Department of Environment and Natural Reources
ENVIRONMENTAL MANAGEMENT BUREAU
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ACKNOWLEDGEMENT RECEIPT

January 21, 2024

Greetings!

This is to Acknowledge Receipt of your OTHERS with the Subject : **EMAIL DTD.JAN.19,2024 FROM Henry Tan RE:LETTER DTD.JAN.18,2024 RE:TEST PROCEDURES IN OPACIMETERS COMPARED TO THE TEST PROCEDURE IN ANNEX C OF DAO 2000-81 THE IRR OF CLEAN AIR ACT**, submitted on January 21, 2024, 5:37pm.

Your transaction has been tagged as IIS No. **CO-2024-002559** with Company ID **EMBR3-1416000-192393**. For follow-ups, you may provide the given details.

For further inquiries, you may contact our designated EMB Office in your area from Monday to Friday 8:00 a.m. to 5:00 p.m. office hours, or email us at recordsco@emb.gov.ph.

Please be guided accordingly.

Thank you.

Private Emission Testing Center Owner's Association

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January 18, 2024

Engr. Gilbert C. Gonzales
Director, Environmental Management Bureau
DENR Compound, Visayas Avenue
Diliman, Quezon City 1100

Thru : **Engr. Chadbert D. Aquino**
Environmental Management Specialist II

Subject : **TEST PROCEDURES IN OPACIMETERS COMPARED TO THE TEST PROCEDURE IN ANNEX C OF DAO 2000-81 THE IRR OF CLEAN AIR ACT**

Dear Sirs:

As promised during the virtual meeting on January 16, 2024, we are forwarding to you the operations manual of various OPACIMETER brands and models that have machine-embedded test procedures that we refer as distinctly different from the opacimeter test procedure prescribed in the Annex C of DENR DAO 2000-81.

These are:

Brand and Model		Test Procedure Description
1	KOENG OP-201	pp. 18-19. *Free (Snap) acceleration test (Inspection mode): After three tests, if the result is acceptable, you will see "PASS" on the display and the test will be ended automatically and each time you press [SET] KEY, you will see the result of the first, the second and the third test in their average (Avrg) and difference (Diff). If the gap between the maximum and the minimum of exhaust emissions density tested three times is larger than 5% or the final test result is over the acceptable limits for exhaust emissions, an additional test will be done once more automatically and up to maximum ten times. In every test, if the calculated result of the last three tests is within the range of 5% gap and the average result is within the acceptable range, the test will be ended with the display of "PASS" and each time you press [SET] KEY, the screen will be changed to show the test result of the first, the second and the third test in their average (Avrg) and difference (Diff).*
2	FOFEN FTY-100	pp.5-6 *If the measurement reached 3 times, the deviation value and the average value of the last 3 measurements will be shown. When testing number exceed 3 times (including 3 times), the instrument will give out the average value and the deviation value.*
3	QROTECH OPA-102/101	*pp. 18-19. After three tests, if the result is acceptable, you will see "PASS" on the display and the test will be ended automatically and each time you press [SET] KEY, you will see the result of the first, the second and the third test in their average (Avrg) and difference (Diff). If the gap between the maximum and the minimum of exhaust emissions density tested three times is larger than 5% or the final test result is over the acceptable limits for exhaust emissions, an additional test will be done once more automatically and up to maximum ten times. In every test, if the calculated result*

		of the last three tests is within the range of 5% gap and the average result is within the acceptable range, the test will be ended with the display of "PASS" and each time you press [SET] KEY, the screen will be changed to show the test result of the first, the second and the third test in their average (Avrg) and difference (Diff).
4	QROTECH OPA-101(102)	p.18 *After the sixth tests, you will see "PASS" or "FAIL" on the display and the test will be ended automatically each time when you press [SET] key. You will see the results of the first, the second – up to the sixth tests on their average (Avrg).*
5	CARTESYKJ MQY-200	p.11 *The free acceleration test should be repeated at least three times according to the requirements in GB3847-2005. If the light absorption coefficient value is in 0.25m-1 bandwidth in 3 continuous times and it does not show the tendency to decrease, make the average of 3 value to be the measure results. After 3 free acceleration tests are finished, the instrument will work out the average value according to the above condition.*

For comparison, below is an excerpt from the Annex C of DAO 2000-81:

"e. With the engine idling, depress the accelerator quickly, but not violently, to obtain maximum delivery from the injection pump. Maintain this position until maximum engine speed is reached for about two (2) to four (4) seconds and the governor comes into action. As soon as this speed is reached, release the accelerator until the engine resumes its idling speed. Record the maximum reading of the smoke meter.

"f. The operation described in paragraph (4)(e) shall be repeated not less than six (6) times in order to clear the exhaust system and to allow for any necessary adjustment of the apparatus. The maximum opacity values read in each successive acceleration shall be noted until stabilized values are obtained. The values read shall be regarded as stabilized when four (4) consecutive readings are within a bandwidth of 0.25 m-1 and do not form a decreasing sequence. The arithmetic mean of the four stabilized values shall be the test result for the concerned vehicle." (*Highlighted for emphasis*.)

To summarize the difference, (a.) above cited opacimeter brands and models averaged the test results after three accelerations, instead of four as prescribed in Annex C; (b.) the "gap" or difference in-between accelerations is measured in percentage (%) or smoke density as described in one of the operation manuals, while the Annex C prescribed the difference in-between acceleration as bandwidth reading of within 0.25 m-1. For your reference and further study.

Respectfully yours,

BERNARDO S. CHANG, JR.
Chairman, PETCOA
Member, PETC PMVIC TWG

cc: ***Atty. Mark A. Reyes***
Director II – FRS/Head, PETC PMVIC AC-TWG