



## **TERMS OF REFERENCE**

### **CONSULTING SERVICES FOR THE CONDUCT OF EMISSION TEST - STACK TESTING OF AIR POLLUTION SOURCE EQUIPMENT (APSE), TWO (2) UNITS DIESEL-POWERED GENERATOR SET LOCATED AT THE PHILIPPINE PORTS AUTHORITY, PMO-ZAMBOANGA, ZAMBOANGA CITY**

#### **I. PROJECT DESCRIPTION**

The Philippine Ports Authority, PMO-Zamboanga has one (1) new APSE in addition to the existing four (4) units. Thus, PPA, PMO-Zamboanga shall undertake the processing of its Permit to Operate (PTO) and shall also include the renewal of PTO for the existing APSE. One of the requirements to process the PTO is the submission of the Engineer's Report indicating the Stack Testing Result to the Environmental Management Bureau (EMB) Regional Office.

#### **II. OBJECTIVES**

The objectives of the emission test are the following:

- a. To prepare the Inspection and Test Plan (ITP) and facilitate the submission to the EMB Regional Office;
- b. To conduct emission test (Stack Sampling and Test Analysis) on the two (2) units diesel-powered generator set for the following Source-Specific Air Pollutants:
  1. Nitrogen Dioxide (SO<sub>x</sub>); and,
  2. Carbon Monoxide;
- c. To verify the compliance of the APSEs with the air quality standard set by DENR Administrative Order No. 2000-81 and the IRR of Clean Air Act of 1999;
- d. To conduct and/or facilitate Fuel Analysis and provide Certificate of Analysis (COA); and
- e. To prepare and provide technical report on the results of the emission test.

#### **III. SCOPE OF CONSULTING SERVICES**

In general, the third party shall conduct sampling and testing using the following methodologies:



Source-Specific Air Pollutants/Parameters	Sampling Method	Test Analysis Method
1. Nitrogen Dioxide (NO <sub>x</sub> )	USEPA Methods 1 through 4 and Method 7	Phenol-disulfonic acid method or per sampling method
2. Carbon Monoxide	USEP Methods 3 or 10	Orsat Analysis or NDIR
Note: <ul style="list-style-type: none"><li>• Three (3) sampling test run per source</li><li>• Conduct/Facilitate Fuel Analysis</li><li>• Tests shall be as per approved ITP from EMB Regional Office</li></ul>		

#### IV. LABORATORY TESTING

##### **FUEL ANALYSIS:**

The Consultant may outsource the conduct of fuel analysis, or portion of it, to a DENR-recognized environmental laboratories, provided that the Consultant shall facilitate the conduct of the same employing its own personnel and resources.

#### V. MANPOWER REQUIREMENTS

The Consultant shall be composed of qualified team leader and staff with experience in the conduct of emission sampling and testing and duly accredited by the EMB Regional Office.

#### VI. REPORTS AND DELIVERABLES

Upon completion of field sampling, final report must be readily available 30 – 50 working days and shall be in a form of one (1) hard bound copy and one (1) compact disc (CD) copy. The report shall include, but not limited to the following:

- a. Analysis Test Results;
- b. Test Report;
- c. Diesel Fuel Test Analysis;
- d. Certificate of Analysis; and,
- e. Air Impact Analysis



VII. COVID-19 PROTOCOLS

The Consultant shall coordinate with the Proponent to assist and facilitate them in complying with the provision of the existing Executive Order particularly regarding interzonal and intrazonal movement provisions.

Business travelers who will be coming in to Zamboanga City shall secure ahead of their entry date an individual **Entry Authorization Pass** from the Local Government Unit (LGU), through the Zamboanga City Disaster and Risk Reduction Management (ZCDRRM), by submitting to the Proponent the following requirements:

- a. Medical Clearance Certification issued by City Health Office/Municipal Health Office or any DOH-accredited institutions that the Authorized Person Outside of Residence (APOR) is neither a contact, suspect, probable nor a confirmed COVID-19 case was tested negative through RT-PCR;
- b. Copy of Business Permit; and,
- c. Copy of Government-issued ID.

If the business traveler was not able to be tested for RT-PCR, they will be tested upon entry and Health Authorities shall determine whether they shall be admitted to a facility-based quarantine.

VIII. WORK SCHEDULE

**INDICATIVE SCHEDULE OF ACTIVITIES:**

Item	Activity	Duration	Timeline											
			W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12
1	Project Start	0 (SS)												
2	Securing Entry Authorization Pass	7 WD												
3	Entry Travel	1 CD												
4	Field Sampling	3 WD												
5	Exit Travel	1 CD												
6	Preparation of Report	50 WD												
7	Report Courier Services	10 CD												
8	Inspection and Acceptance	2 WD												
9	Project Completion	0 (FF)												
Total:		84 Days												
Note: SS – Start -Start activity relationship FF – Finish-Finish activity relationship														



## IX. RESPONSIBILITY

### **PROPONENT'S RESPONSIBILITY:**

The proponent shall provide the following assistance to the Consultant Service Provider:

- a. Assign plant representative to coordinate and assist the activities of the team during the conduct of field sampling;
- b. Provide relevant information for the preparation of ITP and Reports;
- c. Provide and make available on-site power supply;
- d. Provide sampling portholes per specification of the Consultant Service Provider and/or EMB guidelines;
- e. Provide safe workable platform as per requirements of the Consultant; and,
- f. Provide adequate fuel to operate the APSE at a normal to maximum loading during the conduct of emission test.

### **CONSULTANT SERVICE PROVIDER'S RESPONSIBILITY:**

- a. Prepare and facilitate the submission of ITP to the EMB Regional Office;
- b. Conduct emission testing;
- c. Prepare Endorsement Letter; and
- d. Provide Fuel Analysis and Certificate of Analysis.

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