

APPENDIX B
AIR QUALITY AND ENERGY BACKGROUND DATA

BioMarin and Whistlestop/Eden Housing Project - Marin County, Annual

BioMarin and Whistlestop/Eden Housing Project
Marin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	110.00	1000sqft	2.53	110,000.00	0
Research & Development	97.00	1000sqft	2.23	97,000.00	0
Enclosed Parking Structure	12.00	Space	0.11	4,800.00	0
Parking Lot	29.00	Space	0.26	11,600.00	0
Health Club	18.00	1000sqft	0.41	18,000.00	0
Congregate Care (Assisted Living)	67.00	Dwelling Unit	4.19	57,000.00	80

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	69
Climate Zone	5			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	294	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - Operational Year at full buildout = 2028

CO2 Intensity Factor = PG&E's most recent CO2 Intensity Factor value from 2016.

Land Use - The project is 3.05 acres, but the larger default acreage was used to create a more conservative estimate of construction emissions. Residential population based on project description. Total square footage includes amenities.

Construction Phase - No demolition.

Off-road Equipment - Added a drill rig for driving piles.

Demolition - No demolition.

Grading - About 1,400 cubic yards of off-haul of soil is anticipated.

Woodstoves - No woodstoves. The default number of total fireplaces (21.44) assumed to all be gas and not wood.

Water And Wastewater - Marin Municipal Water District does not use septic tanks or lagoons for wastewater treatment.

Stationary Sources - Emergency Generators and Fire Pumps - 1 operational emergency diesel generator (500 kW) is proposed.

Vehicle Trips - Based on Transportation Impact Study

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	10.05	21.44
tblFireplaces	NumberWood	11.39	0.00
tblGrading	MaterialExported	0.00	1,440.00
tblLandUse	LandUseSquareFeet	67,000.00	57,000.00
tblLandUse	Population	192.00	80.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	294
tblVehicleTrips	ST_TR	2.20	2.28
tblVehicleTrips	ST_TR	2.46	2.11
tblVehicleTrips	ST_TR	20.87	14.07
tblVehicleTrips	ST_TR	1.90	2.11
tblVehicleTrips	SU_TR	2.44	2.53
tblVehicleTrips	SU_TR	1.05	1.23
tblVehicleTrips	SU_TR	26.73	18.02
tblVehicleTrips	SU_TR	1.11	1.23

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tblVehicleTrips	WD_TR	2.74	2.84
tblVehicleTrips	WD_TR	11.03	9.00
tblVehicleTrips	WD_TR	32.93	22.20
tblVehicleTrips	WD_TR	8.11	9.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	1.34	0.00
tblWoodstoves	NumberNoncatalytic	1.34	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	1.0694	1.0694
2	4-1-2020	6-30-2020	0.8886	0.8886
3	7-1-2020	9-30-2020	0.8984	0.8984
4	10-1-2020	12-31-2020	0.8962	0.8962
5	1-1-2021	3-31-2021	1.7297	1.7297
		Highest	1.7297	1.7297

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2756	8.0600e-003	0.5004	4.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	3.4939	3.4939	8.4000e-004	5.0000e-005	3.5296
Energy	0.0300	0.2707	0.2162	1.6300e-003		0.0207	0.0207		0.0207	0.0207	0.0000	637.4737	637.4737	0.0393	0.0124	642.1500
Mobile	0.3449	1.0755	3.7099	0.0148	1.6806	0.0130	1.6936	0.4503	0.0121	0.4625	0.0000	1,353.6774	1,353.6774	0.0408	0.0000	1,354.6977
Stationary	0.0275	0.0768	0.0701	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	12.7567	12.7567	1.7900e-003	0.0000	12.8014
Waste						0.0000	0.0000		0.0000	0.0000	55.4998	0.0000	55.4998	3.2799	0.0000	137.4983
Water						0.0000	0.0000		0.0000	0.0000	25.7125	59.6234	85.3359	0.0944	0.0571	104.7211
Total	1.6780	1.4311	4.4967	0.0166	1.6806	0.0407	1.7213	0.4503	0.0398	0.4902	81.2123	2,067.0251	2,148.2374	3.4571	0.0696	2,255.3982

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2756	8.0600e-003	0.5004	4.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	3.4939	3.4939	8.4000e-004	5.0000e-005	3.5296
Energy	0.0300	0.2707	0.2162	1.6300e-003		0.0207	0.0207		0.0207	0.0207	0.0000	637.4737	637.4737	0.0393	0.0124	642.1500
Mobile	0.3449	1.0755	3.7099	0.0148	1.6806	0.0130	1.6936	0.4503	0.0121	0.4625	0.0000	1,353.6774	1,353.6774	0.0408	0.0000	1,354.6977
Stationary	0.0275	0.0768	0.0701	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	12.7567	12.7567	1.7900e-003	0.0000	12.8014
Waste						0.0000	0.0000		0.0000	0.0000	55.4998	0.0000	55.4998	3.2799	0.0000	137.4983
Water						0.0000	0.0000		0.0000	0.0000	25.7125	59.6234	85.3359	0.0944	0.0571	104.7211
Total	1.6780	1.4311	4.4967	0.0166	1.6806	0.0407	1.7213	0.4503	0.0398	0.4902	81.2123	2,067.0251	2,148.2374	3.4571	0.0696	2,255.3982

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/14/2020	5	10	
2	Grading	Grading	1/15/2020	2/11/2020	5	20	
3	Building Construction	Building Construction	2/12/2020	12/29/2020	5	230	
4	Paving	Paving	12/30/2020	1/26/2021	5	20	
5	Architectural Coating	Architectural Coating	1/27/2021	2/23/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.37

Residential Indoor: 115,425; Residential Outdoor: 38,475; Non-Residential Indoor: 337,500; Non-Residential Outdoor: 112,500; Striped Parking Area: 984 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	180.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	129.00	47.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.1300e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6323	0.6323	1.0000e-005	0.0000	0.6327
Total	3.1000e-004	2.2000e-004	2.1300e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6323	0.6323	1.0000e-005	0.0000	0.6327

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3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.1300e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6323	0.6323	1.0000e-005	0.0000	0.6327
Total	3.1000e-004	2.2000e-004	2.1300e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6323	0.6323	1.0000e-005	0.0000	0.6327

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3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0656	0.0000	0.0656	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0271	0.2991	0.1813	3.9000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	34.3124	34.3124	0.0111	0.0000	34.5898
Total	0.0271	0.2991	0.1813	3.9000e-004	0.0656	0.0138	0.0794	0.0337	0.0127	0.0463	0.0000	34.3124	34.3124	0.0111	0.0000	34.5898

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.7000e-004	0.0263	7.6100e-003	7.0000e-005	1.5100e-003	9.0000e-005	1.6000e-003	4.2000e-004	8.0000e-005	5.0000e-004	0.0000	6.8767	6.8767	4.0000e-004	0.0000	6.8867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	4.3000e-004	4.2600e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2646	1.2646	3.0000e-005	0.0000	1.2654
Total	1.4000e-003	0.0267	0.0119	8.0000e-005	2.9300e-003	1.0000e-004	3.0300e-003	8.0000e-004	9.0000e-005	8.9000e-004	0.0000	8.1413	8.1413	4.3000e-004	0.0000	8.1520

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3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0656	0.0000	0.0656	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0271	0.2991	0.1813	3.9000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	34.3123	34.3123	0.0111	0.0000	34.5898
Total	0.0271	0.2991	0.1813	3.9000e-004	0.0656	0.0138	0.0794	0.0337	0.0127	0.0463	0.0000	34.3123	34.3123	0.0111	0.0000	34.5898

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.7000e-004	0.0263	7.6100e-003	7.0000e-005	1.5100e-003	9.0000e-005	1.6000e-003	4.2000e-004	8.0000e-005	5.0000e-004	0.0000	6.8767	6.8767	4.0000e-004	0.0000	6.8867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	4.3000e-004	4.2600e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2646	1.2646	3.0000e-005	0.0000	1.2654
Total	1.4000e-003	0.0267	0.0119	8.0000e-005	2.9300e-003	1.0000e-004	3.0300e-003	8.0000e-004	9.0000e-005	8.9000e-004	0.0000	8.1413	8.1413	4.3000e-004	0.0000	8.1520

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3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2438	2.2064	1.9376	3.1000e-003		0.1285	0.1285		0.1208	0.1208	0.0000	266.3515	266.3515	0.0650	0.0000	267.9760
Total	0.2438	2.2064	1.9376	3.1000e-003		0.1285	0.1285		0.1208	0.1208	0.0000	266.3515	266.3515	0.0650	0.0000	267.9760

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0235	0.5959	0.2208	1.4400e-003	0.0353	3.0500e-003	0.0384	0.0102	2.9100e-003	0.0131	0.0000	138.7210	138.7210	6.9700e-003	0.0000	138.8953
Worker	0.0518	0.0355	0.3507	1.1500e-003	0.1169	8.0000e-004	0.1177	0.0311	7.4000e-004	0.0318	0.0000	104.2241	104.2241	2.4700e-003	0.0000	104.2858
Total	0.0753	0.6313	0.5715	2.5900e-003	0.1522	3.8500e-003	0.1560	0.0413	3.6500e-003	0.0450	0.0000	242.9451	242.9451	9.4400e-003	0.0000	243.1811

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3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2438	2.2064	1.9376	3.1000e-003		0.1285	0.1285		0.1208	0.1208	0.0000	266.3512	266.3512	0.0650	0.0000	267.9757
Total	0.2438	2.2064	1.9376	3.1000e-003		0.1285	0.1285		0.1208	0.1208	0.0000	266.3512	266.3512	0.0650	0.0000	267.9757

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0235	0.5959	0.2208	1.4400e-003	0.0353	3.0500e-003	0.0384	0.0102	2.9100e-003	0.0131	0.0000	138.7210	138.7210	6.9700e-003	0.0000	138.8953
Worker	0.0518	0.0355	0.3507	1.1500e-003	0.1169	8.0000e-004	0.1177	0.0311	7.4000e-004	0.0318	0.0000	104.2241	104.2241	2.4700e-003	0.0000	104.2858
Total	0.0753	0.6313	0.5715	2.5900e-003	0.1522	3.8500e-003	0.1560	0.0413	3.6500e-003	0.0450	0.0000	242.9451	242.9451	9.4400e-003	0.0000	243.1811

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3600e-003	0.0141	0.0147	2.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	2.0028	2.0028	6.5000e-004	0.0000	2.0190
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3900e-003	0.0141	0.0147	2.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	2.0028	2.0028	6.5000e-004	0.0000	2.0190

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055
Total	5.0000e-005	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3600e-003	0.0141	0.0147	2.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	2.0028	2.0028	6.5000e-004	0.0000	2.0190
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3900e-003	0.0141	0.0147	2.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	2.0028	2.0028	6.5000e-004	0.0000	2.0190

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055
Total	5.0000e-005	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1163	0.1319	2.1000e-004		6.1000e-003	6.1000e-003		5.6100e-003	5.6100e-003	0.0000	18.0211	18.0211	5.8300e-003	0.0000	18.1668
Paving	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0116	0.1163	0.1319	2.1000e-004		6.1000e-003	6.1000e-003		5.6100e-003	5.6100e-003	0.0000	18.0211	18.0211	5.8300e-003	0.0000	18.1668

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.9000e-004	2.9100e-003	1.0000e-005	1.0600e-003	1.0000e-005	1.0700e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9153	0.9153	2.0000e-005	0.0000	0.9158
Total	4.4000e-004	2.9000e-004	2.9100e-003	1.0000e-005	1.0600e-003	1.0000e-005	1.0700e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9153	0.9153	2.0000e-005	0.0000	0.9158

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1163	0.1319	2.1000e-004		6.1000e-003	6.1000e-003		5.6100e-003	5.6100e-003	0.0000	18.0211	18.0211	5.8300e-003	0.0000	18.1668
Paving	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0116	0.1163	0.1319	2.1000e-004		6.1000e-003	6.1000e-003		5.6100e-003	5.6100e-003	0.0000	18.0211	18.0211	5.8300e-003	0.0000	18.1668

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.9000e-004	2.9100e-003	1.0000e-005	1.0600e-003	1.0000e-005	1.0700e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9153	0.9153	2.0000e-005	0.0000	0.9158
Total	4.4000e-004	2.9000e-004	2.9100e-003	1.0000e-005	1.0600e-003	1.0000e-005	1.0700e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9153	0.9153	2.0000e-005	0.0000	0.9158

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3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5779					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	1.5801	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5000e-004	5.6000e-004	5.6100e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.4000e-004	1.0000e-005	5.6000e-004	0.0000	1.7628	1.7628	4.0000e-005	0.0000	1.7638
Total	8.5000e-004	5.6000e-004	5.6100e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.4000e-004	1.0000e-005	5.6000e-004	0.0000	1.7628	1.7628	4.0000e-005	0.0000	1.7638

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3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5779					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	1.5801	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5000e-004	5.6000e-004	5.6100e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.4000e-004	1.0000e-005	5.6000e-004	0.0000	1.7628	1.7628	4.0000e-005	0.0000	1.7638
Total	8.5000e-004	5.6000e-004	5.6100e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.4000e-004	1.0000e-005	5.6000e-004	0.0000	1.7628	1.7628	4.0000e-005	0.0000	1.7638

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3449	1.0755	3.7099	0.0148	1.6806	0.0130	1.6936	0.4503	0.0121	0.4625	0.0000	1,353.6774	1,353.6774	0.0408	0.0000	1,354.6977
Unmitigated	0.3449	1.0755	3.7099	0.0148	1.6806	0.0130	1.6936	0.4503	0.0121	0.4625	0.0000	1,353.6774	1,353.6774	0.0408	0.0000	1,354.6977

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	190.28	152.76	169.51	420,240	420,240
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	990.00	232.10	135.30	1,815,325	1,815,325
Health Club	399.60	253.26	324.36	635,687	635,687
Parking Lot	0.00	0.00	0.00		
Research & Development	873.00	204.67	119.31	1,678,821	1,678,821
Total	2,452.88	842.79	748.48	4,550,072	4,550,072

4.3 Trip Type Information

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Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.604980	0.037625	0.197129	0.106677	0.013568	0.005237	0.010915	0.012384	0.002048	0.002456	0.005559	0.000740	0.000682
Enclosed Parking Structure	0.604980	0.037625	0.197129	0.106677	0.013568	0.005237	0.010915	0.012384	0.002048	0.002456	0.005559	0.000740	0.000682
General Office Building	0.604980	0.037625	0.197129	0.106677	0.013568	0.005237	0.010915	0.012384	0.002048	0.002456	0.005559	0.000740	0.000682
Health Club	0.604980	0.037625	0.197129	0.106677	0.013568	0.005237	0.010915	0.012384	0.002048	0.002456	0.005559	0.000740	0.000682
Parking Lot	0.604980	0.037625	0.197129	0.106677	0.013568	0.005237	0.010915	0.012384	0.002048	0.002456	0.005559	0.000740	0.000682
Research & Development	0.604980	0.037625	0.197129	0.106677	0.013568	0.005237	0.010915	0.012384	0.002048	0.002456	0.005559	0.000740	0.000682

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	0.0000	340.9049	340.9049	0.0336	6.9600e-003	343.8189
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	0.0000	340.9049	340.9049	0.0336	6.9600e-003	343.8189
NaturalGas Mitigated	0.0300	0.2707	0.2162	1.6300e-003			0.0207	0.0207		0.0207	0.0207	0.0000	296.5688	296.5688	5.6800e-003	5.4400e-003	298.3311
NaturalGas Unmitigated	0.0300	0.2707	0.2162	1.6300e-003			0.0207	0.0207		0.0207	0.0207	0.0000	296.5688	296.5688	5.6800e-003	5.4400e-003	298.3311

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	584939	3.1500e-003	0.0270	0.0115	1.7000e-004		2.1800e-003	2.1800e-003		2.1800e-003	2.1800e-003	0.0000	31.2146	31.2146	6.0000e-004	5.7000e-004	31.4001
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	2.1263e+006	0.0115	0.1042	0.0876	6.3000e-004		7.9200e-003	7.9200e-003		7.9200e-003	7.9200e-003	0.0000	113.4675	113.4675	2.1700e-003	2.0800e-003	114.1418
Health Club	445500	2.4000e-003	0.0218	0.0183	1.3000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	23.7736	23.7736	4.6000e-004	4.4000e-004	23.9149
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	2.40075e+006	0.0130	0.1177	0.0989	7.1000e-004		8.9400e-003	8.9400e-003		8.9400e-003	8.9400e-003	0.0000	128.1132	128.1132	2.4600e-003	2.3500e-003	128.8745
Total		0.0300	0.2707	0.2162	1.6400e-003		0.0207	0.0207		0.0207	0.0207	0.0000	296.5688	296.5688	5.6900e-003	5.4400e-003	298.3311

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	584939	3.1500e-003	0.0270	0.0115	1.7000e-004		2.1800e-003	2.1800e-003		2.1800e-003	2.1800e-003	0.0000	31.2146	31.2146	6.0000e-004	5.7000e-004	31.4001
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	2.1263e+006	0.0115	0.1042	0.0876	6.3000e-004		7.9200e-003	7.9200e-003		7.9200e-003	7.9200e-003	0.0000	113.4675	113.4675	2.1700e-003	2.0800e-003	114.1418
Health Club	445500	2.4000e-003	0.0218	0.0183	1.3000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	23.7736	23.7736	4.6000e-004	4.4000e-004	23.9149
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	2.40075e+006	0.0130	0.1177	0.0989	7.1000e-004		8.9400e-003	8.9400e-003		8.9400e-003	8.9400e-003	0.0000	128.1132	128.1132	2.4600e-003	2.3500e-003	128.8745
Total		0.0300	0.2707	0.2162	1.6400e-003		0.0207	0.0207		0.0207	0.0207	0.0000	296.5688	296.5688	5.6900e-003	5.4400e-003	298.3311

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	282873	37.7229	3.7200e-003	7.7000e-004	38.0453
Enclosed Parking Structure	27216	3.6294	3.6000e-004	7.0000e-005	3.6604
General Office Building	1.3728e+006	183.0713	0.0181	3.7400e-003	184.6362
Health Club	136080	18.1471	1.7900e-003	3.7000e-004	18.3022
Parking Lot	4060	0.5414	5.0000e-005	1.0000e-005	0.5461
Research & Development	733320	97.7927	9.6500e-003	2.0000e-003	98.6286
Total		340.9049	0.0336	6.9600e-003	343.8188

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	282873	37.7229	3.7200e-003	7.7000e-004	38.0453
Enclosed Parking Structure	27216	3.6294	3.6000e-004	7.0000e-005	3.6604
General Office Building	1.3728e+006	183.0713	0.0181	3.7400e-003	184.6362
Health Club	136080	18.1471	1.7900e-003	3.7000e-004	18.3022
Parking Lot	4060	0.5414	5.0000e-005	1.0000e-005	0.5461
Research & Development	733320	97.7927	9.6500e-003	2.0000e-003	98.6286
Total		340.9049	0.0336	6.9600e-003	343.8188

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2756	8.0600e-003	0.5004	4.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	3.4939	3.4939	8.4000e-004	5.0000e-005	3.5296
Unmitigated	1.2756	8.0600e-003	0.5004	4.0000e-005		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	3.4939	3.4939	8.4000e-004	5.0000e-005	3.5296

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1024					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7000e-004	2.3100e-003	9.8000e-004	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6766	2.6766	5.0000e-005	5.0000e-005	2.6925
Landscaping	0.0152	5.7500e-003	0.4995	3.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	0.8174	0.8174	7.9000e-004	0.0000	0.8372
Total	1.2756	8.0600e-003	0.5004	4.0000e-005		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003	0.0000	3.4939	3.4939	8.4000e-004	5.0000e-005	3.5296

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1024					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7000e-004	2.3100e-003	9.8000e-004	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6766	2.6766	5.0000e-005	5.0000e-005	2.6925
Landscaping	0.0152	5.7500e-003	0.4995	3.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	0.8174	0.8174	7.9000e-004	0.0000	0.8372
Total	1.2756	8.0600e-003	0.5004	4.0000e-005		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003	0.0000	3.4939	3.4939	8.4000e-004	5.0000e-005	3.5296

7.0 Water Detail

7.1 Mitigation Measures Water

BioMarin and Whistlestop/Eden Housing Project - Marin County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	85.3359	0.0944	0.0571	104.7211
Unmitigated	85.3359	0.0944	0.0571	104.7211

BioMarin and Whistlestop/Eden Housing Project - Marin County, Annual

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	4.36532 / 2.75205	5.9789	5.7500e-003	3.4500e-003	7.1506
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	19.5507 / 11.9827	26.6176	0.0258	0.0154	31.8638
Health Club	1.06458 / 0.652482	1.4494	1.4000e-003	8.4000e-004	1.7351
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	47.6943 / 0	51.2901	0.0615	0.0374	63.9717
Total		85.3360	0.0944	0.0571	104.7211

BioMarin and Whistlestop/Eden Housing Project - Marin County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	4.36532 / 2.75205	5.9789	5.7500e-003	3.4500e-003	7.1506
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	19.5507 / 11.9827	26.6176	0.0258	0.0154	31.8638
Health Club	1.06458 / 0.652482	1.4494	1.4000e-003	8.4000e-004	1.7351
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	47.6943 / 0	51.2901	0.0615	0.0374	63.9717
Total		85.3360	0.0944	0.0571	104.7211

8.0 Waste Detail

8.1 Mitigation Measures Waste

BioMarin and Whistlestop/Eden Housing Project - Marin County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	55.4998	3.2799	0.0000	137.4983
Unmitigated	55.4998	3.2799	0.0000	137.4983

BioMarin and Whistlestop/Eden Housing Project - Marin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	61.14	12.4109	0.7335	0.0000	30.7474
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	102.3	20.7660	1.2272	0.0000	51.4468
Health Club	102.6	20.8269	1.2308	0.0000	51.5977
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.37	1.4960	0.0884	0.0000	3.7064
Total		55.4998	3.2799	0.0000	137.4983

BioMarin and Whistlestop/Eden Housing Project - Marin County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	61.14	12.4109	0.7335	0.0000	30.7474
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	102.3	20.7660	1.2272	0.0000	51.4468
Health Club	102.6	20.8269	1.2308	0.0000	51.5977
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	7.37	1.4960	0.0884	0.0000	3.7064
Total		55.4998	3.2799	0.0000	137.4983

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	670	0.73	Diesel

BioMarin and Whistlestop/Eden Housing Project - Marin County, Annual

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (600 - 750 HP)	0.0275	0.0768	0.0701	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	12.7567	12.7567	1.7900e-003	0.0000	12.8014
Total	0.0275	0.0768	0.0701	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	12.7567	12.7567	1.7900e-003	0.0000	12.8014

11.0 Vegetation

Summary of ISCST3 Model Parameters, Assumptions, and Results for DPM and PM_{2.5} Emissions during Construction

ISCST3 Model Parameters and Assumptions				
Source Type	Units	Value	Notes	
Volume Source: Off-Road Equipment Exhaust for Construction of the BioMarin and Whistlestop/Eden Housing Project				
Work Hours/Week	hours/week	64	7AM-6PM Monday-Friday and 9AM-6PM on Saturday	
DPM Emission Rate	gram/second	0.00243	Exhaust PM ₁₀ from off-road equipment	
Number of Sources	count	95	SMAQMD, 2015	
Emission Rate/Source	gram/second	0.000026		
Release Height	meters	5.0	SMAQMD, 2015	
Length of Side	meters	10.0	SMAQMD, 2015	
Initial Lateral Dimension	meters	2.3	ISCST3 Calculator	
Initial Vertical Dimension	meters	1.0	SMAQMD, 2015	
Volume Source: Off-Road Equipment Exhaust for Construction of only the BioMarin Project				
Work Hours/Week	hours/week	64	7AM-6PM Monday-Friday and 9AM-6PM on Saturday	
DPM Emission Rate	gram/second	0.00170	Exhaust PM ₁₀ from off-road equipment = Total x 42 mo/60 mo	
Number of Sources	count	63	SMAQMD, 2015	
Emission Rate/Source	gram/second	0.000027		
Release Height	meters	5.0	SMAQMD, 2015	
Length of Side	meters	10.0	SMAQMD, 2015	
Initial Lateral Dimension	meters	2.3	ISCST3 Calculator	
Initial Vertical Dimension	meters	1.0	SMAQMD, 2015	
ISCST3 Model Results				
Location Type	Emissions Source	Pollutant	Annual Average Concentration	Notes
Residential	Construction of the BioMarin and Whistlestop/Eden Housing Project	DPM (µg/m ³)	0.017	Offsite MEIR (Ground level residential receptor)
		PM _{2.5} (µg/m ³)	0.016	Offsite MEIR (Ground level residential receptor)
	Construction of only the BioMarin Project	DPM (µg/m ³)	0.029	Onsite MEIR (Ground level residential receptor)
		PM _{2.5} (µg/m ³)	0.027	Onsite MEIR (Ground level residential receptor)

Notes:

DPM = diesel particulate matter

PM₁₀ = particulate matter with aerodynamic resistance diameters equal to or less than 10 microns

PM_{2.5} = particulate matter with aerodynamic resistance diameters equal to or less than 2.5 microns

µg/m³ = micrograms per cubic meter

Sacramento Metropolitan Air Quality Management District (SMAQMD), 2015. *Guide to Air Quality Assessment in Sacramento County*. June.

Summary of Health Risk Assessment for the Offsite MEIR during Construction

DPM Emissions from Construction of the BioMarin and Whistlestop/Eden Housing Project					
Inhalation Cancer Risk Assessment for DPM	Units	Age Group			Notes
		3rd Trimester	0-2 Years	2-9 Years	
DPM Concentration (C)	µg/m ³	0.017	0.017	0.017	ISCST3 Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1090	861	95th percentile (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF _D)	mg-m ³ /µg-L	0.000001	0.000001	0.000001	Conversion of µg to mg and L to m ³
Dose (D)	mg/kg/day	0.000006	0.000018	0.000014	C*DBR*A*EF*CF _D (OEHHA, 2015)
Cancer Potency Factor (CPF)	(mg/kg/day) ⁻¹	1.1	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.25	2.00	3.00	Based on total construction period of 60 months
Averaging Time (AT)	years	70	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	0.85	0.85	0.72	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	unitless	1000000	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.20	4.74	1.43	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk	per million	6.37			At Offsite MEIR location
Hazard Index for DPM	Units	Value	Notes		
Chronic REL	µg/m ³	5.0	OEHHA, 2015		
Chronic Hazard Index for DPM	unitless	0.003	At Offsite MEIR location		

Summary of Health Risk Assessment for the Onsite MEIR during Construction

DPM Emissions from Construction of only the BioMarin Project					
Inhalation Cancer Risk Assessment for DPM	Units	Age Group			Notes
		16-70 Years	--	--	
DPM Concentration (C)	µg/m ³	0.029	--	--	ISCST3 Annual Average
Daily Breathing Rate (DBR)	L/kg-day	290	--	--	95th percentile (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	--	--	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	--	--	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF _D)	mg-m ³ /µg-L	0.000001	--	--	Conversion of µg to mg and L to m ³
Dose (D)	mg/kg/day	0.000008	--	--	C*DBR*A*EF*CF _D (OEHHA, 2015)
Cancer Potency Factor (CPF)	(mg/kg/day) ⁻¹	1.1	--	--	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	1	--	--	OEHHA, 2015
Annual Exposure Duration (ED)	years	3.5	--	--	Based on total construction period of 42 months
Averaging Time (AT)	years	70	--	--	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	0.73	--	--	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	unitless	1000000	--	--	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.32	--	--	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk	per million	0.32			At Onsite MEIR location
Hazard Index for DPM	Units	Value	Notes		
Chronic REL	µg/m ³	5.0	OEHHA, 2015		
Chronic Hazard Index for DPM	unitless	0.0058	At Onsite MEIR location		

Notes:

DPM = diesel particulate matter

REL = reference exposure level

µg/m³ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

m³/L = cubic meters per liter

(mg/kg/day)⁻¹ = 1/milligrams per kilograms per day

MEIR = maximum exposed individual resident

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. February.



Step 1: Enter Facility Data	
Plant Name	Project site and offsite MEIR
Plant No.	Future Emergency Generator

Step 3: Estimate Distance	
What is the distance (m) from the facility boundary to the MEIR?	50

Step 4: Specify Source Type	
Does facility have only diesel backup generators?	yes
Is this analysis for a gas station?	no

Step 5: Read Estimates	
Total Cancer Risk	5.0
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.01

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		6.75E-03			0.01
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00		
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00		
CHLOROBENZENE	108907	0.00E+00		
CHLOROFORM ¹	67663	0.00E+00		
Chlorophenols	87865	0.00E+00		
PENTACHLOROPHENOL	87865	0.00E+00		
2,4,6-TRICHLOROPHENOL	88062	0.00E+00		
CHLOROPICRIN	76062	0.00E+00		
p-CHLORO-o-TOLUIDINE	95692	0.00E+00		
CHROMIUM 6 ⁺	18540299	0.00E+00		
Barium chromate ²	10294403	0.00E+00		
Calcium chromate ²	13765190	0.00E+00		
Lead chromate ²	7758976	0.00E+00		
Sodium dichromate ²	10588019	0.00E+00		
Strontium chromate ²	7789062	0.00E+00		
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00		
COPPER AND COMPOUNDS	7440508	0.00E+00		
p-CRESIDINE	120718	0.00E+00		
CRESOLS	1319773	0.00E+00		
M-CRESOL	108394	0.00E+00		
O-CRESOL	95487	0.00E+00		
P-CRESOL	106445	0.00E+00		
CUPFERRON	135206	0.00E+00		
Cyanide And Compounds (inorganic)	57125	0.00E+00		
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00		
2,4-DIAMINOANISOLE	615054	0.00E+00		
2,4-DIAMINOTOLUENE	95807	0.00E+00		
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00		
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00		
3,3-DICHLOROBENZIDINE	91941	0.00E+00		
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00		
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00		
DIETHANOLAMINE	111422	0.00E+00		
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00		
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00		
2,4-DINITROTOLUENE	121142	0.00E+00		
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00		
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00		
1,2-EPOXYBUTANE	106887	0.00E+00		
ETHYL BENZENE	100414	0.00E+00		
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00		
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00		
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00		
ETHYLENE GLYCOL	107211	0.00E+00		
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00		
ETHYLENE THIOUREA	96457	0.00E+00		
Fluorides	1101	0.00E+00		
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00		
FORMALDEHYDE	50000	0.00E+00		

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta-HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	7.10E-03	9.99E+00	2.68E-03
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) 2,7	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	0.00E+00		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	9.987	0.003	1.27E-02
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Step 1: Enter Facility Data	
Plant Name	Project site and onsite MEIR
Plant No.	Future Emergency Generator

Step 3: Estimate Distance	
What is the distance (m) from the facility boundary to the MEI?	35

Step 4: Specify Source Type	
Does facility have only diesel backup generators?	yes
Is this analysis for a gas station?	no

Step 5: Read Estimates	
Total Cancer Risk	6.4
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.01

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		6.75E-03			0.01
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00		
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00		
CHLOROBENZENE	108907	0.00E+00		
CHLOROFORM ¹	67663	0.00E+00		
Chlorophenols	87865	0.00E+00		
PENTACHLOROPHENOL	87865	0.00E+00		
2,4,6-TRICHLOROPHENOL	88062	0.00E+00		
CHLOROPICRIN	76062	0.00E+00		
p-CHLORO-o-TOLUIDINE	95692	0.00E+00		
CHROMIUM 6 ⁺	18540299	0.00E+00		
Barium chromate ²	10294403	0.00E+00		
Calcium chromate ²	13765190	0.00E+00		
Lead chromate ²	7758976	0.00E+00		
Sodium dichromate ²	10588019	0.00E+00		
Strontium chromate ²	7789062	0.00E+00		
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00		
COPPER AND COMPOUNDS	7440508	0.00E+00		
p-CRESIDINE	120718	0.00E+00		
CRESOLS	1319773	0.00E+00		
M-CRESOL	108394	0.00E+00		
O-CRESOL	95487	0.00E+00		
P-CRESOL	106445	0.00E+00		
CUPFERRON	135206	0.00E+00		
Cyanide And Compounds (inorganic)	57125	0.00E+00		
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00		
2,4-DIAMINOANISOLE	615054	0.00E+00		
2,4-DIAMINOTOLUENE	95807	0.00E+00		
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00		
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00		
3,3-DICHLOROBENZIDINE	91941	0.00E+00		
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00		
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00		
DIETHANOLAMINE	111422	0.00E+00		
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00		
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00		
2,4-DINITROTOLUENE	121142	0.00E+00		
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00		
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00		
1,2-EPOXYBUTANE	106887	0.00E+00		
ETHYL BENZENE	100414	0.00E+00		
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00		
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00		
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00		
ETHYLENE GLYCOL	107211	0.00E+00		
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00		
ETHYLENE THIOUREA	96457	0.00E+00		
Fluorides	1101	0.00E+00		
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00		
FORMALDEHYDE	50000	0.00E+00		

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta- HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	7.10E-03	9.99E+00	2.68E-03
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	0.00E+00		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	9.987	0.003	1.27E-02
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 DETAIL POLLUTANTS - ABATED
 MOST RECENT P/O APPROVED (2017)

Printed: MAY 6, 2019

Zappetini, Inc (P# 3235)

S#	SOURCE NAME	SOURCE CODE	POLLUTANT	CODE	LBS/DAY
MATERIAL	THROUGHPUT	DATE			
1	Paint Spraying Operation	SG62A295	Mineral spirits	184	0.00E+00
			Tri chloroethyl ene	295	0.00E+00
		SG62B184	Mineral spirits	184	7.39E-02
			Organi c Li qui d evap - othe	201	1.08E-01
			Tri chl oroethyl ene	295	6.41E-02
		SG700188	Naphtha	188	0.00E+00



Step 1: Enter Facility Data	
Plant Name	Steve Zappetini & Son Inc
Plant No.	3235

Step 3: Estimate Distance	
What is the distance (m) from the facility boundary to the MEI?	165

Step 4: Specify Source Type	
Does facility have only diesel backup generators?	no
Is this analysis for a gas station?	no

Step 5: Read Estimates	
Total Cancer Risk	0.2
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.00

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		0.00E+00			
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00	
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00	
CHLOROBENZENE	108907	0.00E+00	
CHLOROFORM ¹	67663	0.00E+00	
Chlorophenols	87865	0.00E+00	
PENTACHLOROPHENOL	87865	0.00E+00	
2,4,6-TRICHLOROPHENOL	88062	0.00E+00	
CHLOROPICRIN	76062	0.00E+00	
p-CHLORO-o-TOLUIDINE	95692	0.00E+00	
CHROMIUM 6 ⁺ ²	18540299	0.00E+00	
Barium chromate ²	10294403	0.00E+00	
Calcium chromate ²	13765190	0.00E+00	
Lead chromate ²	7758976	0.00E+00	
Sodium dichromate ²	10588019	0.00E+00	
Strontium chromate ²	7789062	0.00E+00	
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00	
COPPER AND COMPOUNDS	7440508	0.00E+00	
p-CRESIDINE	120718	0.00E+00	
CRESOLS	1319773	0.00E+00	
M-CRESOL	108394	0.00E+00	
O-CRESOL	95487	0.00E+00	
P-CRESOL	106445	0.00E+00	
CUPFERRON	135206	0.00E+00	
Cyanide And Compounds (inorganic)	57125	0.00E+00	
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00	
2,4-DIAMINOANISOLE	615054	0.00E+00	
2,4-DIAMINOTOLUENE	95807	0.00E+00	
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00	
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00	
3,3-DICHLOROBENZIDINE	91941	0.00E+00	
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00	
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00	
DIETHANOLAMINE	111422	0.00E+00	
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00	
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00	
2,4-DINITROTOLUENE	121142	0.00E+00	
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00	
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00	
1,2-EPOXYBUTANE	106887	0.00E+00	
ETHYL BENZENE	100414	0.00E+00	
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00	
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00	
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00	
ETHYLENE GLYCOL	107211	0.00E+00	
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00	
ETHYLENE THIOUREA	96457	0.00E+00	
Fluorides	1101	0.00E+00	
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00	
FORMALDEHYDE	50000	0.00E+00	

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta- HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00	
Nickel carbonate ²	3333673	0.00E+00	
Nickel carbonyl ²	13463393	0.00E+00	
Nickel hydroxide ²	12054487	0.00E+00	
Nickelocene ²	1271289	0.00E+00	
NICKEL OXIDE ²	1313991	0.00E+00	
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00	
Nickel subsulfide ²	12035722	0.00E+00	
NITRIC ACID	7697372	0.00E+00	
NITROGEN DIOXIDE	10102440	0.00E+00	
p-NITROSODIPHENYLAMINE	156105	0.00E+00	
OZONE	10028156	0.00E+00	
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	0.00E+00	
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00	
PHENOL	108952	0.00E+00	
PHOSGENE	75445	0.00E+00	
PHOSPHINE	7803512	0.00E+00	
PHOSPHORIC ACID	7664382	0.00E+00	
PTHALIC ANHYDRIDE	85449	0.00E+00	
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00	
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00	
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) 2,7	1746016	0.00E+00	
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00	
NAPHTHALENE	91203	0.00E+00	
POTASSIUM BROMATE	7758012	0.00E+00	
1,3-PROPANE SULTONE	1120714	0.00E+00	
PROPYLENE (PROPENE)	115071	0.00E+00	
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00	
PROPYLENE OXIDE	75569	0.00E+00	
SELENIUM AND COMPOUNDS	7782492	0.00E+00	
HYDROGEN SELENIDE	7783075	0.00E+00	
Selenium sulfide	7446346	0.00E+00	
SILICA (Crystalline, Respirable)	7631869	0.00E+00	
SODIUM HYDROXIDE	1310732	0.00E+00	
STYRENE	100425	0.00E+00	
SULFATES	9960	0.00E+00	
SULFUR DIOXIDE	7446095	0.00E+00	
SULFURIC ACID	7664939	0.00E+00	
SULFUR TRIOXIDE	7446719	0.00E+00	
OLEUM	8014957	0.00E+00	
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00	
THIOACETAMIDE	62555	0.00E+00	
TOLUENE	108883	0.00E+00	
Toluene diisocyanates	26471625	0.00E+00	
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00	
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00	
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00	

TRICHLOROETHYLENE	79016	6.41E-02	5.74E-01	2.02E-04	
TRIETHYLAMINE	121448	0.00E+00			
URETHANE (Ethyl carbamate)	51796	0.00E+00			
Vanadium Compounds	7440622	0.00E+00			
Vanadium (fume or dust)	7440622	0.00E+00			
VANADIUM PENTOXIDE	1314621	0.00E+00			
VINYL ACETATE	108054	0.00E+00			
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00			
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00			
XYLENES (mixed isomers)	1330207	0.00E+00			
m-XYLENE	108383	0.00E+00			
o-XYLENE	95476	0.00E+00			
p-XYLENE	106423	0.00E+00			

TOTAL UNADJUSTED Risk Values		0.574	0.000	0.00E+00	
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 DETAIL POLLUTANTS - ABATED
 MOST RECENT P/O APPROVED (2018)

Printed: MAY 6, 2019

Rafael Town Center (P# 13397)

S#	SOURCE NAME	SOURCE CODE	DATE	POLLUTANT	CODE	LBS/DAY
1	Emergency Generator	Natural		Gas Engine		
		C22AF189				
				Benzene	41	1.36E-04
				Formaldehyde	124	1.23E-03
				Organics (other, including	990	1.22E-01
				Particulates (part not spe	1990	8.82E-04
				Nitrous Oxide (N2O)	2030	2.04E-05
				Nitrogen Oxides (part not	2990	3.00E-01
				Sulfur Dioxide (SO2)	3990	5.01E-05
				Carbon Monoxide (CO) pollu	4990	3.79E-02
				Carbon Dioxide, non-biogen	6960	1.08E+01
				Methane (CH4)	6970	1.20E-01



Step 1:
Enter Facility Data

Plant Name	Rafael Town Center
Plant No.	13397

Step 3:
Estimate Distance

What is the distance (m) from the facility boundary to the MEI?	60
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Step 4:
Specify Source Type

Does facility have only diesel backup generators?	yes
Is this analysis for a gas station?	no

Step 5:
Read Estimates

Total Cancer Risk	0.5
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.00

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		8.39E-04			0.00
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	3.79E-02			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00	
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00	
CHLOROBENZENE	108907	0.00E+00	
CHLOROFORM ¹	67663	0.00E+00	
Chlorophenols	87865	0.00E+00	
PENTACHLOROPHENOL	87865	0.00E+00	
2,4,6-TRICHLOROPHENOL	88062	0.00E+00	
CHLOROPICRIN	76062	0.00E+00	
p-CHLORO-o-TOLUIDINE	95692	0.00E+00	
CHROMIUM 6 ⁺ ²	18540299	0.00E+00	
Barium chromate ²	10294403	0.00E+00	
Calcium chromate ²	13765190	0.00E+00	
Lead chromate ²	7758976	0.00E+00	
Sodium dichromate ²	10588019	0.00E+00	
Strontium chromate ²	7789062	0.00E+00	
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00	
COPPER AND COMPOUNDS	7440508	0.00E+00	
p-CRESIDINE	120718	0.00E+00	
CRESOLS	1319773	0.00E+00	
M-CRESOL	108394	0.00E+00	
O-CRESOL	95487	0.00E+00	
P-CRESOL	106445	0.00E+00	
CUPFERRON	135206	0.00E+00	
Cyanide And Compounds (inorganic)	57125	0.00E+00	
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00	
2,4-DIAMINOANISOLE	615054	0.00E+00	
2,4-DIAMINOTOLUENE	95807	0.00E+00	
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00	
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00	
3,3-DICHLOROBENZIDINE	91941	0.00E+00	
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00	
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00	
DIETHANOLAMINE	111422	0.00E+00	
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00	
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00	
2,4-DINITROTOLUENE	121142	0.00E+00	
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00	
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00	
1,2-EPOXYBUTANE	106887	0.00E+00	
ETHYL BENZENE	100414	0.00E+00	
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00	
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00	
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00	
ETHYLENE GLYCOL	107211	0.00E+00	
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00	
ETHYLENE THIOUREA	96457	0.00E+00	
Fluorides	1101	0.00E+00	
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00	
FORMALDEHYDE	50000	0.00E+00	

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta- HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	8.82E-04	1.24E+00	3.33E-04
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) 2,7	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	0.00E+00		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	1.241	0.000	1.58E-03
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 DETAIL POLLUTANTS - ABATED
 MOST RECENT P/O APPROVED (2016)

Printed: MAY 6, 2019

Comcast Cable Corporation (P# 15958)

S#	SOURCE NAME	SOURCE CODE	POLLUTANT	CODE	LBS/DAY
MATERIAL	THROUGHPUT	DATE			
1	Diesel Engine, Caterpillar	C22AG098	model SR-4B, emergency standby		
			Benzene	41	4.09E-04
			Formaldehyde	124	3.38E-05
			Organics (other, including	990	1.82E-02
			Arsenic (all)	1030	3.56E-07
			Beryllium (all) pollutant	1040	2.09E-07
			Cadmium	1070	8.90E-07
			Chromium (hexavalent)	1095	1.84E-08
			Lead (all) pollutant	1140	7.55E-07
			Manganese	1160	1.18E-06
			Nickel pollutant	1180	1.44E-05
			Mercury (all) pollutant	1190	2.52E-07
			Diesel Engine Exhaust Part	1350	2.79E-03
			PAH's (non-specified)	1840	1.88E-06
			Nitrous Oxide (N2O)	2030	1.09E-04
			Nitrogen Oxides (part not	2990	1.28E-01
			Sulfur Dioxide (SO2)	3990	1.33E-04
			Carbon Monoxide (CO) pollu	4990	1.58E-01
			Carbon Dioxide, non-biogen	6960	1.37E+01
			Methane (CH4)	6970	5.47E-04



Step 1: Enter Facility Data	
Plant Name	Comcast of California/Colorado/Texas
Plant No.	15958

Step 3: Estimate Distance	
What is the distance (m) from the facility boundary to the MEI?	150

Step 4: Specify Source Type	
Does facility have only diesel backup generators?	yes
Is this analysis for a gas station?	no

Step 5: Read Estimates	
Total Cancer Risk	0.5
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.00

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		0.00E+00			
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	1.58E-01			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00	
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00	
CHLOROBENZENE	108907	0.00E+00	
CHLOROFORM ¹	67663	0.00E+00	
Chlorophenols	87865	0.00E+00	
PENTACHLOROPHENOL	87865	0.00E+00	
2,4,6-TRICHLOROPHENOL	88062	0.00E+00	
CHLOROPICRIN	76062	0.00E+00	
p-CHLORO-o-TOLUIDINE	95692	0.00E+00	
CHROMIUM 6 ⁺ ²	18540299	0.00E+00	
Barium chromate ²	10294403	0.00E+00	
Calcium chromate ²	13765190	0.00E+00	
Lead chromate ²	7758976	0.00E+00	
Sodium dichromate ²	10588019	0.00E+00	
Strontium chromate ²	7789062	0.00E+00	
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00	
COPPER AND COMPOUNDS	7440508	0.00E+00	
p-CRESIDINE	120718	0.00E+00	
CRESOLS	1319773	0.00E+00	
M-CRESOL	108394	0.00E+00	
O-CRESOL	95487	0.00E+00	
P-CRESOL	106445	0.00E+00	
CUPFERRON	135206	0.00E+00	
Cyanide And Compounds (inorganic)	57125	0.00E+00	
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00	
2,4-DIAMINOANISOLE	615054	0.00E+00	
2,4-DIAMINOTOLUENE	95807	0.00E+00	
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00	
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00	
3,3-DICHLOROBENZIDINE	91941	0.00E+00	
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00	
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00	
DIETHANOLAMINE	111422	0.00E+00	
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00	
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00	
2,4-DINITROTOLUENE	121142	0.00E+00	
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00	
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00	
1,2-EPOXYBUTANE	106887	0.00E+00	
ETHYL BENZENE	100414	0.00E+00	
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00	
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00	
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00	
ETHYLENE GLYCOL	107211	0.00E+00	
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00	
ETHYLENE THIOUREA	96457	0.00E+00	
Fluorides	1101	0.00E+00	
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00	
FORMALDEHYDE	50000	0.00E+00	

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta- HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	2.79E-03	3.92E+00	1.05E-03
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) 2,7	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	1.33E-04		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	3.925	0.001	0.00E+00
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 DETAIL POLLUTANTS - ABATED
 MOST RECENT P/O APPROVED (2019)

Printed: MAY 6, 2019

Royal Ground (P# 22498)

S#	SOURCE NAME	SOURCE CODE	POLLUTANT	CODE	LBS/DAY
MATERIAL	THROUGHPUT	DATE			
1	Coffee Roaster	C1760189	Benzene	41	1.03E-08
			Formaldehyde	124	1.21E-07
			Toluene	293	5.47E-09
			Organics (other, including	990	9.21E-06
			Particulates (part not spec	1990	4.83E-07
			Nitrous Oxide (N2O)	2030	3.72E-06
			Nitrogen Oxides (part not	2990	2.25E-03
			Sulfur Dioxide (SO2)	3990	9.15E-06
			Carbon Monoxide (CO) pollut	4990	5.63E-04
			Carbon Dioxide, non-biogen	6960	1.97E+00
			Methane (CH4)	6970	3.06E-06
		G1011078	Organics (other, including	990	3.82E-01
			Particulates (part not spec	1990	5.37E-02
			Carbon Monoxide (CO) pollut	4990	2.08E+00
			Carbon Dioxide, non-biogen	6960	9.63E+00
-1	Afterburner with cyclone	C8360189	Benzene	41	2.57E-07
			Formaldehyde	124	3.02E-06
			Toluene	293	1.37E-07
			Organics (other, including	990	2.30E-04
			Particulates (part not spec	1990	1.21E-04
			Nitrous Oxide (N2O)	2030	9.30E-06
			Nitrogen Oxides (part not	2990	5.64E-03
			Sulfur Dioxide (SO2)	3990	2.29E-05
			Carbon Monoxide (CO) pollut	4990	1.41E-03
			Carbon Dioxide, non-biogen	6960	4.93E+00
			Methane (CH4)	6970	7.65E-05

PLANT TOTAL:

Lbs/day Pollutant

- 2.67E-07 Benzene (41)
- 1.65E+01 Carbon Dioxide, non-biogenic CO2 (6960)
- 2.08E+00 Carbon Monoxide (CO) pollutant (4990)
- 3.14E-06 Formaldehyde (124)
- 7.96E-05 Methane (CH4) (6970)
- 7.89E-03 Nitrogen Oxides (part not specified elsewhere) (2990)
- 1.30E-05 Nitrous Oxide (N2O) (2030)
- 3.82E-01 Organics (other, including CH4) (990)
- 5.38E-02 Particulates (part not specified elsewhere) (1990)
- 3.20E-05 Sulfur Dioxide (SO2) (3990)
- 1.42E-07 Toluene (293)



Step 1:
Enter Facility Data

Plant Name	Royal Ground
Plant No.	22498

Step 3:
Estimate Distance

What is the distance (m) from the facility boundary to the MEI?	250
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Step 4:
Specify Source Type

Does facility have only diesel backup generators?	no
Is this analysis for a gas station?	no

Step 5:
Read Estimates

Total Cancer Risk	13.8
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.01

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		3.28E-02			0.06
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	2.67E-07	3.41E-05	1.68E-07	
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00		
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00		
CHLOROBENZENE	108907	0.00E+00		
CHLOROFORM ¹	67663	0.00E+00		
Chlorophenols	87865	0.00E+00		
PENTACHLOROPHENOL	87865	0.00E+00		
2,4,6-TRICHLOROPHENOL	88062	0.00E+00		
CHLOROPICRIN	76062	0.00E+00		
p-CHLORO-o-TOLUIDINE	95692	0.00E+00		
CHROMIUM 6 ⁺	18540299	0.00E+00		
Barium chromate ²	10294403	0.00E+00		
Calcium chromate ²	13765190	0.00E+00		
Lead chromate ²	7758976	0.00E+00		
Sodium dichromate ²	10588019	0.00E+00		
Strontium chromate ²	7789062	0.00E+00		
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00		
COPPER AND COMPOUNDS	7440508	0.00E+00		
p-CRESIDINE	120718	0.00E+00		
CRESOLS	1319773	0.00E+00		
M-CRESOL	108394	0.00E+00		
O-CRESOL	95487	0.00E+00		
P-CRESOL	106445	0.00E+00		
CUPFERRON	135206	0.00E+00		
Cyanide And Compounds (inorganic)	57125	0.00E+00		
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00		
2,4-DIAMINOANISOLE	615054	0.00E+00		
2,4-DIAMINOTOLUENE	95807	0.00E+00		
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00		
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00		
3,3-DICHLOROBENZIDINE	91941	0.00E+00		
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00		
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00		
DIETHANOLAMINE	111422	0.00E+00		
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00		
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00		
2,4-DINITROTOLUENE	121142	0.00E+00		
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00		
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00		
1,2-EPOXYBUTANE	106887	0.00E+00		
ETHYL BENZENE	100414	0.00E+00		
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00		
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00		
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00		
ETHYLENE GLYCOL	107211	0.00E+00		
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00		
ETHYLENE THIOUREA	96457	0.00E+00		
Fluorides	1101	0.00E+00		
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00		
FORMALDEHYDE	50000	3.14E-06	8.43E-05	6.59E-07

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta-HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	5.38E-02	7.57E+01	2.03E-02
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	3.20E-05		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	1.42E-07		8.95E-10
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	75.680	0.020	6.20E-02
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 DETAIL POLLUTANTS - ABATED
 MOST RECENT P/O APPROVED (2019)

Printed: MAY 6, 2019

Safeway Inc #653 (P# 22809)

S#	SOURCE NAME	SOURCE CODE	DATE	POLLUTANT	CODE	LBS/DAY
1	Emergency Standby Natural Gas Generator Set	C22AF189				
				Organics (other, including	990	2.01E-03
				Particulates (part not spe	1990	1.55E-04
				Nitrous Oxide (N2O)	2030	5.37E-07
				Nitrogen Oxides (part not	2990	4.46E-03
				Sulfur Dioxide (SO2)	3990	8.81E-06
				Carbon Monoxide (CO) pollu	4990	7.79E-03
				Carbon Dioxide, non-biogen	6960	1.90E+00
				Methane (CH4)	6970	1.06E-02



Step 1: Enter Facility Data	
Plant Name	Safeway Inc #653
Plant No.	22809

Step 3: Estimate Distance	
What is the distance (m) from the facility boundary to the MEI?	240

Step 4: Specify Source Type	
Does facility have only diesel backup generators?	yes
Is this analysis for a gas station?	no

Step 5: Read Estimates	
Total Cancer Risk	0.0
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.00

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		1.47E-04			0.00
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	7.79E-03			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00	
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00	
CHLOROBENZENE	108907	0.00E+00	
CHLOROFORM ¹	67663	0.00E+00	
Chlorophenols	87865	0.00E+00	
PENTACHLOROPHENOL	87865	0.00E+00	
2,4,6-TRICHLOROPHENOL	88062	0.00E+00	
CHLOROPICRIN	76062	0.00E+00	
p-CHLORO-o-TOLUIDINE	95692	0.00E+00	
CHROMIUM 6 ⁺ ²	18540299	0.00E+00	
Barium chromate ²	10294403	0.00E+00	
Calcium chromate ²	13765190	0.00E+00	
Lead chromate ²	7758976	0.00E+00	
Sodium dichromate ²	10588019	0.00E+00	
Strontium chromate ²	7789062	0.00E+00	
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00	
COPPER AND COMPOUNDS	7440508	0.00E+00	
p-CRESIDINE	120718	0.00E+00	
CRESOLS	1319773	0.00E+00	
M-CRESOL	108394	0.00E+00	
O-CRESOL	95487	0.00E+00	
P-CRESOL	106445	0.00E+00	
CUPFERRON	135206	0.00E+00	
Cyanide And Compounds (inorganic)	57125	0.00E+00	
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00	
2,4-DIAMINOANISOLE	615054	0.00E+00	
2,4-DIAMINOTOLUENE	95807	0.00E+00	
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00	
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00	
3,3-DICHLOROBENZIDINE	91941	0.00E+00	
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00	
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00	
DIETHANOLAMINE	111422	0.00E+00	
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00	
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00	
2,4-DINITROTOLUENE	121142	0.00E+00	
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00	
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00	
1,2-EPOXYBUTANE	106887	0.00E+00	
ETHYL BENZENE	100414	0.00E+00	
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00	
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00	
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00	
ETHYLENE GLYCOL	107211	0.00E+00	
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00	
ETHYLENE THIOUREA	96457	0.00E+00	
Fluorides	1101	0.00E+00	
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00	
FORMALDEHYDE	50000	0.00E+00	

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta- HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	1.55E-04	2.18E-01	5.86E-05
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) 2,7	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	8.81E-06		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	0.218	0.000	2.78E-04
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Step 1: Enter Facility Data	
Plant Name	703 - 723 3rd Street
Plant No.	Future Emergency Generator

Step 3: Estimate Distance	
What is the distance (m) from the facility boundary to the MEI?	280

Step 4: Specify Source Type	
Does facility have only diesel backup generators?	yes
Is this analysis for a gas station?	no

Step 5: Read Estimates	
Total Cancer Risk	0.4
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.00

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		6.75E-03			0.01
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00		
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00		
CHLOROBENZENE	108907	0.00E+00		
CHLOROFORM ¹	67663	0.00E+00		
Chlorophenols	87865	0.00E+00		
PENTACHLOROPHENOL	87865	0.00E+00		
2,4,6-TRICHLOROPHENOL	88062	0.00E+00		
CHLOROPICRIN	76062	0.00E+00		
p-CHLORO-o-TOLUIDINE	95692	0.00E+00		
CHROMIUM 6 ⁺ ²	18540299	0.00E+00		
Barium chromate ²	10294403	0.00E+00		
Calcium chromate ²	13765190	0.00E+00		
Lead chromate ²	7758976	0.00E+00		
Sodium dichromate ²	10588019	0.00E+00		
Strontium chromate ²	7789062	0.00E+00		
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00		
COPPER AND COMPOUNDS	7440508	0.00E+00		
p-CRESIDINE	120718	0.00E+00		
CRESOLS	1319773	0.00E+00		
M-CRESOL	108394	0.00E+00		
O-CRESOL	95487	0.00E+00		
P-CRESOL	106445	0.00E+00		
CUPFERRON	135206	0.00E+00		
Cyanide And Compounds (inorganic)	57125	0.00E+00		
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00		
2,4-DIAMINOANISOLE	615054	0.00E+00		
2,4-DIAMINOTOLUENE	95807	0.00E+00		
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00		
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00		
3,3-DICHLOROBENZIDINE	91941	0.00E+00		
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00		
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00		
DIETHANOLAMINE	111422	0.00E+00		
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00		
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00		
2,4-DINITROTOLUENE	121142	0.00E+00		
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00		
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00		
1,2-EPOXYBUTANE	106887	0.00E+00		
ETHYL BENZENE	100414	0.00E+00		
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00		
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00		
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00		
ETHYLENE GLYCOL	107211	0.00E+00		
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00		
ETHYLENE THIOUREA	96457	0.00E+00		
Fluorides	1101	0.00E+00		
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00		
FORMALDEHYDE	50000	0.00E+00		

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta- HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITroso-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	7.10E-03	9.99E+00	2.68E-03
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) 2,7	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	0.00E+00		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	9.987	0.003	1.27E-02
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Step 1: Enter Facility Data	
Plant Name	809 B Street
Plant No.	Future Emergency Generator

Step 3: Estimate Distance	
What is the distance (m) from the facility boundary to the MEI?	240

Step 4: Specify Source Type	
Does facility have only diesel backup generators?	yes
Is this analysis for a gas station?	no

Step 5: Read Estimates	
Total Cancer Risk	0.6
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.00

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		6.75E-03			0.01
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00		
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00		
CHLOROBENZENE	108907	0.00E+00		
CHLOROFORM ¹	67663	0.00E+00		
Chlorophenols	87865	0.00E+00		
PENTACHLOROPHENOL	87865	0.00E+00		
2,4,6-TRICHLOROPHENOL	88062	0.00E+00		
CHLOROPICRIN	76062	0.00E+00		
p-CHLORO-o-TOLUIDINE	95692	0.00E+00		
CHROMIUM 6 ⁺	18540299	0.00E+00		
Barium chromate ²	10294403	0.00E+00		
Calcium chromate ²	13765190	0.00E+00		
Lead chromate ²	7758976	0.00E+00		
Sodium dichromate ²	10588019	0.00E+00		
Strontium chromate ²	7789062	0.00E+00		
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00		
COPPER AND COMPOUNDS	7440508	0.00E+00		
p-CRESIDINE	120718	0.00E+00		
CRESOLS	1319773	0.00E+00		
M-CRESOL	108394	0.00E+00		
O-CRESOL	95487	0.00E+00		
P-CRESOL	106445	0.00E+00		
CUPFERRON	135206	0.00E+00		
Cyanide And Compounds (inorganic)	57125	0.00E+00		
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00		
2,4-DIAMINOANISOLE	615054	0.00E+00		
2,4-DIAMINOTOLUENE	95807	0.00E+00		
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00		
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00		
3,3-DICHLOROBENZIDINE	91941	0.00E+00		
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00		
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00		
DIETHANOLAMINE	111422	0.00E+00		
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00		
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00		
2,4-DINITROTOLUENE	121142	0.00E+00		
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00		
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00		
1,2-EPOXYBUTANE	106887	0.00E+00		
ETHYL BENZENE	100414	0.00E+00		
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00		
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00		
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00		
ETHYLENE GLYCOL	107211	0.00E+00		
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00		
ETHYLENE THIOUREA	96457	0.00E+00		
Fluorides	1101	0.00E+00		
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00		
FORMALDEHYDE	50000	0.00E+00		

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta-HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	7.10E-03	9.99E+00	2.68E-03
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	0.00E+00		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	9.987	0.003	1.27E-02
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Step 1: Enter Facility Data	
Plant Name	San Rafael Corporate Center - Lindaro Street
Plant No.	Future Emergency Generator

Step 3: Estimate Distance	
What is the distance (m) from the facility boundary to the MEI?	200

Step 4: Specify Source Type	
Does facility have only diesel backup generators?	yes
Is this analysis for a gas station?	no

Step 5: Read Estimates	
Total Cancer Risk	0.8
Total Chronic Hazard	0.00
Total PM2.5 Concentration	0.00

Step 2:
Enter Emissions Data

Chemical Name	CAS No. <small>(dashes removed)</small>	Emission Rate <small>(lb/day)</small>	Cancer Risk <small>(# / 1,000,000)</small>	Chronic Hazard <small>(index)</small>	PM2.5 Concentration <small>(µg/m3)</small>
Fine Particulate Matter (PM2.5)		6.75E-03			0.01
ACETALDEHYDE	75070	0.00E+00			
ACETAMIDE	60355	0.00E+00			
ACROLEIN	107028	0.00E+00			
ACRYLAMIDE	79061	0.00E+00			
ACRYLIC ACID	79107	0.00E+00			
ACRYLONITRILE	107131	0.00E+00			
ALLYL CHLORIDE	107051	0.00E+00			
2-AMINOANTHRAQUINONE	117793	0.00E+00			
AMMONIA	7664417	0.00E+00			
ANILINE	62533	0.00E+00			
ARSENIC AND COMPOUNDS (INORGANIC) ^{1,2}	7440382	0.00E+00			
ARSINE	7784421	0.00E+00			
ASBESTOS ³	1332214	0.00E+00			
BENZENE ¹	71432	0.00E+00			
BENZIDINE (AND ITS SALTS) values also apply to:	92875	0.00E+00			
Benzidine based dyes	92875	0.00E+00			
Direct Black 38	1937377	0.00E+00			
Direct Blue 6	2602462	0.00E+00			
Direct Brown 95 (technical grade)	16071866	0.00E+00			
BENZYL CHLORIDE	100447	0.00E+00			
BERYLLIUM AND COMPOUNDS ²	7440417	0.00E+00			
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111444	0.00E+00			
BIS(CHLOROMETHYL)ETHER	542881	0.00E+00			
BROMINE AND COMPOUNDS see Potassium Bromate	7758012	0.00E+00			
1,3-BUTADIENE	106990	0.00E+00			
CADMIUM AND COMPOUNDS ²	7440439	0.00E+00			
CAPROLACTAM	105602	0.00E+00			
CARBON DISULFIDE ¹	75150	0.00E+00			
CARBON MONOXIDE	630080	0.00E+00			
CARBON TETRACHLORIDE ¹ (Tetrachloromethane)	56235	0.00E+00			
CHLORINATED PARAFFINS	108171262	0.00E+00			
CHLORINE	7782505	0.00E+00			

CHLORINE DIOXIDE	10049044	0.00E+00	
4-CHLORO-O-PHENYLENEDIAMINE	95830	0.00E+00	
CHLOROBENZENE	108907	0.00E+00	
CHLOROFORM ¹	67663	0.00E+00	
Chlorophenols	87865	0.00E+00	
PENTACHLOROPHENOL	87865	0.00E+00	
2,4,6-TRICHLOROPHENOL	88062	0.00E+00	
CHLOROPICRIN	76062	0.00E+00	
p-CHLORO-o-TOLUIDINE	95692	0.00E+00	
CHROMIUM 6 ⁺	18540299	0.00E+00	
Barium chromate ²	10294403	0.00E+00	
Calcium chromate ²	13765190	0.00E+00	
Lead chromate ²	7758976	0.00E+00	
Sodium dichromate ²	10588019	0.00E+00	
Strontium chromate ²	7789062	0.00E+00	
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00	
COPPER AND COMPOUNDS	7440508	0.00E+00	
p-CRESIDINE	120718	0.00E+00	
CRESOLS	1319773	0.00E+00	
M-CRESOL	108394	0.00E+00	
O-CRESOL	95487	0.00E+00	
P-CRESOL	106445	0.00E+00	
CUPFERRON	135206	0.00E+00	
Cyanide And Compounds (inorganic)	57125	0.00E+00	
HYDROGEN CYANIDE (Hydrocyanic acid)	74908	0.00E+00	
2,4-DIAMINOANISOLE	615054	0.00E+00	
2,4-DIAMINOTOLUENE	95807	0.00E+00	
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96128	0.00E+00	
1,4-DICHLOROBENZENE (p-Dichlorobenzene)	106467	0.00E+00	
3,3-DICHLOROBENZIDINE	91941	0.00E+00	
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75343	0.00E+00	
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117817	0.00E+00	
DIETHANOLAMINE	111422	0.00E+00	
p-DIMETHYLAMINOAZOBENZENE	60117	0.00E+00	
N,N-DIMETHYL FORMAMIDE	68122	0.00E+00	
2,4-DINITROTOLUENE	121142	0.00E+00	
1,4-DIOXANE (1,4-Diethylene dioxide)	123911	0.00E+00	
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106898	0.00E+00	
1,2-EPOXYBUTANE	106887	0.00E+00	
ETHYL BENZENE	100414	0.00E+00	
ETHYL CHLORIDE (Chloroethane)	75003	0.00E+00	
ETHYLENE DIBROMIDE (1,2-Dibromoethane)	106934	0.00E+00	
ETHYLENE DICHLORIDE (1,2-Dichloroethane)	107062	0.00E+00	
ETHYLENE GLYCOL	107211	0.00E+00	
ETHYLENE OXIDE (1,2-Epoxyethane)	75218	0.00E+00	
ETHYLENE THIOUREA	96457	0.00E+00	
Fluorides	1101	0.00E+00	
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664393	0.00E+00	
FORMALDEHYDE	50000	0.00E+00	

GLUTARALDEHYDE	111308	0.00E+00
GLYCOL ETHERS	107211	0.00E+00
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111762	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER – EGEE ¹	110805	0.00E+00
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA ¹	111159	0.00E+00
ETHYLENE GLYCOL METHYL ETHER – EGME ¹	109864	0.00E+00
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110496	0.00E+00
HEXACHLOROBENZENE	118741	0.00E+00
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608731	0.00E+00
alpha-HEXACHLOROCYCLOHEXANE	319846	0.00E+00
beta- HEXACHLOROCYCLOHEXANE	319857	0.00E+00
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58899	0.00E+00
n-HEXANE	110543	0.00E+00
HYDRAZINE	302012	0.00E+00
HYDROCHLORIC ACID (Hydrogen chloride)	7647010	0.00E+00
HYDROGEN SULFIDE	7783064	0.00E+00
ISOPHORONE	78591	0.00E+00
ISOPROPYL ALCOHOL (Isopropanol)	67630	0.00E+00
LEAD AND COMPOUNDS ^{2,4} (inorganic) <i>values also apply to:</i>	7439921	0.00E+00
Lead acetate ²	301042	0.00E+00
Lead phosphate ²	7446277	0.00E+00
Lead subacetate ²	1335326	0.00E+00
LINDANE [see gamma-Hexachlorocyclohexanes]	58899	0.00E+00
MALEIC ANHYDRIDE	108316	0.00E+00
MANGANESE AND COMPOUNDS	7439965	0.00E+00
MERCURY AND COMPOUNDS (INORGANIC)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
METHANOL	67561	0.00E+00
METHYL BROMIDE (Bromomethane)	74839	0.00E+00
METHYL tertiary-BUTYL ETHER	1634044	0.00E+00
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71556	0.00E+00
METHYL ETHYL KETONE (2-Butanone)	78933	0.00E+00
METHYL ISOCYANATE	624839	0.00E+00
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101144	0.00E+00
METHYLENE CHLORIDE (Dichloromethane)	75092	0.00E+00
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101779	0.00E+00
METHYLENE DIPHENYL ISOCYANATE	101688	0.00E+00
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90948	0.00E+00
N-NITROSODI-n-BUTYLAMINE	924163	0.00E+00
N-NITROSODI-n-PROPYLAMINE	621647	0.00E+00
N-NITROSODIETHYLAMINE	55185	0.00E+00
N-NITROSODIMETHYLAMINE	62759	0.00E+00
N-NITROSODIPHENYLAMINE	86306	0.00E+00
N-NITROSO-N-METHYLETHYLAMINE	10595956	0.00E+00
N-NITROSOMORPHOLINE	59892	0.00E+00
N-NITROSOPIPERIDINE	100754	0.00E+00
N-NITROSOPYRROLIDINE	930552	0.00E+00
NAPHTHALENE [see Polycyclic aromatic hydrocarbons]	91203	0.00E+00
NICKEL AND COMPOUNDS ² (<i>values also apply to:</i>)	7440020	0.00E+00

Nickel acetate ²	373024	0.00E+00		
Nickel carbonate ²	3333673	0.00E+00		
Nickel carbonyl ²	13463393	0.00E+00		
Nickel hydroxide ²	12054487	0.00E+00		
Nickelocene ²	1271289	0.00E+00		
NICKEL OXIDE ²	1313991	0.00E+00		
Nickel refinery dust from the pyrometallurgical process ²	1146	0.00E+00		
Nickel subsulfide ²	12035722	0.00E+00		
NITRIC ACID	7697372	0.00E+00		
NITROGEN DIOXIDE	10102440	0.00E+00		
p-NITROSODIPHENYLAMINE	156105	0.00E+00		
OZONE	10028156	0.00E+00		
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES	85105	7.10E-03	9.99E+00	2.68E-03
PERCHLOROETHYLENE (Tetrachloroethylene)	127184	0.00E+00		
PHENOL	108952	0.00E+00		
PHOSGENE	75445	0.00E+00		
PHOSPHINE	7803512	0.00E+00		
PHOSPHORIC ACID	7664382	0.00E+00		
PTHALIC ANHYDRIDE	85449	0.00E+00		
PCB (POLYCHLORINATED BIPHENYLS)	1336363	0.00E+00		
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA) ^{2,7}	1746016	0.00E+00		
POLYCYCLIC AROMATIC HYDROCARBON ² (PAH) (AS B(a)P-EQUIV) ⁵	50328	0.00E+00		
NAPHTHALENE	91203	0.00E+00		
POTASSIUM BROMATE	7758012	0.00E+00		
1,3-PROPANE SULTONE	1120714	0.00E+00		
PROPYLENE (PROPENE)	115071	0.00E+00		
PROPYLENE GLYCOL MONOMETHYL ETHER	107982	0.00E+00		
PROPYLENE OXIDE	75569	0.00E+00		
SELENIUM AND COMPOUNDS	7782492	0.00E+00		
HYDROGEN SELENIDE	7783075	0.00E+00		
Selenium sulfide	7446346	0.00E+00		
SILICA (Crystalline, Respirable)	7631869	0.00E+00		
SODIUM HYDROXIDE	1310732	0.00E+00		
STYRENE	100425	0.00E+00		
SULFATES	9960	0.00E+00		
SULFUR DIOXIDE	7446095	0.00E+00		
SULFURIC ACID	7664939	0.00E+00		
SULFUR TRIOXIDE	7446719	0.00E+00		
OLEUM	8014957	0.00E+00		
1,1,2,2-TETRACHLOROETHANE	79345	0.00E+00		
THIOACETAMIDE	62555	0.00E+00		
TOLUENE	108883	0.00E+00		
Toluene diisocyanates	26471625	0.00E+00		
TOLUENE-2,4-DIISOCYANATE	584849	0.00E+00		
TOLUENE-2,6-DIISOCYANATE	91087	0.00E+00		
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79005	0.00E+00		

TRICHLOROETHYLENE	79016	0.00E+00		
TRIETHYLAMINE	121448	0.00E+00		
URETHANE (Ethyl carbamate)	51796	0.00E+00		
Vanadium Compounds	7440622	0.00E+00		
Vanadium (fume or dust)	7440622	0.00E+00		
VANADIUM PENTOXIDE	1314621	0.00E+00		
VINYL ACETATE	108054	0.00E+00		
VINYL CHLORIDE (Chloroethylene)	75014	0.00E+00		
VINYLDENE CHLORIDE (1,1-Dichloroethylene)	75354	0.00E+00		
XYLENES (mixed isomers)	1330207	0.00E+00		
m-XYLENE	108383	0.00E+00		
o-XYLENE	95476	0.00E+00		
p-XYLENE	106423	0.00E+00		

TOTAL UNADJUSTED Risk Values	9.987	0.003	1.27E-02
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Roadway Screening Analysis Calculator

2nd Street

Search Parameters

County	<input type="text" value="Marin"/>
Roadway Direction	<input type="text" value="East-West"/>
Side of the Roadway	<input type="text" value="North"/>
Distance from Roadway	<input type="text" value="185"/> feet
Annual Average Daily Traffic (ADT)	<input type="text" value="22,285"/>

Results

Marin County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.050 ($\mu\text{g}/\text{m}^3$)

Cancer Risk

3.22 (per million)

Data for Marin County based on meteorological data collected from Mt. Tamalpias in 2005

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.