Appendix E

Supplemental Emissions Calculations
for the Hay Road Landfill Project
(August 2019)

Summary of GHG Emissions

	value	units	source
Stationary Sources			
Generator	881	MTCO2e/year	wksht: Stationary-Source GHGs
Landfill (fugitive)	79,200	MTCO2e/year	wksht: Stationary-Source GHGs
Flare	207	MTCO2e/year	wksht: Stationary-Source GHGs
Subtotal	80,288	MTCO2e/year	wksht: Stationary-Source GHGs
Mobile Sources			
Self-Haul Trucks	193	MTCO2e/year	wksht: Truck Emissions 2020
Packer Trucks	788	MTCO2e/year	wksht: Truck Emissions 2020
Transfer Trucks	5,890	MTCO2e/year	wksht: Truck Emissions 2020
Subtotal	6,870	MTCO2e/year	wksht: Truck Emissions 2020
Total, project-realted increase	87,158	MTCO2e/year	summation

Stationary-Source GHG Emissions

	value	units	source
new diesel generator	881	MTCO2e/year	SCS Engineers 2019:49 (Table 4-13)
landfill (fugitive)			
baseline, actual	50,698	MTCO2e/year	SCS Engineers 2019:48 (Table 4-11)
existing-plus-project, permitted	129,898	MTCO2e/year	SCS Engineers 2019:48 (Table 4-11)
project increment	79,200	MTCO2e/year	calculation
flare			
baseline, actual	42	MTCO2e/year	SCS Engineers 2019:48 (Table 4-11)
existing-plus-project, permitted	249	MTCO2e/year	SCS Engineers 2019:48 (Table 4-11)
project increment	207	MTCO2e/year	calculation
Total, project-realted increase	80,288	MTCO2e/year	summation

Truck Emissions in 2020

The purpose of this worksheet is to conservatively calculate the number of add'l truck trips that can be generated by the project without exceeded the BAAQMD-established mass emission threshold for NOx.

Project Parameters

	value	units	source
earliest cal yr of operation	2020	cal yr	project description
fuel type	diesel	fuel	assumption, conservative

Truck Trip Parameters

	Self-haul trucks	Packer trucks	Transfer trucks	units	source
Veh Type in EMFAC	MDV	T7 SWCV	T7 Tractor	n/a	EMFAC
round trips per day	81	23	43	round trips/day	KD Anderson 2018:13
Trip Distance, round trip	15.1	21.7	120	miles	SCS Engineers 2019:41
Travel Distance, daily	1,223	499	5,160	VMT/day	calculation
Percent Breakdown by Air Basin					
in SVAB	50%	100%	0%	%	KD Anderson 2018:43
in SFBAAB	50%	0%	100%	%	KD Anderson 2018:43
Travel Distance, daily, by Air Basin					
in SVAB	612	499	0	VMT/day	calculation
in SFBAAB	612	0	5,160	VMT/day	calculation

It is conservitively assumed that all new trips would be by transfer trucks because, due to their NOx emission rate and average trip distance, they emit the most NOx per trip. Therefore, the number of trips by self-haul trucks and packer trucks is changed to zero. Then the number of trips by transfer trucks is changed to the highest value that would not result in an exceedance of BAAQMD's thresholds for NOx of 54 lb/day or 10 tons/year. In conclusion, as many as 43 additional transfer trucks, 23 packer trucks, and 81 self-haul vehicles (round trips) could take place per day without exceededn BAAQMD-established mass emission thresholds for NOx. There is only a limit on the transfer trucks because these trips would emit almost all the NOx in the SFBAAB.

Truck Emission Factors from EMFAC2017 for Calendar Year 2020

	ROG_RUNEX	NOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM2_5_RUNEX	PM2_5_PMTW	PM2_5_PMBW	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX
units	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*
Self-haul trucks	0.013722833	0.07835124	0.006141361	0.008000002	0.036750011	0.005875689	0.002000001	0.015750005	412.8215389	0.000637399	0.064889797
Packer trucks	0.037456076	8.397508974	0.015020235	0.03600001	0.061740018	0.014370466	0.009000003	0.026460008	4130.212147	0.001739738	0.649211833
Transfer trucks	0.162374173	4.62010241	0.095910963	0.03600001	0.061740018	0.091761897	0.009000003	0.026460008	1411.351592	0.00754186	0.221844816

Source: wksht EMFAC2017 raw output

Global Warming Potential

	value	units	source
CO2	1	unitless	by definition
CH4	25	unitless	The Climate Registry. 2014. Default Emission Factors. Table B.1, p. 43. Available at
N2O	298	unitless	http://www.theclimateregistry.org/resources/protocols/general-reporting-protocol/#jump2. Accessed October 7, 2014.

Truck Emission Rates, 2020

	ROG	NOx	PM10	PM2.5	CO2e
units	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*
Self-haul trucks	0.014	0.078	0.051	0.024	432
Packer trucks	0.037	8.398	0.113	0.050	4324
Transfer trucks	0.162	4.620	0.194	0.127	1478

Source: Consolidation and factoring in Global Warming Potential

Unit Conversion Rates

	value	units	source
mass conversion rate	453.59237	g/lb	onlineconversion.com
mass conversion rate	1,000,000	g/MT	onlineconversion.com
mass conversion rate	2,000	lb/ton	onlineconversion.com
days per year	365	unitless	Earth

Truck Emission Rates, 2020

	ROG	NOx	PM10	PM2.5	CO2e
units	*lb/mile*	*lb/mile*	*lb/mile*	*lb/mile*	*MT/mile*
Self-haul trucks	3.03E-05	1.73E-04	1.12E-04	5.21E-05	4.32E-04
Packer trucks	8.26E-05	1.85E-02	2.49E-04	1.10E-04	4.32E-03
Transfer trucks	3.58E-04	1.02E-02	4.27E-04	2.80E-04	1.48E-03

Source: mass conversion calculations

Truck Emissions, Daily, 2020

	ROG	NOx	PM10	PM2.5	CO2e
units	*lb/day*	*lb/day*	*lb/day*	*lb/day*	*MT/day*
Self-haul trucks	0.04	0.2	0.1	0.1	0.5
Packer trucks	0.04	9.2	0.1	0.05	2.2
Transfer trucks	1.8	52.6	2.2	1.4	7.6
Total	1.9	62.0	2.5	1.6	10.3
Breakdown by Air Basin					
in SVAB	0.1	9.3	0.2	0.1	2.4
in SFBAAB	1.9	**52.7**	5.0	1.5	7.9

Source: calculations

Truck Emissions, Annual, 2020

	ROG	NOx	PM10	PM2.5	CO2e
units	*tons/year*	*tons/year*	*tons/year*	*tons/year*	*MT/year*
Self-haul trucks	0.01	0.04	0.03	0.01	192.9
Packer trucks	0.008	1.686	0.023	0.010	787.7
Transfer trucks	0.3	9.6	0.4	0.3	2,783.0
Total	0.4	11.3	0.4	0.3	3,764
Breakdown by Air Basin					
in SVAB	0.01	1.71	0.04	0.02	884.1
in SFBAAB	0.3	**9.6**	0.4	0.3	2,879.5

Source: calculations

Truck Emissions in 2020

Project Parameters

	value	units	source
earliest cal yr of operation	2020	cal yr	project description
fuel type	diesel	fuel	assumption, conservative

Truck Trip Parameters

	Self-haul trucks	Packer trucks	Transfer trucks	units	source
Veh Type in EMFAC	MDV	T7 SWCV	T7 Tractor	n/a	EMFAC
round trips per day	81	23	91	round trips/day	KD Anderson 2018:13
Trip Distance, round trip	15.1	21.7	120	miles	SCS Engineers 2019:41
Travel Distance, daily	1,223	499	10,920	VMT/day	calculation
Percent Breakdown by Air Basin					
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in SFBAAB	50%	0%	100%	%	KD Anderson 2018:43
Travel Distance, daily, by Air Basin					
in SVAB	612	499	0	VMT/day	calculation
in SFBAAB	612	0	10,920	VMT/day	calculation

Truck Emission Factors from EMFAC2017 for Calendar Year 2020

	ROG_RUNEX	NOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM2_5_RUNEX	PM2_5_PMTW	PM2_5_PMBW	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX
units	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*	*g/mile*
Self-haul trucks	0.013722833	0.07835124	0.006141361	0.008000002	0.036750011	0.005875689	0.002000001	0.015750005	412.8215389	0.000637399	0.064889797
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Packer trucks	0.037	8.398	0.113	0.050	4324
Transfer trucks	0.162	4.620	0.194	0.127	1478

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Self-haul trucks	3.03E-05	1.73E-04	1.12E-04	5.21E-05	4.32E-04
Packer trucks	8.26E-05	1.85E-02	2.49E-04	1.10E-04	4.32E-03
Transfer trucks	3.58E-04	1.02E-02	4.27E-04	2.80E-04	1.48E-03

Source: mass conversion calculations

Truck Emissions, Daily, 2020

	ROG	NOx	PM10	PM2.5	CO2e
units	*lb/day*	*lb/day*	*lb/day*	*lb/day*	*MT/day*
Self-haul trucks	0.04	0.2	0.1	0.1	0.5
Packer trucks	0.04	9.2	0.1	0.05	2.2
Transfer trucks	3.9	111.2	4.7	3.1	16.1
Total	4.0	120.7	4.9	3.2	18.8
Breakdown by Air Basin					
in SVAB	0.1	9.3	0.2	0.1	2.4
in SFBAAB	3.9	**111.3**	5.0	3.1	16.4

Source: calculations

Truck Emissions, Annual, 2020

	ROG	NOx	PM10	PM2.5	CO2e
units	*tons/year*	*tons/year*	*tons/year*	*tons/year*	*MT/year*
Self-haul trucks	0.01	0.04	0.03	0.01	192.9
Packer trucks	0.008	1.686	0.023	0.010	787.7
Transfer trucks	0.7	20.3	0.9	0.6	5,889.6
Total	0.7	22.0	0.9	0.6	6,870
Breakdown by Air Basin					
in SVAB	0.01	1.71	0.04	0.02	884.1
in SFBAAB	0.7	**20.3**	0.9	0.6	5,986.1

Source: calculations

Truck Emission Rates, 2023

	ROG	NOx	PM10	PM2.5	CO2e
units	*lb/mile*	*lb/mile*	*lb/mile*	*lb/mile*	*MT/mile*
Self-haul trucks	2.38E-05	1.10E-04	1.09E-04	4.87E-05	3.97E-04
Packer trucks	8.40E-05	1.54E-02	2.49E-04	1.10E-04	4.16E-03
Transfer truces	4.08E-05	4.48E-03	2.77E-04	1.37E-04	1.33E-03

Source: mass conversion calculations

Truck Emissions, Daily, 2023

	ROG	NOx	PM10	PM2.5	CO2e
units	*lb/day*	*lb/day*	*lb/day*	*lb/day*	*MT/day*
Self-haul trucks	0.0	0.1	0.1	0.1	0.5
Packer trucks	0.04	7.7	0.1	0.06	2.1
Transfer truces	0.4	49.0	3.0	1.5	14.5
Total	0.5	56.8	3.3	1.6	17.0
Breakdown by Air Basin					
in SVAB	0.1	7.7	0.2	0.1	2.3
in SFBAAB	0.5	49.0	5.0	1.5	14.7

Source: calculations

Truck Emissions, Annual, 2023

	ROG	NOx	PM10	PM2.5	CO2e
units	*tons/year*	*tons/year*	*tons/year*	*tons/year*	*MT/year*
Self-haul trucks	0.01	0.02	0.02	0.01	177.4
Packer trucks	0.008	1.398	0.023	0.010	758.4
Transfer truces	0.1	8.9	0.6	0.3	5,282.6
Total	0.1	10.4	0.6	0.3	6,218
Breakdown by Air Basin					
in SVAB	0.01	1.4	0.03	0.02	847.1
in SFBAAB	0.1	8.9	0.6	0.3	5,371.3

Source: calculations

EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Source: EMFAC2017 Web Database at https://www.arb.ca.gov/emfac/2017/
Region: SOLANO
Calendar Year: 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_RESTLOSS	ROG_DIURN
SOLANO	2020	MDV	Aggregated	Aggregated	DSL	810.2934352	35073.30403	3925.355837	0.013722833	0	0	0	0	0	0
SOLANO	2020	T7 SWCV	Aggregated	Aggregated	DSL	71.70664903	2925.957928	279.6559312	0.037456076	1.312645692	0	0	0	0	0
SOLANO	2020	T7 tractor	Aggregated	Aggregated	DSL	1202.062872	166261.6377	15266.19847	0.162374173	1.849635513	0	0	0	0	0
SOLANO	2021	MDV	Aggregated	Aggregated	DSL	872.5500796	37133.80254	4213.336822	0.012663088	0	0	0	0	0	0
SOLANO	2021	T7 SWCV	Aggregated	Aggregated	DSL	71.05161071	2898.889045	277.1012818	0.037801946	1.324246128	0	0	0	0	0
SOLANO	2021	T7 tractor	Aggregated	Aggregated	DSL	1244.242182	169862.2559	15801.87571	0.122551186	1.865597328	0	0	0	0	0
SOLANO	2022	MDV	Aggregated	Aggregated	DSL	932.6200407	38900.92756	4488.234083	0.011702804	0	0	0	0	0	0
SOLANO	2022	T7 SWCV	Aggregated	Aggregated	DSL	70.07127729	2859.140935	273.2779814	0.038059201	1.335800363	0	0	0	0	0
SOLANO	2022	T7 tractor	Aggregated	Aggregated	DSL	1270.262215	173203.5138	16132.33013	0.059557552	1.887638344	0	0	0	0	0
SOLANO	2023	MDV	Aggregated	Aggregated	DSL	989.781182	40580.42251	4748.914695	0.010801642	0	0	0	0	0	0
SOLANO	2023	T7 SWCV	Aggregated	Aggregated	DSL	69.08682562	2818.75605	269.4386199	0.038080621	1.346660607	0	0	0	0	0
SOLANO	2023	T7 tractor	Aggregated	Aggregated	DSL	1282.689048	176583.856	16290.15091	0.018515712	1.879640813	0	0	0	0	0
SOLANO	2024	MDV	Aggregated	Aggregated	DSL	1045.481359	42100.41935	4998.586149	0.010077796	0	0	0	0	0	0
SOLANO	2024	T7 SWCV	Aggregated	Aggregated	DSL	67.91798437	2770.900085	264.880139	0.03791719	1.356175948	0	0	0	0	0
SOLANO	2024	T7 tractor	Aggregated	Aggregated	DSL	1360.603191	180165.5276	17279.66052	0.018716693	1.879640813	0	0	0	0	0
SOLANO	2025	MDV	Aggregated	Aggregated	DSL	1096.128956	43438.14365	5226.848186	0.009376771	0	0	0	0	0	0
SOLANO	2025	T7 SWCV	Aggregated	Aggregated	DSL	66.55439245	2715.135445	259.5621305	0.037444044	1.365247264	0	0	0	0	0
SOLANO	2025	T7 tractor	Aggregated	Aggregated	DSL	1434.539798	183342.9572	18218.65543	0.018852707	1.879640813	0	0	0	0	0
SOLANO	2026	MDV	Aggregated	Aggregated	DSL	1146.597162	44573.70336	5449.206042	0.008797353	0	0	0	0	0	0
SOLANO	2026	T7 SWCV	Aggregated	Aggregated	DSL	65.11465112	2656.007135	253.9471394	0.036870524	1.367592381	0	0	0	0	0
SOLANO	2026	T7 tractor	Aggregated	Aggregated	DSL	1501.609494	186498.8515	19070.44057	0.018927626	1.879640813	0	0	0	0	0
SOLANO	2027	MDV	Aggregated	Aggregated	DSL	1188.829662	45672.53889	5642.993577	0.008070233	0	0	0	0	0	0
SOLANO	2027	T7 SWCV	Aggregated	Aggregated	DSL	63.77331612	2601.468202	248.7159329	0.036337306	1.370498259	0	0	0	0	0
SOLANO	2027	T7 tractor	Aggregated	Aggregated	DSL	1561.512528	190104.8551	19831.20911	0.01893254	1.879640813	0	0	0	0	0
SOLANO	2028	MDV	Aggregated	Aggregated	DSL	1228.59182	46655.71512	5825.481749	0.007492461	0	0	0	0	0	0
SOLANO	2028	T7 SWCV	Aggregated	Aggregated	DSL	62.48651038	2548.814192	243.6973905	0.035692168	1.374385683	0	0	0	0	0
SOLANO	2028	T7 tractor	Aggregated	Aggregated	DSL	1607.290814	192660.1073	20412.59334	0.018888847	1.879640813	0	0	0	0	0
SOLANO	2029	MDV	Aggregated	Aggregated	DSL	1266.913986	47563.16247	5998.927507	0.006935102	0	0	0	0	0	0
SOLANO	2029	T7 SWCV	Aggregated	Aggregated	DSL	61.731764	2517.838722	240.7538796	0.034811696	1.384399744	0	0	0	0	0
SOLANO	2029	T7 tractor	Aggregated	Aggregated	DSL	1645.646814	195194.6914	20899.71454	0.018795108	1.879640813	0	0	0	0	0
SOLANO	2030	MDV	Aggregated	Aggregated	DSL	1306.189783	48399.77522	6170.763303	0.006527366	0	0	0	0	0	0
SOLANO	2030	T7 SWCV	Aggregated	Aggregated	DSL	61.06430211	2490.605506	238.1507782	0.034037384	1.394199385	0	0	0	0	0
SOLANO	2030	T7 tractor	Aggregated	Aggregated	DSL	1679.752209	197713.5437	21332.85305	0.018715149	1.879640813	0	0	0	0	0
SOLANO	2031	MDV	Aggregated	Aggregated	DSL	1344.466449	49167.53841	6335.800153	0.006213097	0	0	0	0	0	0
SOLANO	2031	T7 SWCV	Aggregated	Aggregated	DSL	60.30439507	2459.389026	235.1871408	0.033346478	1.396609242	0	0	0	0	0
SOLANO	2031	T7 tractor	Aggregated	Aggregated	DSL	1704.217255	200210.3263	21643.55913	0.018640747	1.879640813	0	0	0	0	0
SOLANO	2032	MDV	Aggregated	Aggregated	DSL	1380.264384	49882.21055	6489.94691	0.005928447	0	0	0	0	0	0
SOLANO	2032	T7 SWCV	Aggregated	Aggregated	DSL	59.83015149	2439.941621	233.3375908	0.032522692	1.404921783	0	0	0	0	0
SOLANO	2032	T7 tractor	Aggregated	Aggregated	DSL	1719.92416	202681.8855	21843.03683	0.018565368	1.879640813	0	0	0	0	0
SOLANO	2033	MDV	Aggregated	Aggregated	DSL	1414.125482	50556.06009	6635.640738	0.005676787	0	0	0	0	0	0
SOLANO	2033	T7 SWCV	Aggregated	Aggregated	DSL	59.4555419	2424.74753	231.8766134	0.031661575	1.411539114	0	0	0	0	0
SOLANO	2033	T7 tractor	Aggregated	Aggregated	DSL	1724.355628	205137.4907	21899.31648	0.01849868	1.879640813	0	0	0	0	0
SOLANO	2034	MDV	Aggregated	Aggregated	DSL	1446.595239	51189.52118	6775.34788	0.005452796	0	0	0	0	0	0
SOLANO	2034	T7 SWCV	Aggregated	Aggregated	DSL	58.85775118	2400.168083	229.5452296	0.031024308	1.416300991	0	0	0	0	0
SOLANO	2034	T7 tractor	Aggregated	Aggregated	DSL	1728.593316	207577.3629	21953.13511	0.01842649	1.879640813	0	0	0	0	0
SOLANO	2035	MDV	Aggregated	Aggregated	DSL	1477.059242	51795.05227	6907.154792	0.005247043	0	0	0	0	0	0
SOLANO	2035	T7 SWCV	Aggregated	Aggregated	DSL	58.72914292	2395.086861	229.0436574	0.030262345	1.421781281	0	0	0	0	0
SOLANO	2035	T7 tractor	Aggregated	Aggregated	DSL	1735.44311	210005.1282	22040.12749	0.01835984	1.879640813	0	0	0	0	0
SOLANO	2036	MDV	Aggregated	Aggregated	DSL	1506.165379	52350.72825	7032.897533	0.005072133	0	0	0	0	0	0
SOLANO	2036	T7 SWCV	Aggregated	Aggregated	DSL	58.70169566	2394.011025	228.9366131	0.029607178	1.426736609	0	0	0	0	0
SOLANO	2036	T7 tractor	Aggregated	Aggregated	DSL	1741.966002	212418.7759	22122.96822	0.018301145	1.879640813	0	0	0	0	0
SOLANO	2037	MDV	Aggregated	Aggregated	DSL	1534.130391	52889.17755	7153.965418	0.004920361	0	0	0	0	0	0
SOLANO	2037	T7 SWCV	Aggregated	Aggregated	DSL	58.69253007	2393.575245	228.9008673	0.029107641	1.431277856	0	0	0	0	0
SOLANO	2037	T7 tractor	Aggregated	Aggregated	DSL	1747.615512	214819.072	22194.717	0.018249165	1.879640813	0	0	0	0	0
SOLANO	2038	MDV	Aggregated	Aggregated	DSL	1560.359461	53410.4323	7269.148287	0.004784303	0	0	0	0	0	0
SOLANO	2038	T7 SWCV	Aggregated	Aggregated	DSL	58.75489043	2396.045793	229.1440727	0.028534303	1.435001633	0	0	0	0	0
SOLANO	2038	T7 tractor	Aggregated	Aggregated	DSL	1754.783866	217206.5526	22285.7551	0.018205972	1.879640813	0	0	0	0	0
SOLANO	2039	MDV	Aggregated	Aggregated	DSL	1586.28364	53907.53918	7382.434222	0.004674239	0	0	0	0	0	0
SOLANO	2039	T7 SWCV	Aggregated	Aggregated	DSL	58.87083128	2400.71909	229.596242	0.028172355	1.438994876	0	0	0	0	0
SOLANO	2039	T7 tractor	Aggregated	Aggregated	DSL	1763.217805	219579.4519	22392.86613	0.018172206	1.879640813	0	0	0	0	0
SOLANO	2040	MDV	Aggregated	Aggregated	DSL	1611.225837	54393.81686	7492.124081	0.004577822	0	0	0	0	0	0
SOLANO	2040	T7 SWCV	Aggregated	Aggregated	DSL	58.92287048	2402.789529	229.7991949	0.027908677	1.443694765	0	0	0	0	0
SOLANO	2040	T7 tractor	Aggregated	Aggregated	DSL	1776.046949	221940.5156	22555.79625	0.01815003	1.879640813	0	0	0	0	0
SOLANO	2041	MDV	Aggregated	Aggregated	DSL	1636.068263	54869.01641	7600.690376	0.004501502	0	0	0	0	0	0
SOLANO	2041	T7 SWCV	Aggregated	Aggregated	DSL	59.03611174	2407.462665	230.2408358	0.02765625	1.448278402	0	0	0	0	0
SOLANO	2041	T7 tractor	Aggregated	Aggregated	DSL	1791.606182	224292.1039	22753.39852	0.018135399	1.879640813	0	0	0	0	0
SOLANO	2042	MDV	Aggregated	Aggregated	DSL	1660.740109	55321.98117	7708.327188	0.004439909	0	0	0	0	0	0
SOLANO	2042	T7 SWCV	Aggregated	Aggregated	DSL	59.13801181	2411.708685	230.6382461	0.027570329	1.45333129	0	0	0	0	0
SOLANO	2042	T7 tractor	Aggregated	Aggregated	DSL	1809.341065	226635.8703	22978.63153	0.018126606	1.879640813	0	0	0	0	0
SOLANO	2043	MDV	Aggregated	Aggregated	DSL	1684.857947	55755.05616	7813.636822	0.004390222	0	0	0	0	0	0
SOLANO	2043	T7 SWCV	Aggregated	Aggregated	DSL	59.16979207	2412.953908	230.7621891	0.027548467	1.459414384	0	0	0	0	0
SOLANO	2043	T7 tractor	Aggregated	Aggregated	DSL	1828.614137	228973.1988	23223.39954	0.018122216	1.879640813	0	0	0	0	0
SOLANO	2044	MDV	Aggregated	Aggregated	DSL	1708.571292	56177.61345	7917.08311	0.004350241	0	0	0	0	0	0
SOLANO	2044	T7 SWCV	Aggregated	Aggregated	DSL	59.26052064	2416.407441	231.1160305	0.027526635	1.464993936	0	0	0	0	0
SOLANO	2044	T7 tractor	Aggregated	Aggregated	DSL	1849.516975	231306.2584	23488.86558	0.018121747	1.879640813	0	0	0	0	0
SOLANO	2045	MDV	Aggregated	Aggregated	DSL	1731.963651	56586.10975	8018.916631	0.004319095	0	0	0	0	0	0
SOLANO	2045	T7 SWCV	Aggregated	Aggregated	DSL	59.302672	2418.343885	231.2804208	0.027514779	1.470268146	0	0	0	0	0
SOLANO	2045	T7 tractor	Aggregated	Aggregated	DSL	1870.721424	233635.1193	23758.16208	0.018122603	1.879640813	0	0	0	0	0
SOLANO	2046	MDV	Aggregated	Aggregated	DSL	1754.829197	57009.12217	8118.673677	0.004293481	0	0	0	0	0	0
SOLANO	2046	T7 SWCV	Aggregated	Aggregated	DSL	59.28245793	2417.315884	231.2015859	0.027414535	1.475233872	0	0	0	0	0
SOLANO	2046	T7 tractor	Aggregated	Aggregated	DSL	1892.307507	235960.0164	24032.30534	0.018124026	1.879640813	0	0	0	0	0
SOLANO	2047	MDV	Aggregated	Aggregated	DSL	1777.654039	57405.07935	8217.715941	0.004274911	0	0	0	0	0	0
SOLANO	2047	T7 SWCV	Aggregated	Aggregated	DSL	59.28064257	2417.291001	231.194506	0.02719039	1.478929244	0	0	0	0	0
SOLANO	2047	T7 tractor	Aggregated	Aggregated	DSL	1914.180925	238281.5989	24310.09775	0.018125362	1.879640813	0	0	0	0	0
SOLANO	2048	MDV	Aggregated	Aggregated	DSL	1800.066578	57805.85201	8315.04374	0.004258854	0	0	0	0	0	0
SOLANO	2048	T7 SWCV	Aggregated	Aggregated	DSL	59.08457329	2409.351248	230.4298358	0.027007079	1.484482707	0	0	0	0	0
SOLANO	2048	T7 tractor	Aggregated	Aggregated	DSL	1936.296037	240600.5397	24590.95967	0.018126676	1.879640813	0	0	0	0	0
SOLANO	2049	MDV	Aggregated	Aggregated	DSL	1821.80411	58187.62534	8409.961903	0.004242394	0	0	0	0	0	0
SOLANO	2049	T7 SWCV	Aggregated	Aggregated	DSL	58.93113375	2403.055638	229.8314216	0.026749677	1.489112861	0	0	0	0	0
SOLANO	2049	T7 tractor	Aggregated	Aggregated	DSL	1958.62763	242917.37	24874.5709	0.018128301	1.879640813	0	0	0	0	0

TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_RESTLOSS	TOG_DIURN	CO_RUNEX	CO_IDLEX	CO_STREX	NOx_RUNEX	NOx_IDLEX	NOx_STREX	CO2_RUNEX	CO2_IDLEX
0.015622533	0	0	0	0	0	0	0.221660659	0	0	0.07835124	0	0	412.8215389	0
0.042640891	1.4943472	0	0	0	0	0	0.103187117	10.80116478	0	8.397508974	43.0556023	1.849836401	4130.212147	4352.069825
0.184850636	2.105669235	0	0	0	0	0	0.601183645	21.21102543	0	4.62010241	27.58338686	1.224589188	1411.351592	4506.834141
0.014416084	0	0	0	0	0	0	0.213398161	0	0	0.067084975	0	0	401.6668497	0
0.043034639	1.507553414	0	0	0	0	0	0.103830293	11.41049749	0	7.903324953	41.43494654	2.04290366	4081.208848	4308.42151
0.139515197	2.123840546	0	0	0	0	0	0.48272426	22.581012	0	3.90116841	26.87699996	1.353736705	1380.75521	4636.439502
0.013322864	0	0	0	0	0	0	0.20577451	0	0	0.05769149	0	0	390.5744536	0
0.043327503	1.520707031	0	0	0	0	0	0.104256926	12.01611226	0	7.421485335	39.82483041	2.234985116	4029.535705	4261.289422
0.06780174	2.148932565	0	0	0	0	0	0.259817426	24.67312198	0	3.017111721	25.79852036	1.559064718	1334.956827	4860.810053
0.012296951	0	0	0	0	0	0	0.198937313	0	0	0.049729121	0	0	379.5208116	0
0.043351888	1.533070591	0	0	0	0	0	0.104076032	12.62363356	0	6.96400537	38.28537936	2.42933814	3976.723834	4210.208351
0.021078729	2.139827985	0	0	0	0	0	0.160178518	27.77323374	0	2.03423559	22.21159678	1.858666754	1266.032559	4636.983581
0.011472901	0	0	0	0	0	0	0.193106216	0	0	0.043279523	0	0	368.4972423	0
0.043165834	1.543903083	0	0	0	0	0	0.10337896	13.25484005	0	6.502007568	36.83078397	2.632776282	3916.470773	4150.520442
0.02130753	2.139827985	0	0	0	0	0	0.161924138	27.77323374	0	2.039127581	22.21159678	1.859974134	1247.83657	4597.580213
0.010674831	0	0	0	0	0	0	0.187590713	0	0	0.037658807	0	0	357.3519227	0
0.042627194	1.554230086	0	0	0	0	0	0.101910387	13.88866344	0	6.045948375	35.42221379	2.838224093	3852.021301	4085.152873
0.021462372	2.139827985	0	0	0	0	0	0.163106985	27.77323374	0	2.036621582	22.21159678	1.861070558	1228.052781	4555.541045
0.010015201	0	0	0	0	0	0	0.182627051	0	0	0.033237975	0	0	348.3022391	0
0.041974285	1.556899823	0	0	0	0	0	0.100153638	14.5345422	0	5.534559085	34.04395374	3.050243137	3781.525386	4016.67255
0.021547661	2.139827985	0	0	0	0	0	0.163760765	27.77323374	0	2.026757956	22.21159678	1.86207934	1207.278965	4511.16958
0.009187424	0	0	0	0	0	0	0.177293542	0	0	0.028315535	0	0	339.1066665	0
0.041367257	1.560207943	0	0	0	0	0	0.09847858	15.17468366	0	5.035527479	32.70655885	3.260282273	3708.123189	3945.110796
0.021553256	2.139827985	0	0	0	0	0	0.163808762	27.77323374	0	2.006856649	22.21159678	1.863066923	1183.631251	4461.672895
0.008529669	0	0	0	0	0	0	0.172355999	0	0	0.024194495	0	0	330.8446821	0
0.040632816	1.56463348	0	0	0	0	0	0.096568202	15.79054858	0	4.563663836	31.4091762	3.462177954	3633.686678	3871.203462
0.021503515	2.139827985	0	0	0	0	0	0.163435186	27.77323374	0	1.983576448	22.21159678	1.864183295	1159.547979	4407.12008
0.007895153	0	0	0	0	0	0	0.167596801	0	0	0.02103926	0	0	323.4742671	0
0.039630466	1.576033726	0	0	0	0	0	0.094200149	16.31495397	0	4.220655852	30.26556365	3.632461445	3566.023206	3798.805091
0.0213968	2.139827985	0	0	0	0	0	0.162627827	27.77323374	0	1.955810264	22.21159678	1.86532221	1135.92275	4350.009167
0.007430972	0	0	0	0	0	0	0.163903072	0	0	0.018707312	0	0	316.9561414	0
0.03874897	1.587189871	0	0	0	0	0	0.092094241	16.81631789	0	3.893603017	29.16546753	3.795016011	3499.577539	3727.772546
0.021305772	2.139827985	0	0	0	0	0	0.16193916	27.77323374	0	1.932079199	22.21159678	1.866303129	1112.753104	4292.129383
0.007073198	0	0	0	0	0	0	0.160929831	0	0	0.016988263	0	0	311.1936076	0
0.037962427	1.58993331	0	0	0	0	0	0.09012399	17.31204245	0	3.52639791	28.16307729	3.958442098	3430.177954	3657.047945
0.021221072	2.139827985	0	0	0	0	0	0.161298225	27.77323374	0	1.910499446	22.21159678	1.867128194	1090.202653	4233.102989
0.006749143	0	0	0	0	0	0	0.158172667	0	0	0.015546963	0	0	306.0581122	0
0.037024609	1.599396505	0	0	0	0	0	0.087914639	17.74087605	0	3.2643056	27.27843315	4.098217787	3367.265589	3588.287607
0.021135258	2.139827985	0	0	0	0	0	0.16064895	27.77323374	0	1.888328825	22.21159678	1.86793551	1068.355398	4171.508162
0.006462644	0	0	0	0	0	0	0.155695634	0	0	0.014378349	0	0	301.5235638	0
0.036044293	1.606929833	0	0	0	0	0	0.085617786	18.12618767	0	3.029136017	26.51783622	4.224848649	3307.99624	3523.183503
0.02105934	2.139827985	0	0	0	0	0	0.160074982	27.77323374	0	1.867074481	22.21159678	1.868713839	1048.144	4108.089386
0.006207646	0	0	0	0	0	0	0.153466822	0	0	0.013380687	0	0	297.5604786	0
0.035318813	1.612350868	0	0	0	0	0	0.083792634	18.55011998	0	2.696043225	25.64608611	4.363891051	3242.480089	3456.760612
0.020977156	2.139827985	0	0	0	0	0	0.159453458	27.77323374	0	1.844781313	22.21159678	1.869521702	1028.806946	4043.923061
0.005973409	0	0	0	0	0	0	0.151413514	0	0	0.012499516	0	0	294.0980847	0
0.034451376	1.61858976	0	0	0	0	0	0.081805502	18.83999824	0	2.527946788	25.06418665	4.459135788	3192.138635	3400.850405
0.020901281	2.139827985	0	0	0	0	0	0.15887952	27.77323374	0	1.824647929	22.21159678	1.870248966	1011.131081	3981.916741
0.005774286	0	0	0	0	0	0	0.149623393	0	0	0.011775549	0	0	291.0901923	0
0.033705518	1.624231024	0	0	0	0	0	0.080112212	19.08632891	0	2.379798016	24.56668964	4.539749617	3147.158353	3351.161236
0.020834461	2.139827985	0	0	0	0	0	0.158373879	27.77323374	0	1.807665902	22.21159678	1.870845051	995.4267799	3922.267524
0.005601504	0	0	0	0	0	0	0.148059959	0	0	0.011163265	0	0	288.5073583	0
0.033136834	1.629400888	0	0	0	0	0	0.078773874	19.32484647	0	2.235534196	24.1046349	4.617733225	3104.375424	3304.03325
0.020775285	2.139827985	0	0	0	0	0	0.157925912	27.77323374	0	1.793270162	22.21159678	1.871331603	980.4204099	3864.975804
0.00544661	0	0	0	0	0	0	0.146640642	0	0	0.010508896	0	0	286.2898723	0
0.032484131	1.633640125	0	0	0	0	0	0.07730127	19.51755293	0	2.112818531	23.70697393	4.681099144	3065.728342	3261.484055
0.020726113	2.139827985	0	0	0	0	0	0.157553691	27.77323374	0	1.781248605	22.21159678	1.871744094	966.910196	3811.445765
0.00532131	0	0	0	0	0	0	0.14550537	0	0	0.010060884	0	0	284.4269187	0
0.032072081	1.638186128	0	0	0	0	0	0.076340402	19.70372372	0	1.990019621	23.31719484	4.741636259	3029.843195	3222.543319
0.020687673	2.139827985	0	0	0	0	0	0.157262719	27.77323374	0	1.771827261	22.21159678	1.872071086	954.9008672	3762.021956
0.005211546	0	0	0	0	0	0	0.144505777	0	0	0.009610499	0	0	282.8535648	0
0.031771905	1.643536594	0	0	0	0	0	0.075627116	19.90492937	0	1.847211365	22.85181913	4.806502543	2993.957431	3184.299171
0.020662427	2.139827985	0	0	0	0	0	0.157071844	27.77323374	0	1.764781354	22.21159678	1.872349269	944.6395194	3718.659033
0.005124661	0	0	0	0	0	0	0.143729928	0	0	0.009321233	0	0	281.5524184	0
0.031484535	1.648754716	0	0	0	0	0	0.074980693	20.0652538	0	1.736828782	22.44843099	4.857759093	2962.889391	3151.266677
0.020645771	2.139827985	0	0	0	0	0	0.156946145	27.77323374	0	1.75926899	22.21159678	1.87259579	935.8293357	3680.573254
0.005054542	0	0	0	0	0	0	0.143119241	0	0	0.009089837	0	0	280.4876059	0
0.03138672	1.654507045	0	0	0	0	0	0.07474241	20.2246054	0	1.627349685	22.02926291	4.907989361	2934.382485	3121.454571
0.020635761	2.139827985	0	0	0	0	0	0.156870855	27.77323374	0	1.754993431	22.21159678	1.872814311	928.3080025	3647.315469
0.004997975	0	0	0	0	0	0	0.142639331	0	0	0.008906271	0	0	279.6122019	0
0.031361833	1.661432184	0	0	0	0	0	0.074665476	20.40295115	0	1.500346538	21.52610788	4.963712902	2905.602336	3091.732811
0.020630763	2.139827985	0	0	0	0	0	0.156833549	27.77323374	0	1.751784856	22.21159678	1.873001616	921.9080786	3618.835366
0.00495246	0	0	0	0	0	0	0.142265204	0	0	0.008756634	0	0	278.895793	0
0.031336979	1.667784079	0	0	0	0	0	0.074588672	20.56990462	0	1.380856104	21.05077495	5.015998969	2878.367857	3063.603848
0.020630229	2.139827985	0	0	0	0	0	0.156830041	27.77323374	0	1.749645898	22.21159678	1.873152196	916.5869968	3594.996471
0.004917002	0	0	0	0	0	0	0.141989285	0	0	0.008645899	0	0	278.3135062	0
0.031323481	1.673788366	0	0	0	0	0	0.07451458	20.74167598	0	1.264605224	20.59799949	5.070049762	2852.807313	3036.970724
0.020631204	2.139827985	0	0	0	0	0	0.156837897	27.77323374	0	1.748090063	22.21159678	1.873274105	912.000952	3574.406558
0.004887843	0	0	0	0	0	0	0.141770712	0	0	0.008531678	0	0	277.8379176	0
0.031209362	1.679441466	0	0	0	0	0	0.074204067	20.92638793	0	1.139544064	20.14103956	5.128922632	2826.290108	3008.905479
0.020632824	2.139827985	0	0	0	0	0	0.156850582	27.77323374	0	1.746890208	22.21159678	1.873375882	908.1065394	3556.903778
0.004866702	0	0	0	0	0	0	0.141632876	0	0	0.008463295	0	0	277.4594903	0
0.030954189	1.683648366	0	0	0	0	0	0.07359091	21.08607529	0	1.043535445	19.78962488	5.180503239	2802.624056	2983.084506
0.020634345	2.139827985	0	0	0	0	0	0.156862483	27.77323374	0	1.745814259	22.21159678	1.873467677	904.7962589	3542.033152
0.004848422	0	0	0	0	0	0	0.141520104	0	0	0.008380283	0	0	277.1515283	0
0.030745504	1.689970561	0	0	0	0	0	0.073069764	21.29134745	0	0.91638459	19.30580666	5.246084282	2775.58101	2954.000518
0.020635841	2.139827985	0	0	0	0	0	0.156874163	27.77323374	0	1.7448367	22.21159678	1.873552002	901.9881614	3529.425017
0.004829684	0	0	0	0	0	0	0.141396855	0	0	0.008232029	0	0	276.8913089	0
0.030452471	1.695241639	0	0	0	0	0	0.072393151	21.467505	0	0.816291812	18.89858019	5.302633237	2751.581055	2927.849494
0.020637691	2.139827985	0	0	0	0	0	0.156888487	27.77323374	0	1.744080948	22.21159678	1.8736235	899.6698072	3519.014317

	2020-2049 avg	1-way trips/day
MDV:	0.002099249	162
T7 SWCV:	0.016227143	46
T7 tractor:	0.031964555	182

CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	PM2_5_RUNEX	PM2_5_IDLEX	PM2_5_STREX	PM2_5_PMTW	PM2_5_PMBW	SOx_RUNEX
0	0.000637399	0	0	0.006141361	0	0	0.008000002	0.036750011	0.005875689	0	0	0.002000001	0.015750005	0.003902648
0	0.001739738	0.060968993	0	0.015020235	0.068035248	0	0.03600001	0.061740018	0.014370466	0.065092073	0	0.009000003	0.026460008	0.039020196
0	0.00754186	0.085910779	0	0.095910963	0.049057907	0	0.03600001	0.061740018	0.091761897	0.046935683	0	0.009000003	0.026460008	0.01333375
0	0.000588176	0	0	0.00556247	0	0	0.008000002	0.036750011	0.00532184	0	0	0.002000001	0.015750005	0.003797196
0	0.001755803	0.061507803	0	0.015059701	0.063069643	0	0.03600001	0.061740018	0.014408225	0.060341278	0	0.009000003	0.026460008	0.038557238
0	0.005692185	0.086652164	0	0.079014744	0.036666352	0	0.03600001	0.061740018	0.075596602	0.035080182	0	0.009000003	0.026460008	0.013044691
0	0.000543573	0	0	0.005046004	0	0	0.008000002	0.036750011	0.004827716	0	0	0.002000001	0.015750005	0.003692333
0	0.001767751	0.062044467	0	0.015112861	0.058304275	0	0.03600001	0.061740018	0.014459086	0.055782058	0	0.009000003	0.026460008	0.038069055
0	0.002766294	0.087675912	0	0.040448162	0.015488862	0	0.03600001	0.061740018	0.038698392	0.014818821	0	0.009000003	0.026460008	0.01261201
0	0.000501716	0	0	0.004548687	0	0	0.008000002	0.036750011	0.004351913	0	0	0.002000001	0.015750005	0.003587837
0	0.001768746	0.062548897	0	0.015204938	0.054094912	0	0.03600001	0.061740018	0.014547179	0.05175479	0	0.009000003	0.026460008	0.037570115
0	0.000860007	0.087304447	0	0.02791125	0.007999421	0	0.03600001	0.061740018	0.026703821	0.007653369	0	0.009000003	0.026460008	0.011960848
0	0.000468094	0	0	0.004157371	0	0	0.008000002	0.036750011	0.003977525	0	0	0.002000001	0.015750005	0.003483624
0	0.001761155	0.06299086	0	0.015320467	0.049968084	0	0.03600001	0.061740018	0.01465771	0.047806487	0	0.009000003	0.026460008	0.037000874
0	0.000869342	0.087304447	0	0.028495166	0.007999421	0	0.03600001	0.061740018	0.027262478	0.007653369	0	0.009000003	0.026460008	0.011788941
0	0.000435533	0	0	0.003758868	0	0	0.008000002	0.036750011	0.003596261	0	0	0.002000001	0.015750005	0.003378261
0	0.001739179	0.063412199	0	0.015446982	0.046074713	0	0.03600001	0.061740018	0.014778752	0.044081542	0	0.009000003	0.026460008	0.036391987
0	0.000875659	0.087304447	0	0.028889307	0.007999421	0	0.03600001	0.061740018	0.027639569	0.007653369	0	0.009000003	0.026460008	0.011602034
0	0.00040862	0	0	0.003456159	0	0	0.008000002	0.036750011	0.003306647	0	0	0.002000001	0.015750005	0.003292709
0	0.00171254	0.063521124	0	0.0154893	0.040188437	0	0.03600001	0.061740018	0.01481924	0.038449903	0	0.009000003	0.026460008	0.035725977
0	0.000879139	0.087304447	0	0.02910375	0.007999421	0	0.03600001	0.061740018	0.027844735	0.007653369	0	0.009000003	0.026460008	0.011405773
0	0.000374847	0	0	0.002991576	0	0	0.008000002	0.036750011	0.002862162	0	0	0.002000001	0.015750005	0.003205778
0	0.001687774	0.063656094	0	0.015533358	0.034681025	0	0.03600001	0.061740018	0.014861392	0.033180739	0	0.009000003	0.026460008	0.035032509
0	0.000879367	0.087304447	0	0.029111399	0.007999421	0	0.03600001	0.061740018	0.027852052	0.007653369	0	0.009000003	0.026460008	0.011182361
0	0.000348011	0	0	0.00257488	0	0	0.008000002	0.036750011	0.002463492	0	0	0.002000001	0.015750005	0.003127672
0	0.001657809	0.063836655	0	0.015589846	0.029668168	0	0.03600001	0.061740018	0.014915436	0.028384736	0	0.009000003	0.026460008	0.03432927
0	0.000877338	0.087304447	0	0.028976735	0.007999421	0	0.03600001	0.061740018	0.027723214	0.007653369	0	0.009000003	0.026460008	0.010954834
0	0.000322122	0	0	0.002257015	0	0	0.008000002	0.036750011	0.002159378	0	0	0.002000001	0.015750005	0.003057995
0	0.001616913	0.064301782	0	0.015723887	0.027498687	0	0.03600001	0.061740018	0.015043678	0.026309106	0	0.009000003	0.026460008	0.033690019
0	0.000872984	0.087304447	0	0.028695154	0.007999421	0	0.03600001	0.061740018	0.027453815	0.007653369	0	0.009000003	0.026460008	0.010731635
0	0.000303184	0	0	0.002031061	0	0	0.008000002	0.036750011	0.001943198	0	0	0.002000001	0.015750005	0.002996375
0	0.001580948	0.064756695	0	0.015858534	0.025478666	0	0.03600001	0.061740018	0.015172501	0.02437647	0	0.009000003	0.026460008	0.033062273
0	0.00086927	0.087304447	0	0.028454934	0.007999421	0	0.03600001	0.061740018	0.027223986	0.007653369	0	0.009000003	0.026460008	0.01051274
0	0.000288586	0	0	0.001860194	0	0	0.008000002	0.036750011	0.001779723	0	0	0.002000001	0.015750005	0.002941899
0	0.001548858	0.064868882	0	0.015921901	0.021643098	0	0.03600001	0.061740018	0.015233127	0.020706827	0	0.009000003	0.026460008	0.03240662
0	0.000865814	0.087304447	0	0.028231577	0.007999421	0	0.03600001	0.061740018	0.027010292	0.007653369	0	0.009000003	0.026460008	0.010299694
0	0.000275365	0	0	0.001704276	0	0	0.008000002	0.036750011	0.00163055	0	0	0.002000001	0.015750005	0.00289335
0	0.001510595	0.065254978	0	0.016064	0.020333325	0	0.03600001	0.061740018	0.015369079	0.019453714	0	0.009000003	0.026460008	0.031812256
0	0.000862313	0.087304447	0	0.028005159	0.007999421	0	0.03600001	0.061740018	0.026793669	0.007653369	0	0.009000003	0.026460008	0.010093292
0	0.000263676	0	0	0.001565478	0	0	0.008000002	0.036750011	0.001497756	0	0	0.002000001	0.015750005	0.002850482
0	0.001470598	0.065562336	0	0.016201321	0.019194947	0	0.03600001	0.061740018	0.015500459	0.018364582	0	0.009000003	0.026460008	0.031252308
0	0.000859216	0.087304447	0	0.027804309	0.007999421	0	0.03600001	0.061740018	0.026601507	0.007653369	0	0.009000003	0.026460008	0.009902345
0	0.000253272	0	0	0.001440714	0	0	0.008000002	0.036750011	0.00137839	0	0	0.002000001	0.015750005	0.002813017
0	0.001440999	0.065783513	0	0.016215847	0.016552383	0	0.03600001	0.061740018	0.015514356	0.015836334	0	0.009000003	0.026460008	0.030633344
0	0.000855863	0.087304447	0	0.027587122	0.007999421	0	0.03600001	0.061740018	0.026393715	0.007653369	0	0.009000003	0.026460008	0.009719658
0	0.000243715	0	0	0.001324508	0	0	0.008000002	0.036750011	0.001267211	0	0	0.002000001	0.015750005	0.002780285
0	0.001405608	0.066038058	0	0.016338025	0.015858162	0	0.03600001	0.061740018	0.015631249	0.015172145	0	0.009000003	0.026460008	0.030157743
0	0.000852767	0.087304447	0	0.027386766	0.007999421	0	0.03600001	0.061740018	0.026202027	0.007653369	0	0.009000003	0.026460008	0.009552665
0	0.000235591	0	0	0.00122571	0	0	0.008000002	0.036750011	0.001172687	0	0	0.002000001	0.015750005	0.002751849
0	0.001375177	0.06626822	0	0.016443726	0.015230474	0	0.03600001	0.061740018	0.015732378	0.01457161	0	0.009000003	0.026460008	0.029732792
0	0.000850041	0.087304447	0	0.027210585	0.007999421	0	0.03600001	0.061740018	0.026033467	0.007653369	0	0.009000003	0.026460008	0.009404299
0	0.000228541	0	0	0.001139359	0	0	0.008000002	0.036750011	0.001090071	0	0	0.002000001	0.015750005	0.002727432
0	0.001351975	0.066479149	0	0.016552652	0.014646278	0	0.03600001	0.061740018	0.015836592	0.014012687	0	0.009000003	0.026460008	0.0293286
0	0.000847626	0.087304447	0	0.027054767	0.007999421	0	0.03600001	0.061740018	0.02588439	0.007653369	0	0.009000003	0.026460008	0.009262526
0	0.000222222	0	0	0.001060952	0	0	0.008000002	0.036750011	0.001015056	0	0	0.002000001	0.015750005	0.002706469
0	0.001325344	0.066652109	0	0.016640394	0.01412257	0	0.03600001	0.061740018	0.015920538	0.013511634	0	0.009000003	0.026460008	0.028963481
0	0.00084562	0.087304447	0	0.02692527	0.007999421	0	0.03600001	0.061740018	0.025760495	0.007653369	0	0.009000003	0.026460008	0.009134888
0	0.000217109	0	0	0.000997284	0	0	0.008000002	0.036750011	0.000954142	0	0	0.002000001	0.015750005	0.002688857
0	0.001308533	0.066837585	0	0.016723016	0.013583922	0	0.03600001	0.061740018	0.015999586	0.012996288	0	0.009000003	0.026460008	0.028624456
0	0.000844052	0.087304447	0	0.026824033	0.007999421	0	0.03600001	0.061740018	0.025663637	0.007653369	0	0.009000003	0.026460008	0.00902143
0	0.000212631	0	0	0.00094093	0	0	0.008000002	0.036750011	0.000900226	0	0	0.002000001	0.015750005	0.002673983
0	0.001296286	0.067055883	0	0.016807575	0.012796199	0	0.03600001	0.061740018	0.016080487	0.012242641	0	0.009000003	0.026460008	0.028285425
0	0.000843022	0.087304447	0	0.026757259	0.007999421	0	0.03600001	0.061740018	0.025599752	0.007653369	0	0.009000003	0.026460008	0.008924486
0	0.000209086	0	0	0.00089616	0	0	0.008000002	0.036750011	0.000857393	0	0	0.002000001	0.015750005	0.002661683
0	0.001284561	0.067268781	0	0.016859317	0.012228321	0	0.03600001	0.061740018	0.016129991	0.01169933	0	0.009000003	0.026460008	0.02799191
0	0.000842342	0.087304447	0	0.026712916	0.007999421	0	0.03600001	0.061740018	0.025557327	0.007653369	0	0.009000003	0.026460008	0.008841252
0	0.000206225	0	0	0.000859635	0	0	0.008000002	0.036750011	0.000822447	0	0	0.002000001	0.015750005	0.002651617
0	0.00128057	0.067503474	0	0.016902913	0.011630107	0	0.03600001	0.061740018	0.0161717	0.011126993	0	0.009000003	0.026460008	0.027722591
0	0.000841934	0.087304447	0	0.026685948	0.007999421	0	0.03600001	0.061740018	0.025531526	0.007653369	0	0.009000003	0.026460008	0.008770194
0	0.000203917	0	0	0.000829871	0	0	0.008000002	0.036750011	0.000793971	0	0	0.002000001	0.015750005	0.002643341
0	0.001279555	0.067786018	0	0.016950229	0.010883853	0	0.03600001	0.061740018	0.01621697	0.010413022	0	0.009000003	0.026460008	0.02745069
0	0.00084173	0.087304447	0	0.026672129	0.007999421	0	0.03600001	0.061740018	0.025518305	0.007653369	0	0.009000003	0.026460008	0.00870973
0	0.00020206	0	0	0.000805655	0	0	0.008000002	0.036750011	0.000770802	0	0	0.002000001	0.015750005	0.002636568
0	0.001278541	0.068045174	0	0.016993246	0.010201434	0	0.03600001	0.061740018	0.016258125	0.009760125	0	0.009000003	0.026460008	0.027193392
0	0.000841708	0.087304447	0	0.026670061	0.007999421	0	0.03600001	0.061740018	0.025516326	0.007653369	0	0.009000003	0.026460008	0.008659459
0	0.000200614	0	0	0.000786537	0	0	0.008000002	0.036750011	0.000752512	0	0	0.002000001	0.015750005	0.002631064
0	0.00127799	0.068290147	0	0.017043991	0.009582541	0	0.03600001	0.061740018	0.016306676	0.009168004	0	0.009000003	0.026460008	0.026951909
0	0.000841748	0.087304447	0	0.026672037	0.007999421	0	0.03600001	0.061740018	0.025518217	0.007653369	0	0.009000003	0.026460008	0.008616133
0	0.000199424	0	0	0.00077056	0	0	0.008000002	0.036750011	0.000737226	0	0	0.002000001	0.015750005	0.002626567
0	0.001273334	0.068520792	0	0.017109251	0.008964769	0	0.03600001	0.061740018	0.016369113	0.008576957	0	0.009000003	0.026460008	0.026701388
0	0.000841814	0.087304447	0	0.026675776	0.007999421	0	0.03600001	0.061740018	0.025521794	0.007653369	0	0.009000003	0.026460008	0.00857934
0	0.000198561	0	0	0.000758702	0	0	0.008000002	0.036750011	0.000725881	0	0	0.002000001	0.015750005	0.00262299
0	0.001262923	0.068692433	0	0.017168532	0.008544028	0	0.03600001	0.061740018	0.016425829	0.008174417	0	0.009000003	0.026460008	0.026477802
0	0.000841876	0.087304447	0	0.026679303	0.007999421	0	0.03600001	0.061740018	0.025525168	0.007653369	0	0.009000003	0.026460008	0.008548066
0	0.000197816	0	0	0.000748217	0	0	0.008000002	0.036750011	0.000715849	0	0	0.002000001	0.015750005	0.002620079
0	0.001254409	0.068950377	0	0.017234914	0.007949786	0	0.03600001	0.061740018	0.016489339	0.007605882	0	0.009000003	0.026460008	0.026222313
0	0.000841937	0.087304447	0	0.026682797	0.007999421	0	0.03600001	0.061740018	0.025528511	0.007653369	0	0.009000003	0.026460008	0.008521537
0	0.000197051	0	0	0.00073729	0	0	0.008000002	0.036750011	0.000705395	0	0	0.002000001	0.015750005	0.002617619
0	0.001242453	0.069165436	0	0.017283327	0.007455397	0	0.03600001	0.061740018	0.016535658	0.00713288	0	0.009000003	0.026460008	0.025995573
0	0.000842013	0.087304447	0	0.02668727	0.007999421	0	0.03600001	0.061740018	0.025532791	0.007653369	0	0.009000003	0.026460008	0.008499634

SOx_IDLEX	SOx_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX
0	0	0.064889797	0	0
0.041116198	0	0.649211833	0.68408477	0
0.042578334	0	0.221844816	0.708411566	0
0	0	0.063136435	0	0
0.04070383	0	0.641509197	0.677223863	0
0.043802781	0	0.217035491	0.728783723	0
0	0	0.061392865	0	0
0.04025855	0	0.633386898	0.669815355	0
0.045922523	0	0.209836623	0.76405165	0
0	0	0.059655386	0	0
0.039775961	0	0.625085607	0.661786122	0
0.043807922	0	0.199002688	0.728869245	0
0	0	0.057922635	0	0
0.039212059	0	0.615614665	0.652404014	0
0.043435658	0	0.196142532	0.722675584	0
0	0	0.056170746	0	0
0.038594499	0	0.605484106	0.642129142	0
0.043038493	0	0.193032796	0.716067613	0
0	0	0.054748262	0	0
0.037947531	0	0.59440313	0.631364989	0
0.042619293	0	0.189767441	0.709093036	0
0	0	0.053302846	0	0
0.037271451	0	0.582865327	0.620116478	0
0.042151673	0	0.18605035	0.701312847	0
0	0	0.052004177	0	0
0.036573211	0	0.571164944	0.608499274	0
0.041636285	0	0.182264795	0.692737904	0
0	0	0.05084565	0	0
0.035889227	0	0.560529188	0.597119259	0
0.04109673	0	0.178551238	0.683760864	0
0	0	0.049821092	0	0
0.035218147	0	0.550084855	0.585953932	0
0.04054991	0	0.174909292	0.674662968	0
0	0	0.048915301	0	0
0.034549976	0	0.539176206	0.57483701	0
0.039992258	0	0.171364675	0.66538484	0
0	0	0.048108073	0	0
0.033900362	0	0.529287259	0.564028842	0
0.039410341	0	0.167930591	0.655702991	0
0	0	0.047395305	0	0
0.033285291	0	0.519970942	0.553795383	0
0.038811192	0	0.164753641	0.645734443	0
0	0	0.046772363	0	0
0.03265776	0	0.509672716	0.54335463	0
0.03820498	0	0.161714125	0.63564839	0
0	0	0.046228123	0	0
0.032129548	0	0.50175974	0.534566324	0
0.037619175	0	0.158935725	0.62590186	0
0	0	0.045755325	0	0
0.03166011	0	0.494689466	0.526755879	0
0.037055639	0	0.156467228	0.616525834	0
0	0	0.045349339	0	0
0.031214868	0	0.487964586	0.519348015	0
0.036514375	0	0.154108435	0.607520373	0
0	0	0.045000781	0	0
0.030812884	0	0.481889803	0.512659875	0
0.03600865	0	0.151984818	0.599106197	0
0	0	0.044707951	0	0
0.030444991	0	0.476249157	0.506538933	0
0.035541718	0	0.150097119	0.591337462	0
0	0	0.044460641	0	0
0.03008368	0	0.470608415	0.500527486	0
0.035132047	0	0.148484178	0.584521415	0
0	0	0.044256119	0	0
0.029771605	0	0.465724952	0.495335238	0
0.034772231	0	0.147099339	0.578534861	0
0	0	0.044088746	0	0
0.029489955	0	0.461244063	0.49064919	0
0.034458028	0	0.145917091	0.5733072	0
0	0	0.043951144	0	0
0.029209159	0	0.456720224	0.485977343	0
0.034188962	0	0.144911112	0.568830524	0
0	0	0.043838535	0	0
0.02894341	0	0.452439343	0.481555862	0
0.033963744	0	0.144074712	0.565083382	0
0	0	0.043747007	0	0
0.028691794	0	0.448421582	0.477369505	0
0.033769221	0	0.143353849	0.561846934	0
0	0	0.043672252	0	0
0.028426647	0	0.444253447	0.47295804	0
0.033603863	0	0.142741702	0.559095741	0
0	0	0.043612768	0	0
0.028182703	0	0.440533473	0.468899343	0
0.033463373	0	0.142221372	0.556758286	0
0	0	0.043564361	0	0
0.027907932	0	0.436282683	0.464327744	0
0.033344258	0	0.141779978	0.554776463	0
0	0	0.043523458	0	0
0.02766087	0	0.432510224	0.460217168	0
0.033245902	0	0.141415565	0.553140045	0