

EHP Air Screening Model Tables

The tables address the following six categories of emission sources of high concern:

1. Well pad with tanks (producing wells)
2. Well pad undergoing fracking
3. Well pad with flares and finishing processes
4. Compressor Station
5. Processing Station
6. Produced water pond

Average hourly emission per day in grams/minute

	VOCs	PM 2.5	Formaldehyde
Well pad with tanks	80	25	8
Well pad undergoing fracking	160	50	16
Well pad flares and finishing processes	300	100	30
Compressor Station	300	100	30
Processing Station	3000 (1500)	1000 (500)	300
Produced water pond	60	20	6

Note: These tables were developed with the organization's best access to the publicly available data on emissions from UNGD sources in 2014. We will update our report when new, precise information is available. Using values in () would reduce impacts by a factor of 2. Contact EHP for more information.

By identifying local weather conditions and the distance between an emissions source and your residence, you can find the estimated level of pollution exposure and determine whether it might pose health risks. The charts below are color-coded to give you a quick look at your health risks.

Color	Meaning (for Air Quality Purposes)
Green	Good There are no associated health risks/concerns
Yellow	Moderate Unusually sensitive people (those with heart/lung disease or asthma) should consider reducing extended or heavy exertion
Orange	Unhealthy for Sensitive Groups Unusually sensitive people, older adults, and children should avoid extended or heavy exertion.
Red	Unhealthy (for all) People with heart or lung disease, older adults, and children should avoid extended or heavy exertion. Everyone else should reduce extended or heavy exertion
Purple	Very Unhealthy Everyone should reduce extended or heavy exertion.

Well pad with tanks (producing wells) Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	125	4	1	<1	<1	<1	0
Sky: clear day Wind: 5-7 mph A-B2	100	7	2	<1	<1	<1	0
Sky: clear day Wind: 7-11 mph B3	76	6	2	<1	<1	<1	0
Sky: clear day Wind: 11-13 mph C4	100	18	6	1	<1	<1	<1
Sky: clear day Wind: >13 mph C5	93	15	5	1	<1	<1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	150	9	2	<1	<1	<1	0
Sky: scattered clouds, day Wind: 5-7 mph B7	100	10	3	<1	<1	<1	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	100	14	4	1	<1	<1	<1
Sky: scattered clouds, day Wind: 11-13 mph C-D9	150	22	8	2	1	<1	<1
Sky: scattered clouds, day Wind: >13 mph D-10	150	23	8	3	1	<1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	150	15	4	1	<1	<1	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	200	33	11	3	1	<1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	125	20	7	2	<1	<1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	175	27	9	3	1	<1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	150	23	8	3	1	<1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	500	70	25	10	5	1	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	350	50	18	7	3	1	<1

Well pad with tanks (producing wells)							
Estimated air exposure values of VOCs in ug/m³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	225	31	11	4	2	<1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	175	27	9	3	1	<1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	150	23	8	3	1	<1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	700	125	58	28	17	8	2
Sky: clouds > 50%, night day 5-7 mph E22	500	99	41	20	12	5	1
Sky: clouds > 50%, night Wind: 7-11 mph D23	225	31	11	4	2	<1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	175	27	9	3	1	<1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	150	23	8	3	1	<1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	1100	175	93	45	26	12	4
Sky: clouds < 50%, night day 5-7 mph F27	800	125	66	32	19	8	3
Sky: clouds < 50%, night Wind: 7-11 mph E28	300	63	26	12	7	3	1
Sky: clouds < 50%, night Wind: 11-13 mph D29	175	27	9	3	1	<1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	150	23	8	3	1	<1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Well pad with tanks (producing wells) Estimated air exposure values of PM2.5 in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	43	1	<1	<1	0	0	0
Sky: clear day Wind: 5-7 mph A-B2	34	2	<1	<1	<1	0	0
Sky: clear day Wind: 7-11 mph B3	23	2	<1	<1	<1	0	0
Sky: clear day Wind: 11-13 mph C4	33	5	2	<1	<1	<1	0
Sky: clear day Wind: >13 mph C5	29	4	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: <5 mph AB6	48	3	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: 5-7 mph B7	37	3	1	<1	<1	0	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	31	4	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	47	7	2	<1	<1	<1	0
Sky: scattered clouds, day Wind: >13 mph D-10	52	7	2	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	52	4	1	<1	<1	<1	0
Sky: broken clouds, >50%, day day 5-7 mph C12	62	10	3	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	39	6	2	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	60	8	3	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	52	7	2	1	<1	<1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	150	22	8	3	1	<1	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	100	15	5	2	1	<1	<1

Well pad with tanks (producing wells)							
Estimated air exposure values of PM2.5 in ug/m³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	71	10	3	1	<1	<1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	60	8	3	1	<1	<1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	52	7	2	1	<1	<1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	200	43	18	8	5	2	<1
Sky: clouds > 50%, night day 5-7 mph E22	150	30	13	6	3	1	<1
Sky: clouds > 50%, night Wind: 7-11 mph D23	70	10	3	1	<1	<1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	60	8	3	1	<1	<1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	52	7	2	1	<1	<1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	350	60	29	14	8	3	1
Sky: clouds < 50%, night day 5-7 mph F27	250	43	20	10	5	2	1
Sky: clouds < 50%, night Wind: 7-11 mph E28	99	19	8	4	2	1	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	60	8	3	1	<1	<1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	52	7	2	1	<1	<1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Well pad with tanks (producing wells) Estimated air exposure values of formaldehyde in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	14	<1	<1	0	0	0	0
Sky: clear day Wind: 5-7 mph A-B2	11	<1	<1	0	0	0	0
Sky: clear day Wind: 7-11 mph B3	7	<1	<1	0	0	0	0
Sky: clear day Wind 11-13 mph C4	10	1	<1	<1	<1	0	0
Sky: clear day Wind: >13 mph C5	9	1	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: <5 mph AB6	15	1	<1	<1	0	0	0
Sky: scattered clouds, day Wind: 5-7 mph B7	12	1	<1	<1	0	0	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	10	1	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	15	2	<1	<1	<1	<1	0
Sky: scattered clouds, day Wind: >13 mph D-10	16	2	<1	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: <5 mph B11	16	1	<1	<1	0	0	0
Sky: broken clouds, >50%, day day 5-7 mph C12	20	3	1	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	12	2	<1	<1	<1	0	0
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	19	2	1	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: >13 mph D15	16	2	<1	<1	<1	<1	0
Sky: overcast > 80%, day Wind: <5 mph D16	50	7	2	1	<1	<1	0
Sky: overcast > 80%, day Wind: 5-7 mph D17	36	5	1	<1	<1	<1	0

Well pad with tanks (producing wells)							
Estimated air exposure values of formaldehyde in ug/m³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	23	3	1	<1	<1	<1	0
Sky: overcast > 80%, day Wind: 11-13 mph D19	19	2	1	<1	<1	<1	0
Sky: overcast > 80%, day Wind: >13 mph D20	16	2	<1	<1	<1	<1	0
Sky: clouds > 50%, night Wind: <5 mph E21	70	13	5	2	1	<1	<1
Sky: clouds > 50%, night day 5-7 mph E22	50	9	4	2	1	<1	<1
Sky: clouds > 50%, night Wind: 7-11 mph D23	23	3	1	<1	<1	<1	0
Sky: clouds > 50%, night Wind: 11-13 mph D24	19	2	1	<1	<1	<1	0
Sky: clouds > 50%, night Wind: >13 mph D25	16	2	0	<1	<1	<1	0
Sky: clouds < 50%, night Wind: <5 mph F26	100	19	9	4	2	1	<1
Sky: clouds < 50%, night day 5-7 mph F27	80	13	6	3	1	<1	<1
Sky: clouds < 50%, night Wind: 7-11 mph E28	31	6	2	1	<1	<1	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	19	2	1	<1	<1	<1	0
Sky: clouds < 50%, night Wind: >13 mph D30	16	2	<1	<1	<1	<1	0

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Well pad undergoing fracking
Estimated air exposure values of VOCs in ug/m³

Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	275	9	2	<1	<1	<1	0
Sky: clear day Wind: 5-7 mph A-B2	200	14	4	1	<1	<1	<1
Sky: clear day Wind: 7-11 mph B3	150	13	4	1	<1	<1	<1
Sky: clear day Wind 11-13 mph C4	200	36	12	3	1	<1	<1
Sky: clear day Wind: >13 mph C5	175	31	10	3	1	<1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	300	19	5	1	<1	<1	<1
Sky: scattered clouds, day Wind: 5-7 mph B7	225	21	7	1	<1	<1	<1
Sky: scattered clouds, day Wind: 7-11 mph B-C8	200	28	9	2	1	<1	<1
Sky: scattered clouds, day Wind: 11-13 mph C-D9	300	45	16	5	2	1	<1
Sky: scattered clouds, day Wind: >13 mph D-10	325	46	17	6	3	1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	325	30	9	2	<1	<1	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	400	66	23	6	2	1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	250	42	14	4	1	<1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	375	54	19	7	3	1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	325	46	17	6	3	1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	1000	125	51	20	9	3	1
Sky: overcast > 80%, day Wind: 5-7 mph D17	700	100	36	14	7	2	<1

Well pad undergoing fracking Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	450	63	23	9	4	1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	300	54	19	7	3	1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	325	46	17	6	3	1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	1400	275	100	56	35	16	5
Sky: clouds > 50%, night day 5-7 mph E22	1000	175	83	40	25	11	3
Sky: clouds > 50%, night Wind: 7-11 mph D23	450	63	23	9	4	1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	375	54	19	7	3	1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	325	46	17	6	3	1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	2250	375	175	90	53	24	9
Sky: clouds < 50%, night day 5-7 mph F27	1600	275	125	64	38	17	6
Sky: clouds < 50%, night Wind: 7-11 mph E28	625	125	53	25	15	7	2
Sky: clouds < 50%, night Wind: 11-13 mph D29	375	54	19	7	3	1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	325	66	17	6	3	1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Well pad undergoing fracking Estimated air exposure values of PM2.5 in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	87	2	<1	<1	<1	0	0
Sky: clear day Wind: 5-7 mph A-B2	69	4	1	<1	<1	<1	0
Sky: clear day Wind: 7-11 mph B3	47	4	1	<1	<1	<1	0
Sky: clear day Wind: 11-13 mph C4	67	11	4	1	<1	<1	<1
Sky: clear day Wind: >13 mph C5	58	9	3	1	<1	<1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	96	6	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: 5-7 mph B7	75	6	2	<1	<1	<1	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	63	8	3	<1	<1	<1	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	94	14	5	1	<1	<1	<1
Sky: scattered clouds, day Wind: >13 mph D-10	100	14	5	2	1	<1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	100	9	3	<1	<1	<1	0
Sky: broken clouds, >50%, day day 5-7 mph C12	125	20	7	2	<1	<1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	79	13	4	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	100	16	6	2	1	<1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	100	14	5	2	1	<1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	300	43	16	6	3	1	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	225	31	11	4	2	<1	<1

Well pad undergoing fracking

Estimated air exposure values of PM2.5 in ug/m³

Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	125	20	7	2	1	<1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	100	16	6	2	1	<1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	100	14	5	2	1	<1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	425	86	36	17	11	5	1
Sky: clouds > 50%, night day 5-7 mph E22	300	62	26	12	7	3	1
Sky: clouds > 50%, night Wind: 7-11 mph D23	125	20	7	2	1	<1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	100	16	6	2	1	<1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	100	14	5	2	1	<1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	700	100	58	28	16	7	2
Sky: clouds < 50%, night day 5-7 mph F27	500	86	41	20	11	5	2
Sky: clouds < 50%, night Wind: 7-11 mph E28	175	39	16	8	5	2	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	100	16	6	2	1	<1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	100	14	5	2	1	<1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Well pad undergoing fracking Estimated air exposure values of formaldehyde in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	28	<1	<1	<1	0	0	0
Sky: clear day Wind: 5-7 mph A-B2	22	1	<1	<1	0	0	0
Sky: clear day Wind: 7-11 mph B3	15	1	<1	<1	0	0	0
Sky: clear day Wind: 11-13 mph C4	21	3	1	<1	<1	<1	0
Sky: clear day Wind: >13 mph C5	18	3	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: <5 mph AB6	30	2	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: 5-7 mph B7	24	2	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	20	2	1	<1	<1	0	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	30	4	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: >13 mph D-10	33	4	1	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: <5 mph B11	33	3	1	<1	<1	0	0
Sky: broken clouds, >50%, day day 5-7 mph C12	40	6	2	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	25	4	1	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	38	5	2	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: >13 mph D15	33	4	1	<1	<1	<1	0
Sky: overcast > 80%, day Wind: <5 mph D16	100	14	5	2	1	<1	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	72	10	3	1	<1	<1	<1

Well pad undergoing fracking Estimated air exposure values of formaldehyde in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	46	6	2	<1	<1	<1	0
Sky: overcast > 80%, day Wind: 11-13 mph D19	38	5	2	<1	<1	<1	0
Sky: overcast > 80%, day Wind: >13 mph D20	33	4	1	<1	<1	<1	0
Sky: clouds > 50%, night Wind: <5 mph E21	125	27	11	5	3	1	<1
Sky: clouds > 50%, night day 5-7 mph E22	100	19	8	4	2	1	<1
Sky: clouds > 50%, night Wind: 7-11 mph D23	46	6	2	<1	<1	<1	0
Sky: clouds > 50%, night Wind: 11-13 mph D24	38	5	2	<1	<1	<1	0
Sky: clouds > 50%, night Wind: >13 mph D25	33	4	1	<1	<1	<1	0
Sky: clouds < 50%, night Wind: <5 mph F26	200	38	18	9	5	2	<1
Sky: clouds < 50%, night day 5-7 mph F27	150	27	13	6	3	1	<1
Sky: clouds < 50%, night Wind: 7-11 mph E28	63	12	5	2	1	<1	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	38	5	2	<1	<1	<1	0
Sky: clouds < 50%, night Wind: >13 mph D30	33	4	1	<1	<1	<1	0

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Well pad with flares and finishing processes Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	525	17	4	1	<1	<1	0
Sky: clear day Wind: 5-7 mph A-B2	400	26	7	1	<1	<1	<1
Sky: clear day Wind: 7-11 mph B3	275	25	8	1	<1	<1	<1
Sky: clear day Wind: 11-13 mph C4	400	67	23	6	3	1	<1
Sky: clear day Wind: >13 mph C5	350	58	20	5	2	1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	575	37	11	2	1	<1	<1
Sky: scattered clouds, day Wind: 5-7 mph B7	450	40	12	2	1	<1	<1
Sky: scattered clouds, day Wind: 7-11 mph B-C8	375	52	18	4	2	<1	<1
Sky: scattered clouds, day Wind: 11-13 mph C-D9	550	84	30	10	5	2	<1
Sky: scattered clouds, day Wind: >13 mph D-10	625	87	32	12	6	2	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	625	56	18	3	1	<1	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	750	125	44	12	5	2	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	475	79	28	7	3	1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	725	100	37	14	7	2	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	625	87	32	12	6	2	<1
Sky: overcast > 80%, day Wind: <5 mph D16	1800	250	96	37	18	7	1
Sky: overcast > 80%, day Wind: 5-7 mph D17	1300	175	69	26	13	5	1

Well pad with flares and finishing processes

Estimated air exposure values of VOCs in ug/m³

Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	850	100	44	17	8	3	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	725	100	37	14	7	2	<1
Sky: overcast > 80%, day Wind: >13 mph D20	625	87	32	12	6	2	<1
Sky: clouds > 50%, night Wind: <5 mph E21	2600	500	200	100	65	31	9
Sky: clouds > 50%, night day 5-7 mph E22	1800	350	150	75	46	22	7
Sky: clouds > 50%, night Wind: 7-11 mph D23	850	100	44	17	8	3	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	725	100	37	14	7	2	<1
Sky: clouds > 50%, night Wind: >13 mph D25	625	87	32	12	6	2	<1
Sky: clouds < 50%, night Wind: <5 mph F26	4200	725	350	150	99	46	17
Sky: clouds < 50%, night day 5-7 mph F27	3000	500	250	100	71	33	12
Sky: clouds < 50%, night Wind: 7-11 mph E28	1100	225	99	48	29	14	4
Sky: clouds < 50%, night Wind: 11-13 mph D29	725	100	37	14	7	2	<1
Sky: clouds < 50%, night Wind: >13 mph D30	625	87	32	12	6	2	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Well pad with flares and finishing processes
Estimated air exposure values of PM2.5 in ug/m³

Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	175	5	1.3	<1	<1	<1	0
Sky: clear day Wind: 5-7 mph A-B2	125	8	2	<1	<1	<1	0
Sky: clear day Wind: 7-11 mph B3	75	8	2	<1	<1	<1	0
Sky: clear day Wind 11-13 mph C4	125	22	7	2	1	<1	<1
Sky: clear day Wind: >13 mph C5	100	19	6	1	<1	<1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	175	12	3	<1	<1	<1	0
Sky: scattered clouds, day Wind: 5-7 mph B7	150	13	4	<1	<1	<1	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	125	17	6	1	<1	<1	<1
Sky: scattered clouds, day Wind: 11-13 mph C-D9	175	28	10	3	1	<1	<1
Sky: scattered clouds, day Wind: >13 mph D-10	200	29	10	4	2	<1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	200	18	6	1	<1	<1	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	250	41	14	4	1	<1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	150	26	9	2	1	<1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	225	33	12	4	2	<1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	200	25	10	4	2	<1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	625	87	32	12	6	2	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	450	62	23	9	4	1	<1

Well pad with flares and finishing processes

Estimated air exposure values of PM2.5 in ug/m³

Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	275	39	14	5	2	1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	225	33	12	4	2	<1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	200	29	10	4	2	<1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	875	150	73	35	21	10	3
Sky: clouds > 50%, night day 5-7 mph E22	625	100	52	25	15	7	2
Sky: clouds > 50%, night Wind: 7-11 mph D23	275	39	14	5	2	1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	225	33	12	4	2	<1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	200	29	10	4	2	<1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	1400	225	100	56	33	15	5
Sky: clouds < 50%, night day 5-7 mph F27	1000	150	83	40	23	11	4
Sky: clouds < 50%, night Wind: 7-11 mph E28	375	78	33	16	9	4	1
Sky: clouds < 50%, night Wind: 11-13 mph D29	225	33	12	4	2	<1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	200	29	10	4	2	<1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Well pad with flares and finishing processes Estimated air exposure values of formaldehyde in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	52	1	<1	<1	<1	0	0
Sky: clear day Wind: 5-7 mph A-B2	41	2	<1	<1	<1	0	0
Sky: clear day Wind: 7-11 mph B3	28	2	<1	<1	<1	0	0
Sky: clear day Wind: 11-13 mph C4	40	6	2	<1	<1	<1	0
Sky: clear day Wind: >13 mph C5	35	5	2	<1	<1	<1	0
Sky: scattered clouds, day Wind: <5 mph AB6	57	3	1	<1	<1	0	0
Sky: scattered clouds, day Wind: 5-7 mph B7	45	4	1	<1	<1	0	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	38	5	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	56	8	3	1	<1	<1	<1
Sky: scattered clouds, day Wind: >13 mph D-10	63	8	3	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	63	5	1	<1	<1	<1	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	75	12	4	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	47	8	2	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	72	10	3	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	63	8	3	1	<1	<1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	175	26	9	3	1	<1	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	125	18	6	2	1	<1	<1

Well pad with flares and finishing processes

Estimated air exposure values of formaldehyde in ug/m³

Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	86	12	4	1	<1	<1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	72	10	3	1	<1	<1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	63	8	3	1	<1	<1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	250	52	22	10	6	3	1
Sky: clouds > 50%, night day 5-7 mph E22	175	37	15	7	4	2	<1
Sky: clouds > 50%, night Wind: 7-11 mph D23	86	12	4	1	<1	<1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	72	10	3	1	<1	<1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	63	8	3	1	<1	<1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	400	72	35	16	10	4	1
Sky: clouds < 50%, night day 5-7 mph F27	300	52	25	12	7	3	1
Sky: clouds < 50%, night Wind: 7-11 mph E28	100	23	10	4	3	1	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	72	10	3	1	<1	<1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	63	8	3	1	<1	<1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Compressor station Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	525	17	4	1	<1	<1	0
Sky: clear day Wind: 5-7 mph A-B2	400	26	7	1	<1	<1	<1
Sky: clear day Wind: 7-11 mph B3	275	25	8	1	<1	<1	<1
Sky: clear day Wind: 11-13 mph C4	400	67	23	6	3	<1	<1
Sky: clear day Wind: >13 mph C5	350	58	20	5	2	1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	575	37	11	2	1	<1	<1
Sky: scattered clouds, day Wind: 5-7 mph B7	450	40	12	2	1	<1	<1
Sky: scattered clouds, day Wind: 7-11 mph B-C8	375	52	18	4	2	<1	<1
Sky: scattered clouds, day Wind: 11-13 mph C-D9	550	84	30	10	5	2	<1
Sky: scattered clouds, day Wind: >13 mph D-10	625	87	32	12	6	2	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	630	56	18	3	1	<1	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	750	125	44	12	5	2	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	475	79	28	7	3	1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	725	100	37	14	7	2	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	630	87	32	12	6	2	<1
Sky: overcast > 80%, day Wind: <5 mph D16	1850	250	96	37	18	7	1
Sky: overcast > 80%, day Wind: 5-7 mph D17	1350	175	69	26	13	5	1

Compressor station Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	850	100	44	17	8	3	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	725	100	37	14	7	2	<1
Sky: overcast > 80%, day Wind: >13 mph D20	625	87	32	12	6	2	<1
Sky: clouds > 50%, night Wind: <5 mph E21	2600	500	200	100	65	31	9
Sky: clouds > 50%, night day 5-7 mph E22	1850	350	150	75	46	22	7
Sky: clouds > 50%, night Wind: 7-11 mph D23	850	100	44	17	8	3	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	725	100	37	14	7	2	<1
Sky: clouds > 50%, night Wind: >13 mph D25	625	87	32	12	6	2	<1
Sky: clouds < 50%, night Wind: <5 mph F26	4200	725	350	150	99	46	17
Sky: clouds < 50%, night day 5-7 mph F27	3000	500	250	100	71	33	12
Sky: clouds < 50%, night Wind: 7-11 mph E28	1100	225	99	48	29	14	4
Sky: clouds < 50%, night Wind: 11-13 mph D29	725	100	37	14	7	2	<1
Sky: clouds < 50%, night Wind: >13 mph D30	625	87	32	12	6	2	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Compressor station Estimated air exposure values of PM2.5 in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	175	5	1	<1	<1	<1	0
Sky: clear day Wind: 5-7 mph A-B2	125	8	2	<1	<1	<1	0
Sky: clear day Wind: 7-11 mph B3	75	8	2	<1	<1	<1	0
Sky: clear day Wind 11-13 mph C4	125	22	7	2	1	<1	<1
Sky: clear day Wind: >13 mph C5	100	19	6	1	<1	<1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	175	12	3	<1	<1	<1	0
Sky: scattered clouds, day Wind: 5-7 mph B7	150	13	4	<1	<1	<1	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	125	17	6	1	<1	<1	<1
Sky: scattered clouds, day Wind: 11-13 mph C-D9	175	28	10	3	1	<1	<1
Sky: scattered clouds, day Wind: >13 mph D-10	200	29	10	4	2	<1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	200	18	6	1	<1	<1	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	250	41	14	4	1	<1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	150	25	9	2	1	<1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	225	33	12	4	2	<1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	200	29	10	4	2	<1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	625	87	32	12	6	2	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	450	62	23	9	4	1	<1

Compressor station							
Estimated air exposure values of PM2.5 in ug/m³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	275	39	14	5	2	1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	225	33	12	4	2	<1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	200	29	10	4	2	<1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	875	150	73	35	21	10	3
Sky: clouds > 50%, night day 5-7 mph E22	625	100	52	25	15	7	2
Sky: clouds > 50%, night Wind: 7-11 mph D23	275	39	14	5	2	1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	225	33	12	4	2	<1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	200	29	10	4	2	<1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	1400	225	100	56	33	15	5
Sky: clouds < 50%, night day 5-7 mph F27	1000	150	83	40	23	11	4
Sky: clouds < 50%, night Wind: 7-11 mph E28	375	78	33	16	9	4	1
Sky: clouds < 50%, night Wind: 11-13 mph D29	225	33	12	4	2	<1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	200	29	10	4	2	<1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Compressor station Estimated air exposure values of formaldehyde in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	52	1	<1	<1	<1	0	0
Sky: clear day Wind: 5-7 mph A-B2	41	2	<1	<1	<1	0	0
Sky: clear day Wind: 7-11 mph B3	28	2	<1	<1	<1	0	0
Sky: clear day Wind: 11-13 mph C4	40	6	2	<1	<1	<1	0
Sky: clear day Wind: >13 mph C5	35	5	2	<1	<1	<1	0
Sky: scattered clouds, day Wind: <5 mph AB6	57	3	1	<1	<1	0	0
Sky: scattered clouds, day Wind: 5-7 mph B7	45	4	1	<1	<1	0	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	38	5	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	56	8	3	1	<1	<1	<1
Sky: scattered clouds, day Wind: >13 mph D-10	63	8	3	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	63	5	1	<1	<1	<1	0
Sky: broken clouds, >50%, day day 5-7 mph C12	75	12	4	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	47	8	2	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	72	10	3	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	63	8	3	1	<1	<1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	175	26	9	3	1	<1	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	125	18	6	2	1	<1	<1

Compressor station							
Estimated air exposure values of formaldehyde in ug/m³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	86	12	4	1	<1	<1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	72	10	3	1	<1	<1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	63	8	3	1	<1	<1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	250	52	22	10	6	3	1
Sky: clouds > 50%, night day 5-7 mph E22	175	37	15	7	4	2	<1
Sky: clouds > 50%, night Wind: 7-11 mph D23	86	12	4	1	<1	<1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	72	10	3	1	<1	<1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	63	8	3	1	<1	<1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	400	72	35	16	10	4	1
Sky: clouds < 50%, night day 5-7 mph F27	300	52	25	12	7	3	1
Sky: clouds < 50%, night Wind: 7-11 mph E28	100	23	10	4	3	1	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	72	10	3	1	<1	<1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	63	8	3	1	<1	<1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Processing station Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	5200	175	40	11	5	2	0
Sky: clear day Wind: 5-7 mph A-B2	4100	250	78	18	8	3	1
Sky: clear day Wind: 7-11 mph B3	2800	250	82	18	7	3	1
Sky: clear day Wind: 11-13 mph C4	4000	675	225	66	30	11	3
Sky: clear day Wind: >13 mph C5	3500	575	200	57	26	10	3
Sky: scattered clouds, day Wind: <5 mph AB6	5700	370	100	25	11	4	1
Sky: scattered clouds, day Wind: 5-7 mph B7	4500	400	125	28	12	4	1
Sky: scattered clouds, day Wind: 7-11 mph B-C8	3800	525	175	48	21	8	2
Sky: scattered clouds, day Wind: 11-13 mph C-D9	5600	825	300	100	51	20	5
Sky: scattered clouds, day Wind: >13 mph D-10	6300	875	300	125	62	24	6
Sky: broken clouds, >50%, day Wind: <5 mph B11	6300	550	175	39	16	6	2
Sky: broken clouds, >50%, day day 5-7 mph C12	7500	1200	425	100	55	21	6
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	4700	775	275	78	35	13	4
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	7200	1000	350	125	72	28	7
Sky: broken clouds, >50%, day Wind: >13 mph D15	6300	875	300	125	62	24	6
Sky: overcast > 80%, day Wind: <5 mph D16	18000	2600	950	375	175	73	18
Sky: overcast > 80%, day Wind: 5-7 mph D17	13500	1800	675	250	125	52	13

Processing station Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	8600	1100	425	150	85	33	8
Sky: overcast > 80%, day Wind: 11-13 mph D19	7200	1000	350	125	72	28	7
Sky: overcast > 80%, day Wind: >13 mph D20	6300	875	300	125	62	24	6
Sky: clouds > 50%, night Wind: <5 mph E21	26300	5200	2100	1000	650	300	98
Sky: clouds > 50%, night day 5-7 mph E22	18800	3700	1500	750	450	200	70
Sky: clouds > 50%, night Wind: 7-11 mph D23	8600	1100	425	150	85	33	8
Sky: clouds > 50%, night Wind: 11-13 mph D24	7200	1000	350	125	72	28	7
Sky: clouds > 50%, night Wind: >13 mph D25	6300	875	300	125	62	24	6
Sky: clouds < 50%, night Wind: <5 mph F26	42000	7200	3500	1600	975	450	175
Sky: clouds < 50%, night day 5-7 mph F27	30000	5200	2500	1200	700	325	125
Sky: clouds < 50%, night Wind: 7-11 mph E28	11900	2300	975	475	275	125	44
Sky: clouds < 50%, night Wind: 11-13 mph D29	7200	1000	350	125	72	28	7
Sky: clouds < 50%, night Wind: >13 mph D30	6300	875	300	125	62	24	6

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Processing station Estimated air exposure values of PM2.5 in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	1700	58	13	3	1	<1	0
Sky: clear day Wind: 5-7 mph A-B2	1300	88	26	6	2	1	<1
Sky: clear day Wind: 7-11 mph B3	950	85	27	6	2	1	<1
Sky: clear day Wind 11-13 mph C4	1300	225	79	22	10	3	1
Sky: clear day Wind: >13 mph C5	1100	175	68	19	8	3	1
Sky: scattered clouds, day Wind: <5 mph AB6	1900	100	36	8	3	1	<1
Sky: scattered clouds, day Wind: 5-7 mph B7	1500	125	42	9	4	1	<1
Sky: scattered clouds, day Wind: 7-11 mph B-C8	1200	175	60	16	7	2	<1
Sky: scattered clouds, day Wind: 11-13 mph C-D9	1800	275	100	35	17	6	1
Sky: scattered clouds, day Wind: >13 mph D-10	2100	275	100	41	20	8	2
Sky: broken clouds, >50%, day Wind: <5 mph B11	2100	175	60	13	5	2	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	2500	400	125	41	18	7	2
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	1500	250	93	26	11	4	1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	2400	350	100	48	24	9	2
Sky: broken clouds, >50%, day Wind: >13 mph D15	2100	275	100	41	20	8	2
Sky: overcast > 80%, day Wind: <5 mph D16	6300	875	300	125	62	24	6
Sky: overcast > 80%, day Wind: 5-7 mph D17	4500	625	225	89	44	17	4

Processing station Estimated air exposure values of PM2.5 in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	2800	375	125	57	28	11	2
Sky: overcast > 80%, day Wind: 11-13 mph D19	2400	325	100	48	24	9	2
Sky: overcast > 80%, day Wind: >13 mph D20	2100	275	100	41	20	8	2
Sky: clouds > 50%, night Wind: <5 mph E21	8700	1700	725	350	200	100	32
Sky: clouds > 50%, night day 5-7 mph E22	6200	100	500	250	150	74	23
Sky: clouds > 50%, night Wind: 7-11 mph D23	2800	375	125	57	28	11	2
Sky: clouds > 50%, night Wind: 11-13 mph D24	2400	325	100	48	24	9	2
Sky: clouds > 50%, night Wind: >13 mph D25	2100	275	100	41	20	8	2
Sky: clouds < 50%, night Wind: <5 mph F26	14,000	2400	1100	550	325	150	58
Sky: clouds < 50%, night day 5-7 mph F27	10000	1700	825	400	225	100	41
Sky: clouds < 50%, night Wind: 7-11 mph E28	3900	775	325	150	99	47	14
Sky: clouds < 50%, night Wind: 11-13 mph D29	2400	325	100	48	24	9	2
Sky: clouds < 50%, night Wind: >13 mph D30	2100	275	100	41	20	8	2

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Processing station Estimated air exposure values of formaldehyde in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	525	17	4	1	<1	<1	0
Sky: clear day Wind: 5-7 mph A-B2	400	26	7	1	<1	<1	<1
Sky: clear day Wind: 7-11 mph B3	275	25	8	1	<1	<1	<1
Sky: clear day Wind: 11-13 mph C4	400	67	23	6	3	1	<1
Sky: clear day Wind: >13 mph C5	350	58	20	5	2	1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	575	37	11	2	1	<1	<1
Sky: scattered clouds, day Wind: 5-7 mph B7	450	40	12	2	1	<1	<1
Sky: scattered clouds, day Wind: 7-11 mph B-C8	375	52	18	4	2	<1	<1
Sky: scattered clouds, day Wind: 11-13 mph C-D9	550	84	30	10	5	2	<1
Sky: scattered clouds, day Wind: >13 mph D-10	625	87	32	12	6	2	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	625	56	18	3	1	<1	<1
Sky: broken clouds, >50%, day day 5-7 mph C12	750	125	44	12	5	2	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	475	79	28	7	3	1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	725	100	37	14	7	2	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	625	87	32	12	6	2	<1
Sky: overcast > 80%, day Wind: <5 mph D16	1800	250	96	37	18	7	1
Sky: overcast > 80%, day Wind: 5-7 mph D17	1300	175	69	26	13	5	1

Processing station Estimated air exposure values of formaldehyde in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	850	100	44	17	8	3	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	725	100	37	14	7	2	<1
Sky: overcast > 80%, day Wind: >13 mph D20	625	87	32	12	6	2	<1
Sky: clouds > 50%, night Wind: <5 mph E21	2600	500	200	100	65	31	9
Sky: clouds > 50%, night day 5-7 mph E22	1800	350	150	75	46	22	7
Sky: clouds > 50%, night Wind: 7-11 mph D23	850	100	44	17	8	3	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	725	100	37	14	7	2	<1
Sky: clouds > 50%, night Wind: >13 mph D25	625	87	32	12	6	2	<1
Sky: clouds < 50%, night Wind: <5 mph F26	4200	725	350	150	99	46	17
Sky: clouds < 50%, night day 5-7 mph F27	3000	500	250	100	71	33	12
Sky: clouds < 50%, night Wind: 7-11 mph E28	1100	225	99	48	29	14	4
Sky: clouds < 50%, night Wind: 11-13 mph D29	725	100	37	14	7	2	<1
Sky: clouds < 50%, night Wind: >13 mph D30	625	87	32	12	6	2	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Produced water pond Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	100	3	<1	<1	<1	0	0
Sky: clear day Wind: 5-7 mph A-B2	82	5	1	<1	<1	<1	0
Sky: clear day Wind: 7-11 mph B3	57	5	1	<1	<1	<1	0
Sky: clear day Wind 11-13 mph C4	81	13	4	1	<1	<1	<1
Sky: clear day Wind: >13 mph C5	70	11	4	1	<1	<1	<1
Sky: scattered clouds, day Wind: <5 mph AB6	100	7	2	<1	<1	<1	0
Sky: scattered clouds, day Wind: 5-7 mph B7	90	8	2	<1	<1	<1	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	76	10	3	1	<1	<1	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	100	16	6	2	1	<1	<1
Sky: scattered clouds, day Wind: >13 mph D-10	125	17	6	2	1	<1	<1
Sky: broken clouds, >50%, day Wind: <5 mph B11	125	11	3	<1	<1	<1	0
Sky: broken clouds, >50%, day day 5-7 mph C12	150	25	8	2	1	<1	<1
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	95	16	5	1	<1	<1	<1
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	125	20	7	2	1	<1	<1
Sky: broken clouds, >50%, day Wind: >13 mph D15	125	17	6	2	1	<1	<1
Sky: overcast > 80%, day Wind: <5 mph D16	375	52	19	7	3	1	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	250	37	13	5	2	1	<1

Produced water pond Estimated air exposure values of VOCs in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	150	23	8	3	1	<1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	125	20	7	2	1	<1	<1
Sky: overcast > 80%, day Wind: >13 mph D20	125	17	6	2	1	<1	<1
Sky: clouds > 50%, night Wind: <5 mph E21	525	100	43	21	13	6	2
Sky: clouds > 50%, night day 5-7 mph E22	375	74	31	15	9	4	1
Sky: clouds > 50%, night Wind: 7-11 mph D23	150	23	8	3	1	<1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	125	20	7	2	1	<1	<1
Sky: clouds > 50%, night Wind: >13 mph D25	125	17	6	2	1	<1	<1
Sky: clouds < 50%, night Wind: <5 mph F26	825	125	70	33	20	9	3
Sky: clouds < 50%, night day 5-7 mph F27	600	100	50	24	14	6	2
Sky: clouds < 50%, night Wind: 7-11 mph E28	225	47	20	9	6	2	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	125	20	7	2	1	<1	<1
Sky: clouds < 50%, night Wind: >13 mph D30	125	17	6	2	1	<1	<1

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Produced water pond Estimated air exposure values of PM2.5 in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	35	1	<1	<1	0	0	0
Sky: clear day Wind: 5-7 mph A-B2	27	1	<1	<1	<1	0	0
Sky: clear day Wind: 7-11 mph B3	19	1	<1	<1	0	0	0
Sky: clear day Wind: 11-13 mph C4	27	4	1	<1	<1	<1	0
Sky: clear day Wind: >13 mph C5	23	3	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: <5 mph AB6	38	2	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: 5-7 mph B7	30	2	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	25	3	1	<1	<1	<1	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	37	5	2	<1	<1	<1	0
Sky: scattered clouds, day Wind: >13 mph D-10	42	5	2	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: <5 mph B11	42	3	1	<1	<1	0	0
Sky: broken clouds, >50%, day day 5-7 mph C12	50	8	2	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	31	5	1	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	48	6	2	1	<1	<1	0
Sky: broken clouds, >50%, day Wind: >13 mph D15	42	5	2	<1	<1	<1	0
Sky: overcast > 80%, day Wind: <5 mph D16	125	17	6	2	2	<1	<1
Sky: overcast > 80%, day Wind: 5-7 mph D17	90	12	4	1	<1	<1	<1

Produced water pond Estimated air exposure values of PM2.5 in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: overcast > 80%, day Wind: 7-11 mph D18	57	8	2	1	<1	<1	<1
Sky: overcast > 80%, day Wind: 11-13 mph D19	48	6	2	1	<1	<1	0
Sky: overcast > 80%, day Wind: >13 mph D20	42	5	2	<1	<1	<1	0
Sky: clouds > 50%, night Wind: <5 mph E21	175	34	14	7	4	2	<1
Sky: clouds > 50%, night day 5-7 mph E22	125	24	10	5	3	1	<1
Sky: clouds > 50%, night Wind: 7-11 mph D23	57	8	2	1	<1	<1	<1
Sky: clouds > 50%, night Wind: 11-13 mph D24	48	6	2	1	<1	<1	0
Sky: clouds > 50%, night Wind: >13 mph D25	42	5	2	<1	<1	<1	0
Sky: clouds < 50%, night Wind: <5 mph F26	280	48	23	11	6	3	1
Sky: clouds < 50%, night day 5-7 mph F27	200	34	16	8	4	2	<1
Sky: clouds < 50%, night Wind: 7-11 mph E28	79	15	6	3	2	<1	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	48	6	2	1	<1	<1	0
Sky: clouds < 50%, night Wind: >13 mph D30	42	5	2	<1	<1	<1	0

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.

Produced water pond Estimated air exposure values of formaldehyde in ug/m ³							
Weather and Stability Class	100 yds 0.1 km	360 yds 0.5 km	½ mile 1 km	1.2 miles 2 km	1.8 miles 3 km	3.1 miles 5 km	6.2 miles 10 km
Sky: clear day Wind: <5 mph A1	10	<1	<1	0	0	0	0
Sky: clear day Wind: 5-7 mph A-B2	8	<1	<1	0	0	0	0
Sky: clear day Wind: 7-11 mph B3	5	<1	<1	0	0	0	0
Sky: clear day Wind 11-13 mph C4	8	1	<1	<1	<1	0	0
Sky: clear day Wind: >13 mph C5	7	1	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: <5 mph AB6	11	<1	<1	<1	0	0	0
Sky: scattered clouds, day Wind: 5-7 mph B7	9	<1	<1	<1	0	0	0
Sky: scattered clouds, day Wind: 7-11 mph B-C8	7	1	<1	<1	0	0	0
Sky: scattered clouds, day Wind: 11-13 mph C-D9	11	1	<1	<1	<1	0	0
Sky: scattered clouds, day Wind: >13 mph D-10	12	1	<1	<1	<1	0	0
Sky: broken clouds, >50%, day Wind: <5 mph B11	12	1	<1	<1	0	0	0
Sky: broken clouds, >50%, day day 5-7 mph C12	15	2	<1	<1	<1	0	0
Sky: broken clouds, >50%, day Wind: 7-11 mph C13	9	1	<1	<1	<1	0	0
Sky: broken clouds, >50%, day Wind: 11-13 mph D14	14	2	<1	<1	<1	<1	0
Sky: broken clouds, >50%, day Wind: >13 mph D15	12	1	<1	<1	<1	0	0
Sky: overcast > 80%, day Wind: <5 mph D16	37	5	1	<1	<1	<1	0
Sky: overcast > 80%, day Wind: 5-7 mph D17	27	3	1	<1	<1	<1	0

Sky: overcast > 80%, day Wind: 7-11 mph D18	17	2	<1	<1	<1	<1	0
Sky: overcast > 80%, day Wind: 11-13 mph D19	14	2	<1	<1	<1	<1	0
Sky: overcast > 80%, day Wind: >13 mph D20	12	1	<1	<1	<1	0	0
Sky: clouds > 50%, night Wind: <5 mph E21	52	10	4	2	1	<1	<1
Sky: clouds > 50%, night day 5-7 mph E22	37	7	3	1	<1	<1	<1
Sky: clouds > 50%, night Wind: 7-11 mph D23	17	2	<1	<1	<1	<1	0
Sky: clouds > 50%, night Wind: 11-13 mph D24	14	2	<1	<1	<1	<1	0
Sky: clouds > 50%, night Wind: >13 mph D25	12	1	<1	<1	<1	0	0
Sky: clouds < 50%, night Wind: <5 mph F26	84	14	7	3	2	<1	<1
Sky: clouds < 50%, night day 5-7 mph F27	60	10	5	2	1	<1	<1
Sky: clouds < 50%, night Wind: 7-11 mph E28	23	4	2	1	<1	<1	<1
Sky: clouds < 50%, night Wind: 11-13 mph D29	14	2	<1	<1	<1	<1	0
Sky: clouds < 50%, night Wind: >13 mph D30	12	1	<1	<1	<1	0	0

* All emissions are assumed to be ground level and constant over the day and year, on level terrain and in summer conditions. Numbers are in micrograms per meter cubed.