

San Joaquin Valley Air Pollution Control District

Emissions Calculations Sheets for IC Engines and Gasoline Tanks

Crop Water Use Factors

| Crop | Water Use (acre-ft/acre-year) |
|----------------------|----------------------------------|
| Field Crops | 2.85 |
| Grains | 1.49 |
| Truck Crops | 2.74 |
| Deciduous Orchards | 2.89 |
| Subtropical Orchards | 2.18 |
| Vineyards | 2.51 |

Emissions From Each Piece of Equipment (Note: Use addition sheets if necessary.)

| IC Engines | Pollutants | Water Use (acre-ft/acre-year) | x | Acreage (acres) | x | Well Depth (ft) | x | Conversion Factor | = | Annual Emissions (lbs/year) |
|---------------|--------------------------|----------------------------------|---|--------------------|---|--------------------|---|----------------------|---|-----------------------------------|
| | Engine 1 NO _x | █ | x | █ | x | █ | x | 0.06037 | = | █ |
| | Engine 1 VOC | █ | x | █ | x | █ | x | 0.00525 | = | █ |
| | Engine 2 NO _x | █ | x | █ | x | █ | x | 0.06037 | = | █ |
| | Engine 2 VOC | █ | x | █ | x | █ | x | 0.00525 | = | █ |
| | Engine 3 NO _x | █ | x | █ | x | █ | x | 0.06037 | = | █ |
| | Engine 3 VOC | █ | x | █ | x | █ | x | 0.00525 | = | █ |
| | Engine 4 NO _x | █ | x | █ | x | █ | x | 0.06037 | = | █ |
| | Engine 4 VOC | █ | x | █ | x | █ | x | 0.00525 | = | █ |

| Tanks | Pollutant | Emissions Factor (lb/gal) | x | Total Annual Throughput (gal/year) | = | Annual Emissions (lbs/year) |
|-------------|-----------|------------------------------|---|--|---|--------------------------------|
| Aboveground | VOC | 0.0282 | x | █ | = | █ |
| Belowground | VOC | 0.0212 | x | █ | = | █ |

Total Emissions From This Equipment

| Total Emissions | Pollutant | Diesel Combustion Emissions (lbs/year) | + | Natural Gas Combustion Emissions (lbs/year) | + | Gasoline Tank Emissions (lbs/year) | = | Total Annual Emissions (lbs/year) |
|--------------------|-----------------|---|---|--|---|---|---|---|
| | NO _x | █ | + | █ | + | N/A | = | █ |
| | VOC | █ | + | █ | + | █ | = | █ |

San Joaquin Valley Air Pollution Control District
Emissions Calculations Sheets for CAFOs

| Dairy Cows | Pollutant | Emission Factor (lbs/head-year) | Total Number of Cows | | | Annual Emissions (lbs/year) | |
|--|------------------|--|---|-----------------------------------|----------------------|------------------------------------|--|
| Milking Cow | VOC | 21.0 | x | | = | | |
| Dry Cow | VOC | 11.9 | x | | = | | |
| Heifer (15 – 24 month) | VOC | 8.3 | x | | = | | |
| Heifer (7 – 14 month) | VOC | 7.2 | x | | = | | |
| Heifer (4 – 6 month) | VOC | 6.6 | x | | = | | |
| Calf (under 3 months) | VOC | 6.2 | x | | = | | |
| Total | | | | | | | |
| Feedlot Cattle | Pollutant | Emission Factor (lbs/head-year) | Total Number of Cattle | | | Annual Emissions (lbs/year) | |
| | VOC | 11.1 | x | | = | | |
| Laying Hens & Associated Birds | Pollutant | Emission Factor (lbs/head-year) | Total Number of Hens | | | Annual Emissions (lbs/year) | |
| | VOC | 0.05 | x | | = | | |
| Broiler Chickens & Associated Birds | Pollutant | Emission Factor (lbs/head-year) | Max. # of Chickens at Any One Time | # of Days Houses are Empty | Days per Year | Annual Emissions (lbs/year) | |
| | VOC | 0.025 | x | | x (365 -) | ÷ 365 = | |
| Turkeys & Associated Birds | Pollutant | Emission Factor (lbs/head-year) | Max. # of Turkeys at Any One Time | # of Days Houses are Empty | Days per Year | Annual Emissions (lbs/year) | |
| | VOC | 0.10 | x | | x (365 -) | ÷ 365 = | |