

ENGINEERING & COMPLIANCE...MEMORANDUM

TO File	FROM AS08	DATE January 18, 2011
REFERENCE Eastern Municipal Water District (EMWD) – San Jacinto Valley Regional Water Reclamation Facility (SJVRWRF), Facility ID 19159 Title V Revision No. 6		PERMIT APPL. NOs.: 503050

Subject: Alteration of PC A/N 503050 Condition No. 12 to correct the PM10 emission limit.

Equipment description:

BOILER, DIGESTER GAS FIRED, RATED AT 5.3 MMBTU PER HOUR, WITH ULTRA LOW NO_x BURNER.

A/N 503050 originally calculated PM10

To estimate emissions, the emission factors for natural gas are used.

$$R1 = R2 = \frac{EF}{HHV} \times BTU/hr$$

EF = Emission factor = 7.6 lbs/mmcf of fuel

HHV = Higher heating value = 9,026 Btu/cf (for digester gas)

$$\begin{aligned} \text{Emission rate} &= 7.6 \text{ lb/1E6cf} / 9,026 \text{ Btu/cf} \times 5,300,000 \text{ Btu/hr} \times \\ &= 0.004 \text{ lbs/hr} \end{aligned}$$

A/N 503050 correct calculation for PM10

$$R1 = R2 = \frac{EF}{HHV} \times BTU/hr$$

EF = Emission factor = 7.6 lbs/mmcf of fuel

HHV = Higher heating value = 620 Btu/cf (for digester gas)

$$\begin{aligned} \text{Emission rate} &= 7.6 \text{ lb/1E6cf} / 620 \text{ Btu/cf} \times 5,300,000 \text{ Btu/hr} \times \\ &= 0.06 \text{ lbs/hr} \end{aligned}$$

It is recommended to correct the emission limit in Permit to Construct A/N 503050, ID 19159 Condition No. 12 for PM10 to be 0.06 lbs/hr.