TESTING AND MONITORING RECOMMENDATIONS FOR EXISTING COMBUSTION EQUIPMENT [1]

The use of the Testing and Monitoring Guidance chart is primarily to update the periodic stack testing and the monitoring requirements of existing equipment for which a minor or significant modification has been submitted and to update the stack testing and the monitoring requirements at the time of operating permit renewal. Any initial stack testing for a new or modified equipment must be determined based on the equipment size, fuel use, and the pertinent applicable requirements.

REFINERY GAS OR LANDFILL GAS [2]

Size (MMBTU/HR)	Monitoring Recommendation [3]	Frequency of Stack Tests
1 ≤ heat input <10	Combustion Process Adjustment [5] (≥ 5 MM BTU/hr) & CEM (SO_2) [4]	None
10 ≤ heat input <20	Combustion Process Adjustment [5] & CEM (SO_2) [4]	None
20 ≤ heat input <50	Combustion Process Adjustment [5] & CEM (SO_2) [4]	None
50 ≤ heat input <100	Combustion Process Adjustment [5], Stack Test (CO & NO_X) & CEM (SO_2) [4]	Every 5 years
100 ≤ heat input <250	Combustion Process Adjustment [5], Stack Test (CO & NO_X) & CEM (SO_2) [4]	Every 5 years
250 ≤ heat input	Combustion Process Adjustment [5], Stack Test (CO & NO_X, PM10) [6, 7, 8] & CEM (NO_X, CO, O_2 & SO_2 [4])	Every 5 years

[1] This chart applies to boilers and other combustion equipment, including Heat Recovery Steam Generator (HRSG) with duct firing capability that operates in Fresh Air Fired mode without the turbine in operation.

[2] If the Landfill gas has more than 100 ppm H2S, the combustion equipment should be tested in the same manner as refinery gas, i.e., the combustion equipment should have SO2 CEM or sampling of the landfill gas or digester gas continuously or manually each week for sulfur or H2S.

[3] When only stack testing is required, CEMs can replace stack testing if the CEM monitors and records units similar to stack testing (e.g. stack testing requires 2.5 lb/hr of VOC and CEM also monitors VOC in lb/hr continuously).

[4] SO2 CEM required for Refinery Gas only. Facility can sample refinery gas continuously or manually each week for sulfur or H2S in lieu of having a SO2 CEM.

[5] The adjustment of the combustion process should be carried out according to the manufacturer's recommended procedures and maintenance schedule pursuant to N.J.A.C. 7:27-19.7 and 19.16.

[6] Initial PM-10 (including condensible) testing is required for all combustion equipment greater than 250 MMBTU/Hr capacity combusting gaseous fuel. Subsequent PM-10 stack testing requirements will be determined on a case-by-case basis considering results of the initial stack tests.

[7] Initial and once every 5 year stack emission testing for TSP and PM10 (including condensibles) is required for combustion equipment > 100 MMBtu/hr capacity combusting oil and for combustion equipment > 250 MMBtu/hr capacity combusting gas. Note that testing is required for combustion equipment operating less than 500 hours per year.

[8] Initial and Annual stack emission testing for TSP and PM10 (including condensibles) is required for combustion equipment > 100 MMBtu/hr capacity combusting oil and for combustion equipment > 250 MMBtu/hr capacity combusting gas that operate more than 500 hours per year on oil.