## Appendix A – Air Emission Calculations

**Guadalupe Soil Hauling Emissions**

**Trucking Emission Summary -Santa Maria Landfill (SMLF)**

| Source | Peak Day Emissions, lbs/day | | | | | | Annual Emissions, Tons/yr | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | N2O | CH4 | CO2 |
| ***Within SLO County*** | | | | | | | | | | | | | | | |
| Truck Loading | 1.44 | 5.09 | 13.38 | 0.01 | 0.56 | 0.56 | 0.18 | 0.64 | 1.67 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 194 |
| HHDT Trucks - Onsite Hauling (M3 to Main Gate) | 0.89 | 4.23 | 13.12 | 0.00 | 0.48 | 0.44 | 0.08 | 0.37 | 1.14 | 0.00 | 0.04 | 0.04 | 0.00 | 0.00 | 156 |
| HHDT Trucks - Offsite Hauling: Betteravia Route | 0.46 | 2.55 | 11.21 | 0.00 | 0.37 | 0.34 | 0.04 | 0.22 | 0.97 | 0.00 | 0.03 | 0.03 | 0.00 | 0.00 | 128 |
| ***Peak within SLO County*** | ***2.80*** | ***11.87*** | ***37.71*** | ***0.01*** | ***1.41*** | ***1.34*** | ***0.30*** | ***1.22*** | ***3.78*** | ***0.00*** | ***0.14*** | ***0.14*** | ***0.01*** | ***0.02*** | ***479*** |
| | | | | | | | | | | | | | | | |
| ***Within Santa Barbara County*** | | | | | | | | | | | | | | | |
| HHDT Trucks - Offsite Hauling: Betteravia Route | 4.32 | 23.84 | 104.84 | 0.00 | 3.48 | 3.20 | 0.38 | 2.07 | 9.10 | 0.00 | 0.30 | 0.28 | 0.02 | 0.02 | 1,196 |
| *Peak within Santa Barbara County* | ***4.32*** | ***23.84*** | ***104.84*** | ***0.00*** | ***3.48*** | ***3.20*** | ***0.38*** | ***2.07*** | ***9.10*** | ***0.00*** | ***0.30*** | ***0.28*** | ***0.02*** | ***0.02*** | ***1,196*** |
| | | | | | | | | | | | | | | | |
| ***Total All Counties: Maximum Emissions*** | ***7.12*** | ***35.71*** | ***142.55*** | ***0.01*** | ***4.89*** | ***4.54*** | ***0.67*** | ***3.29*** | ***12.88*** | ***0.00*** | ***0.45*** | ***0.42*** | ***0.02*** | ***0.04*** | ***1,674*** |
| | | | | | | | | | | | | | | | |
| **2005 SEIR Emissions Estimates: SMLF Only** | | | | | | | | | | | | | | | |
| SLO County | *7.20* | *29.50* | *107.50* | *2.50* | *4.90* | - | *0.88* | *3.63* | *13.16* | *0.30* | *0.60* | - | - | - | - |
| SB County | *5.40* | *24.20* | *169.30* | *1.90* | *9.20* | - | *0.65* | *2.90* | *20.22* | *0.23* | *1.09* | - | - | - | - |
| *Total* | *12.60* | *53.70* | *276.80* | *4.40* | *14.10* | - | *1.53* | *6.53* | *33.38* | *0.53* | *1.69* | - | - | - | - |

1. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ emissions have been converted to equivalent $CO_2$ emissions ($310*NO_2=CO_2e$, $21*CH_4=CO_2e$, $CO_2=CO_2e$).

**Trucking Emission Summary -Santa Maria Landfill (SMLF) and Buttonwillow**

| Source | Peak Day Emissions, lbs/day | | | | | | Annual Emissions, Tons/yr | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | N2O | CH4 | CO2 |
| ***Within SLO County*** | | | | | | | | | | | | | | | |
| Truck Loading | 1.44 | 5.09 | 13.38 | 0.01 | 0.56 | 0.56 | 0.1802 | 0.6358 | 1.67258 | 0.0017 | 0.0696 | 0.0696 | 0.0014 | 0.0161 | 194 |
| HHDT Trucks - Onsite Hauling (M3 to Main Gate) | 0.89 | 4.23 | 13.12 | 0.00 | 0.48 | 0.44 | 0.08 | 0.37 | 1.14 | 0.00 | 0.04 | 0.04 | 0.00 | 0.00 | 157 |
| HHDT Trucks - Offsite Hauling to SMLF | 0.23 | 1.27 | 5.60 | 0.00 | 0.19 | 0.17 | 0.03 | 0.18 | 0.78 | 0.00 | 0.03 | 0.02 | 0.00 | 0.00 | 102 |
| HHDT Trucks - Offsite Hauling to Buttonwillow | 4.72 | 24.45 | 116.45 | 0.00 | 4.65 | 4.28 | 0.17 | 0.86 | 4.08 | 0.00 | 0.16 | 0.15 | 0.01 | 0.01 | 521 |
| *Peak within SLO County* | *7.29* | *35.05* | *148.55* | *0.01* | *5.88* | *5.45* | *0.46* | *2.04* | *7.67* | *0.00* | *0.30* | *0.28* | *0.01* | *0.03* | *974* |
| | | | | | | | | | | | | | | | |
| ***Within Santa Barbara County*** | | | | | | | | | | | | | | | |
| HHDT Trucks - Offsite Hauling to SMLF | 2.26 | 12.45 | 54.73 | 0.00 | 1.81 | 1.67 | 0.31 | 1.73 | 7.60 | 0.00 | 0.25 | 0.23 | 0.01 | 0.02 | 999 |
| HHDT Trucks - Offsite Hauling to Buttonwillow | 6.23 | 32.29 | 153.74 | 0.00 | 6.14 | 5.65 | 0.22 | 1.13 | 5.38 | 0.00 | 0.21 | 0.20 | 0.01 | 0.01 | 687 |
| *Peak within Santa Barbara County* | *8.49* | *44.73* | *208.47* | *0.00* | *7.95* | *7.32* | *0.53* | *2.86* | *12.98* | *0.00* | *0.47* | *0.43* | *0.03* | *0.03* | *1,686* |
| | | | | | | | | | | | | | | | |
| ***Within Kern County*** | | | | | | | | | | | | | | | |
| HHDT Trucks - Offsite Hauling to Buttonwillow | 6.23 | 32.29 | 153.74 | 0.00 | 6.14 | 5.65 | 0.95 | 5.02 | 23.22 | 0.00 | 0.87 | 0.80 | 0.05 | 0.05 | 2,997 |
| | | | | | | | | | | | | | | | |
| *Total All Counties* | *22.00* | *112.07* | *510.76* | *0.01* | *19.97* | *18.42* | *1.93* | *9.92* | *43.87* | *0.00* | *1.64* | *1.51* | *0.08* | *0.10* | *5,657* |
| | | | | | | | | | | | | | | | |
| **2005 SEIR Emissions Estimates: Buttonwillow Only** | | | | | | | | | | | | | | | |
| SLO County | *29.40* | *128.40* | *800.00* | *10.00* | *27.10* | - | *3.49* | *15.43* | *95.81* | *1.20* | *3.18* | - | - | - | - |
| SB County | *9.70* | *43.30* | *302.40* | *3.40* | *9.60* | - | *1.16* | *5.17* | *36.12* | *0.41* | *1.15* | - | - | - | - |
| San Joaquin Valley | *14.40* | *64.70* | *451.40* | *5.10* | *14.40* | - | *1.72* | *7.72* | *53.92* | *0.61* | *1.72* | - | - | - | - |
| Total | *53.50* | *236.40* | *1,553.80* | *18.50* | *51.10* | - | *6.37* | *28.32* | *185.85* | *2.22* | *6.05* | - | - | - | - |
| | | | | | | | | | | | | | | | |

1. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ emissions have been converted to equivalent $CO_2$ emissions ($310*NO_2=CO_2e$, $21*CH_4=CO_2e$, $CO_2=CO_2e$).

**Guadalupe Soil Hauling Emissions: Onsite Emissions**

**Onsite Truck Emissions**

| Source | Vehicle Type | Emission Factors (lbs/mile) | | | | | | | | | Peak Day Round Trips per day | Average Round Trips per day | Length of Round Trip (miles) | Days per yr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | N2O | CH4 | CO2 | | | | |
| **Transport to SMLF Only** | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF: Main | T7 | 0.00219 | 0.01038 | 0.03216 | 0.00000 | 0.00118 | 0.00109 | 0.00005 | 0.00006 | 4.4 | 120.0 | 83.3 | 3.4 | 250 |
| | | | | | | | | | | | | | | |
| **Transport to Buttonwillow and SMLF** | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF | T7 | 0.00219 | 0.01038 | 0.03216 | 0.00000 | 0.00118 | 0.00109 | 0.00005 | 0.00006 | 4.4 | 60.0 | 66.7 | 3.4 | 250 |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.00219 | 0.01038 | 0.03216 | 0.00000 | 0.00118 | 0.00109 | 0.00005 | 0.00006 | 4.4 | 60.0 | 21.0 | 3.4 | 200 |
| *Total* | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

1. Emission Factors from EMFAC 2011 area fleet average for SLO County and 25 mph average speed, T7 tractor construction.
2. Length of trip is assumed to be round trip distances, based on loading at M3 site.
3. Assumes 50 wks per year for SMLF transport and 40 weeks per year for Buttonwillow transport
4. Years for SMLF transport 3
5. Years for Buttomwillow transport 3
6. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ emissions have been converted to equivalent $CO_2$ emissions ($310*NO_2=CO_2e$, $21*CH_4=CO_2e$, $CO_2=CO_2e$).

**Guadalupe Soil Hauling Emissions: Onsite Emissions**

**Onsite Loading Equipment Emissions**

| Source | Load | BHP | Emission Factors (g/bhp-hr) | | | | | | | | | Peak Hours per Day | Average Hours per Day | Days/yr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | N2O | CH4 | CO2 | | | |
| 980 CAT Front-End Loader | 0.54 | 270 | 0.494 | 1.718 | 4.81 | 0.005 | 0.178 | 0.178 | 0.0042 | 0.044 | 568 | 8 | 8 | 250 |
| Sweeper (SweepMaster 250) | 0.68 | 76 | 1.018 | 3.977 | 6.085 | 0.006 | 0.586 | 0.586 | 0.0042 | 0.091 | 568 | 1.5 | 1.5 | 250 |
| ***Total*** | | | | | | | | | | | | | | |

1. Water truck emission are not include since this truck is used as part of the ongoing remediation and restoration activities at the site.
2. Load factors based on CalEEMod. HP based on manufacturers specs
3. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ emissions have been converted to equivalent $CO_2$ emissions ($310*NO_2=CO_2e$, $21*CH_4=CO_2e$, $CO_2=CO_2e$).

**Guadalupe Soil Hauling Emissions: Onsite Emissions**

**Onsite Truck Emissions**

| Source | Vehicle Type | Peak Day Emissions, lbs/day | | | | | | Peak Quarter Emissions, tons | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| **Transport to SMLF Only** | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF: Main | T7 | 0.89 | 4.23 | 13.12 | 0.00 | 0.48 | 0.44 | 0.02 | 0.09 | 0.27 | 0.00 | 0.01 | 0.01 |
| | | | | | | | | | | | | | |
| **Transport to Buttonwillow and SMLF** | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF | T7 | 0.45 | 2.12 | 6.56 | 0.00 | 0.24 | 0.22 | 0.01 | 0.07 | 0.22 | 0.00 | 0.01 | 0.01 |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.45 | 2.12 | 6.56 | 0.00 | 0.24 | 0.22 | 0.00 | 0.02 | 0.07 | 0.00 | 0.00 | 0.00 |
| *Total* | | ***0.89*** | ***4.23*** | ***13.12*** | ***0.00*** | ***0.48*** | ***0.44*** | ***0.02*** | ***0.09*** | ***0.29*** | ***0.00*** | ***0.01*** | ***0.01*** |
| | | | | | | | | | | | | | |

1. Emission Factors from EMFAC 2011 area fleet average for SLO County
2. Length of trip is assumed to be round trip distances, based on loading at
3. Assumes 50 wks per year for SMLF transport and 40 weeks per year fo
4. Years for SMLF transport 3
5. Years for Buttomwillow transport 3
6. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ e

**Guadalupe Soil Hauling Emissions: Onsite Emissions**

**Onsite Loading Equipment Emissions**

| Source | Load | Peak Day Emissions, lbs/day | | | | | | Peak Quarter Emissions, tons | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| 980 CAT Front-End Loader | 0.54 | 1.2676 | 4.4085 | 12.343 | 0.0128 | 0.4568 | 0.4568 | 0.038 | 0.1323 | 0.3703 | 0.0004 | 0.0137 | 0.0137 |
| Sweeper (SweepMaster 250) | 0.68 | 0.1736 | 0.6783 | 1.0378 | 0.001 | 0.0999 | 0.0999 | 0.0052 | 0.0203 | 0.0311 | 3E-05 | 0.003 | 0.003 |
| ***Total*** | | ***1.4413*** | ***5.0868*** | ***13.381*** | ***0.0139*** | ***0.5567*** | ***0.5567*** | ***0.0432*** | ***0.1526*** | ***0.4014*** | ***0.0004*** | ***0.0167*** | ***0.0167*** |

1. Water truck emission are not include since this truck is used as part of th
2. Load factors based on CalEEMod. HP based on manufacturers specs
3. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ e

**Guadalupe Soil Hauling Emissions: Onsite Emissions**

**Onsite Truck Emissions**

| Source | Vehicle Type | Annual Emissions, Tons/yr | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | $N_2O$ | $CH_4$ | $CO_2$ | $CO_2e$[6] |
| **Transport to SMLF Only** | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF: Main | T7 | 0.08 | 0.37 | 1.14 | 0.00 | 0.04 | 0.04 | 0.00 | 0.00 | 156 | 141 |
| | | | | | | | | | | | |
| **Transport to Buttonwillow and SMLF** | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF | T7 | 0.06 | 0.29 | 0.91 | 0.00 | 0.03 | 0.03 | 0.00 | 0.00 | 125 | 113 |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.02 | 0.07 | 0.23 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 32 | 28 |
| *Total* | | ***0.08*** | ***0.37*** | ***1.14*** | ***0.00*** | ***0.04*** | ***0.04*** | ***0.00*** | ***0.00*** | ***157*** | ***142*** |
| | | | | | | | | | | | |

1. Emission Factors from EMFAC 2011 area fleet average for SLO County
2. Length of trip is assumed to be round trip distances, based on loading at
3. Assumes 50 wks per year for SMLF transport and 40 weeks per year fo
4. Years for SMLF transport 3
5. Years for Buttomwillow transport 3
6. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ e

**Guadalupe Soil Hauling Emissions: Onsite Emissions**

**Onsite Loading Equipment Emissions**

| Source | Load | Annual Emissions, Tons/yr | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | $N_2O$ | $CH_4$ | $CO_2$ | $CO_2e$[3] |
| 980 CAT Front-End Loader | 0.54 | 0.1585 | 0.5511 | 1.5429 | 0.0016 | 0.0571 | 0.0571 | 0.0013 | 0.0141 | 182 | 165 |
| Sweeper (SweepMaster 250) | 0.68 | 0.0217 | 0.0848 | 0.1297 | 0.0001 | 0.0125 | 0.0125 | 9E-05 | 0.0019 | 12 | 11 |
| ***Total*** | | ***0.1802*** | ***0.6358*** | ***1.6726*** | ***0.0017*** | ***0.0696*** | ***0.0696*** | ***0.0014*** | ***0.0161*** | ***194*** | ***176*** |

1. Water truck emission are not include since this truck is used as part of th
2. Load factors based on CalEEMod. HP based on manufacturers specs
3. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ e

**Guadalupe Soil Hauling Emissions: Offsite Impacts Only**

| Source | Vehicle Type | Emission Factors (lbs/mile) | | | | | | | | | Peak Day Round Trips per day | Average Round Trips per day | Length of Round Trip (miles) | Days/yr | Peak Day Emissions, lbs/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | N2O | CH4 | CO2 | | | | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| **Transport to SMLF Only** | | | | | | | | | | | | | | | | | | | | |
| ***Within SLO County*** | | | | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF: Betteravia | T7 | 0.00113 | 0.00625 | 0.02747 | 0.00000 | 0.00091 | 0.00084 | 0.00005 | 0.00006 | 3.6 | 120.0 | 83.3 | 3.4 | 250 | 0.46 | 2.55 | 11.21 | 0.00 | 0.37 | 0.34 |
| ***Peak within SLO County*** | | | | | | | | | | | | | | | ***0.46*** | ***2.55*** | ***11.21*** | ***0.00*** | ***0.37*** | ***0.34*** |
| | | | | | | | | | | | | | | | | | | | | |
| ***Within Santa Barbara County*** | | | | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF: Betteravia | T7 | 0.00113 | 0.00625 | 0.02747 | 0.00000 | 0.00091 | 0.00084 | 0.00005 | 0.00006 | 3.6 | 120.0 | 83.3 | 31.8 | 250 | 4.32 | 23.84 | 104.84 | 0.00 | 3.48 | 3.20 |
| ***Peak within Santa Barbara County*** | | | | | | | | | | | | | | | ***4.32*** | ***23.84*** | ***104.84*** | ***0.00*** | ***3.48*** | ***3.20*** |
| | | | | | | | | | | | | | | | | | | | | |
| ***Total All Counties: Maximum Emissions*** | | | | | | | | | | | | | | | ***4.78*** | ***26.39*** | ***116.05*** | ***0.00*** | ***3.85*** | ***3.54*** |
| | | | | | | | | | | | | | | | | | | | | |
| **Transport to Buttonwillow and SMLF** | | | | | | | | | | | | | | | | | | | | |
| ***Within SLO County*** | | | | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF | T7 | 0.00113 | 0.00625 | 0.02747 | 0.00000 | 0.00091 | 0.00084 | 0.00005 | 0.00006 | 3.6 | 60.0 | 66.7 | 3.4 | 250 | 0.23 | 1.27 | 5.60 | 0.00 | 0.19 | 0.17 |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.00110 | 0.00572 | 0.02726 | 0.00000 | 0.00109 | 0.00100 | 0.00005 | 0.00006 | 3.5 | 60.0 | 21.0 | 71.2 | 200 | 4.72 | 24.45 | 116.45 | 0.00 | 4.65 | 4.28 |
| ***Peak within SLO County*** | | | | | | | | | | | | | | | ***4.95*** | ***25.73*** | ***122.05*** | ***0.00*** | ***4.84*** | ***4.45*** |
| | | | | | | | | | | | | | | | | | | | | |
| ***Within Santa Barbara County*** | | | | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF | T7 | 0.00113 | 0.00625 | 0.02747 | 0.00000 | 0.00091 | 0.00084 | 0.00005 | 0.00006 | 3.6 | 60.0 | 66.7 | 33.2 | 250 | 2.26 | 12.45 | 54.73 | 0.00 | 1.81 | 1.67 |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.00110 | 0.00572 | 0.02726 | 0.00000 | 0.00109 | 0.00100 | 0.00005 | 0.00006 | 3.5 | 60.0 | 21.0 | 94.0 | 200 | 6.23 | 32.29 | 153.74 | 0.00 | 6.14 | 5.65 |
| ***Peak within Santa Barbara County*** | | | | | | | | | | | | | | | ***8.49*** | ***44.73*** | ***208.47*** | ***0.00*** | ***7.95*** | ***7.32*** |
| | | | | | | | | | | | | | | | | | | | | |
| ***Within Kern County*** | | | | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.00110 | 0.00572 | 0.02726 | 0.00000 | 0.00109 | 0.00100 | 0.00005 | 0.00006 | 3.5 | 60.0 | 21.0 | 94.0 | 200 | 6.23 | 32.29 | 153.74 | 0.00 | 6.14 | 5.65 |
| | | | | | | | | | | | | | | | | | | | | |
| ***Total All Counties*** | | | | | | | | | | | | | | | ***19.66*** | ***102.75*** | ***484.26*** | ***0.00*** | ***18.93*** | ***17.42*** |
| | | | | | | | | | | | | | | | | | | | | |
| **2005 SEIR Emissions Estimates: SMLF Only** | | | | | | | | | | | | | | | | | | | | |
| SLO County | | | | | | | | | | | | | | | *7.20* | *29.50* | *107.50* | *2.50* | *4.90* | - |
| SB County | | | | | | | | | | | | | | | *5.40* | *24.20* | *169.30* | *1.90* | *9.20* | - |
| ***Total*** | | | | | | | | | | | | | | | ***12.60*** | ***53.70*** | ***276.80*** | ***4.40*** | ***14.10*** | |
| | | | | | | | | | | | | | | | | | | | | |
| **2005 SEIR Emissions Estimates: Buttonwillow Only** | | | | | | | | | | | | | | | | | | | | |
| SLO County | | | | | | | | | | | | | | | *29.40* | *128.40* | *800.00* | *10.00* | *27.10* | - |
| SB County | | | | | | | | | | | | | | | *9.70* | *43.30* | *302.40* | *3.40* | *9.60* | - |
| San Joaquin Valley | | | | | | | | | | | | | | | *14.40* | *64.70* | *451.40* | *5.10* | *14.40* | - |
| **Total** | | | | | | | | | | | | | | | ***53.50*** | ***236.40*** | ***1,553.80*** | ***18.50*** | ***51.10*** | |
| | | | | | | | | | | | | | | | | | | | | |

1. Emission Factors from EMFAC 2011 area fleet average for SLO County and 45 mph average speed, T7 tractor construction (55 mph assumed for Buttonwillow route on Hwy 166 and 33)
2. Length of trip is assumed to be round trip distances, based on distance to SMLF or Buttomwillow
3. Assumes 50 wks per year for SMLF transport and 40 weeks per year for Buttonwillow transport
4. Years for SMLF transport 3
5. Years for Buttomwillow transport 3
6. $CO_2$e is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$ emissions have been converted to equivalent $CO_2$ emissions (310*$NO_2$=$CO_2$e, 21*$CH_4$=$CO_2$e, $CO_2$=$CO_2$e).

Santa Barbara APCD Significance Threshold for mobile sources is 25 lbs NOx/day
San Joaquin (Kern County) APCD Significance Threshold for is 10 tons Nox or VOC/year

**Guadalupe Soil Hauling Emissions: Offsite Impacts Only**

| Source | Vehicle Type | Peak Quarter Emissions, tons | | | | | | Annual Emissions, Tons/yr | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | ROG | CO | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | $N_2O$ | $CH_4$ | $CO_2$ | $CO_2e$[6] |
| **Transport to SMLF Only** | | | | | | | | | | | | | | | | | |
| ***Within SLO County*** | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF: Betteravia | T7 | 0.01 | 0.05 | 0.23 | 0.00 | 0.01 | 0.01 | 0.04 | 0.22 | 0.97 | 0.00 | 0.03 | 0.03 | 0.00 | 0.00 | 128 | 116 |
| ***Peak within SLO County*** | | ***0.01*** | ***0.05*** | ***0.23*** | ***0.00*** | ***0.01*** | ***0.01*** | ***0.04*** | ***0.22*** | ***0.97*** | ***0.00*** | ***0.03*** | ***0.03*** | ***0.00*** | ***0.00*** | ***128*** | ***116*** |
| | | | | | | | | | | | | | | | | | |
| ***Within Santa Barbara County*** | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF: Betteravia | T7 | 0.09 | 0.50 | 2.18 | 0.00 | 0.07 | 0.07 | 0.38 | 2.07 | 9.10 | 0.00 | 0.30 | 0.28 | 0.02 | 0.02 | 1,196 | 1,081 |
| ***Peak within Santa Barbara County*** | | ***0.09*** | ***0.50*** | ***2.18*** | ***0.00*** | ***0.07*** | ***0.07*** | ***0.38*** | ***2.07*** | ***9.10*** | ***0.00*** | ***0.30*** | ***0.28*** | ***0.02*** | ***0.02*** | ***1,196*** | ***1,081*** |
| | | | | | | | | | | | | | | | | | |
| ***Total All Counties: Maximum Emissions*** | | ***0.10*** | ***0.55*** | ***2.42*** | ***0.00*** | ***0.08*** | ***0.07*** | ***0.42*** | ***2.29*** | ***10.07*** | ***0.00*** | ***0.33*** | ***0.31*** | ***0.02*** | ***0.02*** | ***1,324*** | ***1,197*** |
| | | | | | | | | | | | | | | | | | |
| **Transport to Buttonwillow and SMLF** | | | | | | | | | | | | | | | | | |
| ***Within SLO County*** | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF | T7 | 0.01 | 0.04 | 0.19 | 0.00 | 0.01 | 0.01 | 0.03 | 0.18 | 0.78 | 0.00 | 0.03 | 0.02 | 0.00 | 0.00 | 102 | 93 |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.05 | 0.26 | 1.22 | 0.00 | 0.05 | 0.04 | 0.17 | 0.86 | 4.08 | 0.00 | 0.16 | 0.15 | 0.01 | 0.01 | 521 | 471 |
| ***Peak within SLO County*** | | ***0.06*** | ***0.30*** | ***1.41*** | ***0.00*** | ***0.06*** | ***0.05*** | ***0.20*** | ***1.03*** | ***4.85*** | ***0.00*** | ***0.19*** | ***0.17*** | ***0.01*** | ***0.01*** | ***623*** | ***564*** |
| | | | | | | | | | | | | | | | | | |
| ***Within Santa Barbara County*** | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to SMLF | T7 | 0.08 | 0.41 | 1.82 | 0.00 | 0.06 | 0.06 | 0.31 | 1.73 | 7.60 | 0.00 | 0.25 | 0.23 | 0.01 | 0.02 | 999 | 903 |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.07 | 0.34 | 1.61 | 0.00 | 0.06 | 0.06 | 0.22 | 1.13 | 5.38 | 0.00 | 0.21 | 0.20 | 0.01 | 0.01 | 687 | 622 |
| ***Peak within Santa Barbara County*** | | ***0.14*** | ***0.75*** | ***3.44*** | ***0.00*** | ***0.12*** | ***0.11*** | ***0.53*** | ***2.86*** | ***12.98*** | ***0.00*** | ***0.47*** | ***0.43*** | ***0.03*** | ***0.03*** | ***1,686*** | ***1,525*** |
| | | | | | | | | | | | | | | | | | |
| ***Within Kern County*** | | | | | | | | | | | | | | | | | |
| HHDT Trucks - soil hauling to Buttonwillow | T7 | 0.07 | 0.34 | 1.61 | 0.00 | 0.06 | 0.06 | 0.22 | 1.13 | 5.38 | 0.00 | 0.21 | 0.20 | 0.01 | 0.01 | 687 | 622 |
| | | | | | | | | | | | | | | | | | |
| ***Total All Counties*** | | ***0.26*** | ***1.39*** | ***6.46*** | ***0.00*** | ***0.24*** | ***0.22*** | ***0.95*** | ***5.02*** | ***23.22*** | ***0.00*** | ***0.87*** | ***0.80*** | ***0.05*** | ***0.05*** | ***2,997*** | ***2,711*** |
| | | | | | | | | | | | | | | | | | |
| **2005 SEIR Emissions Estimates: SMLF Only** | | | | | | | | | | | | | | | | | |
| SLO County | | *0.22* | *0.91* | *3.29* | *0.08* | *0.15* | - | *0.88* | *3.63* | *13.16* | *0.30* | *0.60* | - | - | - | | |
| SB County | | *0.16* | *0.73* | *5.06* | *0.06* | *0.27* | - | *0.65* | *2.90* | *20.22* | *0.23* | *1.09* | - | - | - | | |
| ***Total*** | | ***0.38*** | ***1.63*** | ***8.35*** | ***0.13*** | ***0.42*** | | ***1.53*** | ***6.53*** | ***33.38*** | ***0.53*** | ***1.69*** | ***-*** | ***-*** | ***-*** | | |
| | | | | | | | | | | | | | | | | | |
| **2005 SEIR Emissions Estimates: Buttonwillow Only** | | | | | | | | | | | | | | | | | |
| SLO County | | *0.87* | *3.86* | *23.95* | *0.30* | *0.80* | - | *3.49* | *15.43* | *95.81* | *1.20* | *3.18* | - | - | - | | |
| SB County | | *0.29* | *1.29* | *9.03* | *0.10* | *0.29* | - | *1.16* | *5.17* | *36.12* | *0.41* | *1.15* | - | - | - | | |
| San Joaquin Valley | | *0.43* | *1.93* | *13.48* | *0.15* | *0.43* | - | *1.72* | *7.72* | *53.92* | *0.61* | *1.72* | - | - | - | | |
| **Total** | | ***1.59*** | ***7.08*** | ***46.46*** | ***0.56*** | ***1.51*** | | ***6.37*** | ***28.32*** | ***185.85*** | ***2.22*** | ***6.05*** | ***-*** | ***-*** | ***-*** | | |
| | | | | | | | | | | | | | | | | | |

1. Emission Factors from EMFAC 2011 area fleet average for SLO Coun
2. Length of trip is assumed to be round trip distances, based on distance
3. Assumes 50 wks per year for SMLF transport and 40 weeks per year f
4. Years for SMLF transport 3
5. Years for Buttomwillow transport 3
6. $CO_2e$ is in metric tons of $CO_2$ equivalent, were the $N_20$, $CH_4$ and $CO_2$

Santa Barbara APCD Significance Threshold for mobile sources is 25 lbs
San Joaquin (Kern County) APCD Significance Threshold for is 10 tons