By Weight)  |  |  |
| …… |  |  |
| **Proximate Analysis （As Received）** |
| Total Moisture (% By Weight)  | 　 | 　 |
| Ash (% By Weight)  | 　 | 　 |
| Volatile Matter (% By Weight)  | 　 | 　 |
| Fixed Carbon (% By Weight)  | 　 | 　 |
| **Ultimate Analysis （As Received）** |
| Carbon (% By Weight)  | 　 | 　 |
| Hydrogen (% By Weight)  | 　 | 　 |
| Oxygen (% By Weight Difference) | 　 | 　 |
| Nitrogen (% By Weight)  | 　 | 　 |
| Sulfur (% By Weight) | 　 | 　 |
| Chlorine (% By Weight) | 　 | 　 |
| **Calorific Value (As Received)**  |
| High Heat Value (kJ/kg) | 　 | 　 |
| Low Heat Value (kJ/kg) | 　 | 　 |
| **Ash Analysis**  |
| SiO2 (% By Weight)  | 　 | 　 |
| Al2O3 (% By Weight) | 　 | 　 |
| Fe2O3 (% By Weight) | 　 | 　 |
| MgO (% By Weight) | 　 | 　 |
| CaO (% By Weight) | 　 | 　 |
| Na2O (% By Weight) | 　 | 　 |
| MnO(% By Weight) | 　 | 　 |
| TiO2 (% By Weight) | 　 | 　 |
| P2O5 (% By Weight) | 　 | 　 |
| SO3 (% By Weight) | 　 | 　 |
| K2O (% By Weight) | 　 | 　 |
| Base / Acid Ratio | 　 | 　 |
| **Ash Fusibility Characteristics** |
| Initial Deformation (°C)at Reduced Atm | 　 | 　 |
| Softening Temperature (°C) | 　 | 　 |
| Fusion Temperature (°C) at Reduced Atm | 　 | 　 |

1. **Electrical**

8.1 Local power grid information relation to power station

8.1.1 The power grid nominal voltage classification from HV to LV.

8.1.2 The voltage level, quantity and direction of outgoing transmission line linking the proposal power plant to Grid.

8.1.3 Owner’s requirement to main electrical connection of proposal power plant.

1. **Flue Gas Emissions, Waste Water Discharge, Noise Emission Limits**

 9.1 Please provide the local standards for flue gas emissions and waste water discharge and noise emission limits.

 9.2 Please provide requirement for ash discharge.

**11. Code and Standard**

The information of the local forced executive code and standard, such as fire fighting, environmental protection, etc.

**12. Communication System**

12.1 Please provide the documents on requirements of the local dispatching center to this system and current status of telecommunication system.

12.2 How the power plant access to the local power grid?

**13. Operation method**

13.1 Please provide annual operation hours.

13.2 Whether the plant can be totally shut down. Or at least one boiler shall be in operation?