



Non-Oil & Gas Industry
Construction Permit Application Completeness Checklist
Form APCD-100a
Air Pollution Control Division

Company Name: Oracle America, Inc.
Source Name: Oracle Broomfield Campus
Date: 10/26/2023

Are you requesting a facility wide permit for multiple emissions points? ☒ ☐

In order to have a complete application, the following attachments must be provided, unless stated otherwise.
If application is incomplete, it will be returned to sender and **filing fees will not be refunded.**

Attachment	Application Element	Attached?
A	APEN Filing Fee(s)	☒
B	Air Pollutant Emission Notice(s) (APENs) - APCD Form Series 200	☒
C	Emissions Calculations and Supporting Documentation	☒
D	Company Contact Information - Form APCD-101 ☐ Check here if there will only be one point of contact (Attachment D not required)	☒
E	Ambient Air Impact Analysis (One of the following MUST be selected in order for the application to be considered complete) ☒ Check here if source is exempt from modeling determination requirements per "Interim Colorado Modeling Guideline for Air Quality Permits" and/or "Permitting Section Addendum to the Modeling Guideline". ☐ Check here if operator submitted a request for modeling determination (Form APCD-114) to the Division's Permit Modeling Unit (PMU) prior to application submittal, and the Division determined that modeling was not required. (Include the version of form APCD-114 that was approved and returned by the PMU.) ☐ Check here if operator submitted a modeling analysis to the Division which was approved by the Division prior to application submittal. (Include form APCD-114, operator's approved modeling analysis, and the PMU Modeling Review Report provided by the Division which documents compliance with the NAAQS and conditions of approval for proposed source.) ☐ Check here if operator is submitting a modeling analysis to the Division concurrently with the application submittal, or if the already-submitted modeling analysis has not yet been approved by the Division.	☐
F	Facility Emissions Inventory - Form APCD-102a ☐ Check here if single emissions point source (Attachment F not required)	☒
G	Process description, flow diagram, plot plan of emissions unit and/or facility ☐ Check here if single emissions point source (Attachment G not required)	☒
H	Regulatory Analysis ☒ Check here to request APCD to complete regulatory analysis (Attachment H not required)	☐
Additional attachments		
Certain sources may require additional forms. Refer to https://www.colorado.gov/pacific/cdphe/air/air-permit to check if any APEN supplement forms are required for your source.		
Send Complete Application to: Colorado Department of Public Health & Environment APCD-SS-B1 4300 Cherry Creek Drive South Denver, Colorado 80246-1530 Check box if facility is an existing Title V source: ☐ Send an additional application copy Check box if refined modeling analysis included: ☐ Send an additional application copy Check box if application is for major NANSR or PSD permit: NANSR = Nonattainment Area New Source Review ☐ Send eight (8) total application copies PSD = Prevention of Significant Deterioration		

- Red highlighted cell and red text indicates exceeds 25 tpy

Combustion Source Information for APENs

Oracle America Inc.
Oracle Brommfield Campus

	kW	HP	Hours Operation	Installation Date	Manufacturer	Model #	Serial #	Exhaust Stack				Seasonal Use (%)				Normal Operation			
								Height (ft)	Diameter (ft)	Exhaust Temperature (°)	Flow Rate (CFM)*	Velocity (ft/sec)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr
Generator #1	1,000	1,342	25.0	1997	Caterpillar	SR-4B	2GM00675	7.00	0.83	326 (no load typ.)	8,162	249.7	25.00	25.00	25.00	25.00	0.5	1	52
Generator #2	1,000	1,342	24.0	1997	Caterpillar	SR-4B	2GM00682	7.00	0.83	330.00	8,162	251.5	25.00	25.00	25.00	25.00	0.5	1	52
Generator #3	1,000	1,342	24.0	1997	Caterpillar	SR-4B	2GM00683	7.00	0.83	337.00	7,307	225.2	25.00	25.00	25.00	25.00	0.5	1	52
Generator #4	1,000	1,342	50.0	1997	Caterpillar	SR-4B	2GM00680	7.00	0.83	337.00	8,161	251.5	17.00	27.00	49.00	17.00	0.5	1	52
Generator #5	1,600	2,200	35.0	2001	Cummins	DGAF-1786918	K170274016	8.00	(2) - 0.66	370.00	12,177	593.5	24.00	24.00	30.00	24.00	0.5	1	52
Generator #6	210	286	33.0	1997	Caterpillar	3208	9EF02328	6.00	0.33	236.00	2,055	400.6	23.00	23.00	31.00	23.00	0.5	1	52
Generator #7	750	1,005	35.0	1999	Cummins	DFHA-4479810	E000103753	7.00	(2) - 0.5 > 1.33	259.00	6,160	73.9	24.00	24.00	28.00	24.00	0.5	1	52
Generator #8	210	286	33.0	1999	Caterpillar	3208	9EF02713	6.00	0.33	244.00	2,055	400.6	23.00	23.00	31.00	23.00	0.5	1	52
Generator #9	1,500	2,011	39.0	2001	Cummins	DFCC4487429	J000166145	7.00	(2) - 0.5 > 1.33	371.00	10,650	127.8	21.00	21.00	37.00	21.00	0.5	1	52
Generator #10	150	201	31.0	2001	Cummins	DGFC4956205	CO10214008	3.00	0.42	263.00	1,515	185.9	22.00	22.00	34.00	22.00	0.5	1	52
Boiler #1 Bldg 2 (4.1 MMBTU/hr)			8,760	1997	Ajax	WFG5000	52071.00	52 (See Note 2)	1.5 > 2.33	477 @ 100%	2,000	7.8	46.00	22.00	10.00	22.00	24	7	52
Boiler #21 Bldg 2 (4.1 MMBTU/hr)			8,760	1997	Ajax	WFG5000	52070.00	52 (See Note 2)					46.00	22.00	10.00	22.00	24	7	52
Boiler #3 Bldg 2 (4.1 MMBTU/hr)			8,760	1997	Ajax	WFG5000	52072.00	52 (See Note 2)					46.00	22.00	10.00	22.00	24	7	52
Boiler #4 Bldg 2 (4.1 MMBTU/hr)			8,760	2001	Ajax	WFG5000	55476.00	52 (See Note 2)					46.00	22.00	10.00	22.00	24	7	52
Boiler #5 Bldg 9 (4.835 MMBTU/hr)			8,760	2021	Buserus	G615/16	63130084-00-737-0124	52 (See Note 2)	1.5 > 2.16	263 @ 100%	2,000	9.1	46.00	22.00	10.00	22.00	24	7	52
Water Heaters (0.135 MMBTU/hr)			8,760	2016	Rheem	GHE 125-500A HA	0318BHE0022	52 (See Note 2)	0.66	250.00	200	9.7	25.00	25.00	25.00	25.00	24	7	52
Water Heaters (0.135 MMBTU/hr)			8,760	2018	Rheem	GHE 125-500A HA	1019BHE0031	52 (See Note 3)	0.66	250.00	200	9.7	25.00	25.00	25.00	25.00	24	7	52

Diesel (ULSD): <0.0015% Sulfur
Facility SIC Code: 3571
General Description of facility operations: Offices / Data Center

NOTE 1 Each generator is routinely operated (under no load) each week for 1/2 hour to ensure their operation.
NOTE 2 Boilers and water heater use Natural Gas. Boiler #1, 2 & 3 have a common 28 inch diameter exhaust stack with barometric damper. Boiler #4 has a 26 inch exhaust stack with future boiler conn and barometric damper.
Boilers have a Power Flame Burner, model CR 4-G-25 with a 3HP 3450 rpm motor, 600,000 BTU input.
NOTE 3 Water heater exhaust duct has a 1/4HP Booster Fan at exit through roof.
* Generator data based on vender technical data sheets from vendor web-site.
- Boiler and heater exhaust flow estimated based on typical CO2 readings and formula from Cleaver-Brooks.
- Velocity (ft/sec) = flow rate (CFM) / [(Diameter (ft)/2)² x pi] / 60 (sec/min)
- Height of boiler stack is total height above ground level. Stack height is approximaetly 15-feet above the rooftop.
- Boiler operating hours estimated based on % firing rate and natural gas usage provided by facility.

Emergency Generator Information for APEN

Oracle America Inc.
Oracle Brommfield Campus

	kW	gal/hr @ 100% load*	Actual Hours Operation (2006)	Installation Date	Manufacturer	Model #	Serial #	Exhaust Stack					Seasonal Use (%)				Normal Operation			
								Height (ft)	Diameter (ft)	Exhaust Temperature (F)	Flow Rate (CFM)*	Velocity (ft/sec)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	hrs/yr
Generator #1 (1,341 HP)	1,000	71.9	25.0	1997	Caterpillar	SR-4B	2GM00675	7.00	0.83	326 (no load typ.)	8,162	249.7	25.00	25.00	25.00	25.00	0.5	1	52	26
Generator #2 (1,341 HP)	1,000	71.9	24.0	1997	Caterpillar	SR-4B	2GM00682	7.00	0.83	330.00	8,162	251.5	25.00	25.00	25.00	25.00	0.5	1	52	26
Generator #3 (1,341 HP)	1,000	71.9	24.0	7997	Caterpillar	SR-4B	2GM00683	7.00	0.83	337.00	7,307	225.2	25.00	25.00	25.00	25.00	0.5	1	52	26
Generator #4 (1,341 HP)	1,000	71.9	50.0	1997	Caterpillar	SR-4B	2GM00680	7.00	0.83	337.00	8,161	251.5	17.00	27.00	49.00	17.00	0.5	1	52	26
Generator #5 (2,011 HP)	1,500	108.6	35.0	2001	Caterpillar	SR-4B	5DM0045	8.00	(2) - 0.66	370.00	12,177	593.5	24.00	24.00	30.00	24.00	0.5	1	52	26
Generator #6 (268 HP)	200	18.0	33.0	1997	Caterpillar	3208	9EF02328	6.00	0.33	236.00	2,055	400.6	23.00	23.00	31.00	23.00	0.5	1	52	26
Generator #7 (1,005 HP)	750	54.7	35.0	1999	Cummins	DFHA-4479810	E000103753	7.00	(2) - 0.5 > 1.33	259.00	6,160	73.9	24.00	24.00	28.00	24.00	0.5	1	52	26
Generator #8 (268 HP)	200	17.9	33.0	1999	Caterpillar	3208	9EF02713	6.00	0.33	244.00	2,055	400.6	23.00	23.00	31.00	23.00	0.5	1	52	26
Generator #9 (2,011 HP)	1,500	130.6	39.0	2001	Cummins	DFCC4487429	J000166145	7.00	(2) - 0.5 > 1.33	371.00	10,650	127.8	21.00	21.00	37.00	21.00	0.5	1	52	26
Generator #10 (201 HP)	150	14.1	31.0	2001	Cummins	DGFC4956205	CO10214008	3.00	0.42	263.00	1,515	185.9	22.00	22.00	34.00	22.00	0.5	1	52	26
																			260	

Diesel Fuel (Fuel Oil #2): <0. 0015% Sulfur

* Generator data based on technical data sheets from manufacturer.

Generator #1 - 1,342 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	71.9	gal/hr			
HRS OF OPERATION	8	hrs/yr			
ACTUAL USAGE	575	gal/yr =	79.66	MMBtu/yr	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	80	0.69	5.55	2.78E-03
PM-10	0.06	80	0.57	4.56	2.28E-03
PM-2.5	0.05	80	0.48	3.82	1.91E-03
SOx	0.002	80	0.02	0.12	6.03E-05
CO	0.85	80	8.46	67.71	0.03
NOx	3.2	80	31.86	254.91	0.13
VOC (non-methane)	0.08	80	0.82	6.52	3.26E-03
AMMONIA	0.02	80	0.21	1.65	8.24E-04
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	80	2.51E-03	0.02	1.00E-05
ACROLEIN	7.88E-06	80	7.85E-05	6.28E-04	3.14E-07
BENZENE	7.76E-04	80	7.73E-03	0.06	3.09E-05
FORMALDEHYDE	7.89E-05	80	7.86E-04	6.29E-03	3.14E-06
PAH	2.12E-04	80	2.11E-03	0.02	8.44E-06
TOLUENE	2.81E-04	80	2.80E-03	0.02	1.12E-05
XYLENES	1.93E-04	80	1.92E-03	0.02	7.69E-06
- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu - Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr) - SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 - Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Generator #1 - 1,342 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	71.9	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	35,950	gal/yr =	4,979	MMBtu/yr	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	4,979	0.69	347.02	0.17
PM-10	0.06	4,979	0.57	285.28	0.14
PM-2.5	0.05	4,979	0.48	238.48	0.12
SOx	0.002	4,979	0.02	7.54	3.77E-03
CO	0.85	4,979	8.46	4,231.91	2.12
NOx	3.2	4,979	31.86	15,931.89	7.97
VOC (non-methane)	0.08	4,979	0.82	407.76	0.20
AMMONIA	0.02	4,979	0.21	103.06	0.05
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	4,979	2.51E-03	1.25	6.27E-04
ACROLEIN	7.88E-06	4,979	7.85E-05	0.04	1.96E-05
BENZENE	7.76E-04	4,979	7.73E-03	3.86	1.93E-03
FORMALDEHYDE	7.89E-05	4,979	7.86E-04	0.39	1.96E-04
NAPHTHALENE	1.30E-04	4,979	1.29E-03	0.65	3.24E-04
TOLUENE	2.81E-04	4,979	2.80E-03	1.40	7.00E-04
XYLENES	1.93E-04	4,979	1.92E-03	0.96	4.80E-04
- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu - Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr) - SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 * Maximum hours for emergency generators per EPA guidance. - Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Generator #2 - 1,342 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	71.9	gal/hr			
HRS OF OPERATION	12.8	hrs/yr			
ACTUAL USAGE	920	gal/yr =	127.46	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	127	0.69	8.88	4.44E-03
PM-10	0.06	127	0.57	7.30	3.65E-03
PM-2.5	0.05	127	0.48	6.11	3.05E-03
SOx	0.002	127	0.02	0.19	9.65E-05
CO	0.85	127	8.46	108.34	0.05
NOx	3.2	127	31.86	407.86	0.20
VOC (non-methane)	0.08	127	0.82	10.44	5.22E-03
AMMONIA	0.02	127	0.21	2.64	1.32E-03

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	127	2.51E-03	0.03	1.61E-05
ACROLEIN	7.88E-06	127	7.85E-05	1.00E-03	5.02E-07
BENZENE	7.76E-04	127	7.73E-03	0.10	4.95E-05
FORMALDEHYDE	7.89E-05	127	7.86E-04	1.01E-02	5.03E-06
PAH	2.12E-04	127	2.11E-03	0.03	1.35E-05
TOLUENE	2.81E-04	127	2.80E-03	0.04	1.79E-05
XYLENES	1.93E-04	127	1.92E-03	0.02	1.23E-05

- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu
- Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #2 - 1,342 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	71.9	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	35,950	gal/yr =	4,979	MMBtu/yr	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	4,979	0.69	347.02	0.17
PM-10	0.06	4,979	0.57	285.28	0.14
PM-2.5	0.05	4,979	0.48	238.48	0.12
SOx	0.002	4,979	0.02	7.54	3.77E-03
CO	0.85	4,979	8.46	4,231.91	2.12
NOx	3.2	4,979	31.86	15,931.89	7.97
VOC (non-methane)	0.08	4,979	0.82	407.76	0.20
AMMONIA	0.02	4,979	0.21	103.06	0.05
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	4,979	2.51E-03	1.25	6.27E-04
ACROLEIN	7.88E-06	4,979	7.85E-05	3.92E-02	1.96E-05
BENZENE	7.76E-04	4,979	7.73E-03	3.86	1.93E-03
FORMALDEHYDE	7.89E-05	4,979	7.86E-04	0.39	1.96E-04
PAH	2.12E-04	4,979	2.11E-03	1.06	5.28E-04
TOLUENE	2.81E-04	4,979	2.80E-03	1.40	7.00E-04
XYLENES	1.93E-04	4,979	1.92E-03	0.96	4.80E-04
- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu - Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr) - SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 * Maximum hours for emergency generators per EPA guidance. - Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Generator #3 - 1,342 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	71.9	gal/hr			
HRS OF OPERATION	8.1	hrs/yr			
ACTUAL USAGE	582	gal/yr =	80.66	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	81	0.69	5.62	2.81E-03
PM-10	0.06	81	0.57	4.62	2.31E-03
PM-2.5	0.05	81	0.48	3.86	1.93E-03
SOx	0.002	81	0.02	0.12	6.11E-05
CO	0.85	81	8.46	68.56	0.03
NOx	3.2	81	31.86	258.10	0.13
VOC (non-methane)	0.08	81	0.82	6.61	3.30E-03
AMMONIA	0.02	81	0.21	1.67	8.35E-04

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	81	2.51E-03	0.02	1.02E-05
ACROLEIN	7.88E-06	81	7.85E-05	6.36E-04	3.18E-07
BENZENE	7.76E-04	81	7.73E-03	0.06	3.13E-05
FORMALDEHYDE	7.89E-05	81	7.86E-04	6.36E-03	3.18E-06
PAH	2.12E-04	81	2.11E-03	0.02	8.55E-06
TOLUENE	2.81E-04	81	2.80E-03	0.02	1.13E-05
XYLENES	1.93E-04	81	1.92E-03	0.02	7.78E-06

- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu
- Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #3 - 1,342 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	71.9	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	35,950	gal/yr =	4,979	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	4,979	0.69	347.02	0.17
PM-10	0.06	4,979	0.57	285.28	0.14
PM-2.5	0.05	4,979	0.48	238.48	0.12
SOx	0.002	4,979	0.02	7.54	3.77E-03
CO	0.85	4,979	8.46	4,231.91	2.12
NOx	3.2	4,979	31.86	15,931.89	7.97
VOC (non-methane)	0.08	4,979	0.82	407.76	0.20
AMMONIA	0.02	4,979	0.21	103.06	0.05

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	4,979	2.51E-03	1.25	6.27E-04
ACROLEIN	7.88E-06	4,979	7.85E-05	0.04	1.96E-05
BENZENE	7.76E-04	4,979	7.73E-03	3.86	1.93E-03
FORMALDEHYDE	7.89E-05	4,979	7.86E-04	0.39	1.96E-04
PAH	2.12E-04	4,979	2.11E-03	1.06	5.28E-04
TOLUENE	2.81E-04	4,979	2.80E-03	1.40	7.00E-04
XYLENES	1.93E-04	4,979	1.92E-03	0.96	4.80E-04

- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu
- Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- * Maximum hours for emergency generators per EPA guidance.
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #4 - 1,342 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	71.9	gal/hr			
HRS OF OPERATION	7.9	hrs/yr			
ACTUAL USAGE	568	gal/yr =	78.66	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	79	0.69	5.48	2.74E-03
PM-10	0.06	79	0.57	4.51	2.25E-03
PM-2.5	0.05	79	4.77E-01	3.77	1.88E-03
SOx	0.002	79	0.02	0.12	5.96E-05
CO	0.85	79	8.46	66.86	0.03
NOx	3.2	79	31.86	251.72	0.13
VOC (non-methane)	0.08	79	0.82	6.44	3.22E-03
AMMONIA	0.02	79	0.21	1.63	8.14E-04

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	79	3.48E-04	2.75E-03	1.37E-06
ACROLEIN	7.88E-06	79	1.09E-05	8.58E-05	4.29E-08
BENZENE	7.76E-04	79	1.07E-03	8.45E-03	4.23E-06
FORMALDEHYDE	7.89E-05	79	1.09E-04	8.60E-04	4.30E-07
PAH	2.12E-04	79	2.92E-04	2.31E-03	1.15E-06
TOLUENE	2.81E-04	79	3.88E-04	3.06E-03	1.53E-06
XYLENES	1.93E-04	79	2.66E-04	2.10E-03	1.05E-06

- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu
- Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #4 - 1,342 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	71.9	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	35,950	gal/yr =	4,979	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	4,979	0.69	347.02	0.17
PM-10	0.06	4,979	0.57	285.28	0.14
PM-2.5	0.05	4,979	4.77E-01	238.48	0.12
SOx	0.002	4,979	0.02	7.54	3.77E-03
CO	0.85	4,979	8.46	4,231.91	2.12
NOx	3.2	4,979	31.86	15,931.89	7.97
VOC (non-methane)	0.08	4,979	0.82	407.76	0.20
AMMONIA	0.02	4,979	0.21	103.06	0.05

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	4,979	2.51E-03	1.25	6.27E-04
ACROLEIN	7.88E-06	4,979	7.85E-05	0.04	1.96E-05
BENZENE	7.76E-04	4,979	7.73E-03	3.86	1.93E-03
FORMALDEHYDE	7.89E-05	4,979	7.86E-04	0.39	1.96E-04
PAH	2.12E-04	4,979	2.11E-03	1.06	5.28E-04
TOLUENE	2.81E-04	4,979	2.80E-03	1.40	7.00E-04
XYLENES	1.93E-04	4,979	1.92E-03	0.96	4.80E-04

- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu
- Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- * Maximum hours for emergency generators per EPA guidance.
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #5 - 2,200 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	108.6	gal/hr			
HRS OF OPERATION	8.4	hrs/yr			
ACTUAL USAGE	912	gal/yr =	126.34	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	126	1.05	8.81	4.40E-03
PM-10	0.06	126	0.86	7.24	3.62E-03
PM-2.5	0.05	126	0.72	6.05	3.03E-03
SOx	0.002	126	0.02	0.19	9.57E-05
CO	0.85	126	12.78	107.39	0.05
NOx	3.2	126	48.13	404.28	0.20
VOC (non-methane)	0.08	126	1.23	10.35	5.17E-03
AMMONIA	0.02	126	0.31	2.62	1.31E-03

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	126	3.79E-03	0.03	1.59E-05
ACROLEIN	7.88E-06	126	1.19E-04	9.96E-04	4.98E-07
BENZENE	7.76E-04	126	1.17E-02	0.10	4.90E-05
FORMALDEHYDE	7.89E-05	126	1.19E-03	9.97E-03	4.98E-06
PAH	2.12E-04	126	3.19E-03	0.03	1.34E-05
TOLUENE	2.81E-04	126	4.23E-03	0.04	1.78E-05
XYLENES	1.93E-04	126	2.90E-03	0.02	1.22E-05

- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu
- Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #5 - 2,200 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	108.6	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	54,300	gal/yr =	7,520	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	7,520	1.05	524.14	0.26
PM-10	0.06	7,520	0.86	430.90	0.22
PM-2.5	0.05	7,520	0.72	360.21	0.18
SOx	0.002	7,520	0.02	11.39	5.70E-03
CO	0.85	7,520	12.78	6,392.01	3.20
NOx	3.2	7,520	48.13	24,064.02	12.03
VOC (non-methane)	0.08	7,520	1.23	615.89	0.31
AMMONIA	0.02	7,520	0.31	155.66	0.08

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	7,520	3.79E-03	1.90	9.48E-04
ACROLEIN	7.88E-06	7,520	1.19E-04	0.06	2.96E-05
BENZENE	7.76E-04	7,520	1.17E-02	5.84	2.92E-03
FORMALDEHYDE	7.89E-05	7,520	1.19E-03	0.59	2.97E-04
PAH	2.12E-04	7,520	3.19E-03	1.59	7.97E-04
TOLUENE	2.81E-04	7,520	4.23E-03	2.11	1.06E-03
XYLENES	1.93E-04	7,520	2.90E-03	1.45	7.26E-04

- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu
- Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- * Maximum hours for emergency generators per EPA guidance.
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #6 - 286 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	18.0	gal/hr			
HRS OF OPERATION	9.9	hrs/yr			
ACTUAL USAGE	178	gal/yr =	24.68	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.31	25	0.77	7.65	3.83E-03
PM-10	0.31	25	0.77	7.65	3.83E-03
PM-2.5	0.31	25	0.77	7.65	3.83E-03
SOx	0.29	25	0.72	7.16	3.58E-03
CO	0.95	25	2.37	23.44	1.17E-02
NOx	4.41	25	10.99	108.83	0.05
VOC (non-methane)	0.36	25	0.90	8.88	4.44E-03
AMMONIA	0.01	25	0.01	0.14	7.00E-05

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/hr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	7.67E-04	25	1.91E-03	0.02	9.46E-06
ACROLEIN	9.25E-05	25	2.31E-04	2.28E-03	1.14E-06
BENZENE	9.33E-04	25	2.33E-03	0.02	1.15E-05
FORMALDEHYDE	1.18E-03	25	2.94E-03	0.03	1.46E-05
PAH	1.68E-04	25	4.19E-04	4.15E-03	2.07E-06
TOLUENE	4.09E-04	25	1.02E-03	1.01E-02	5.05E-06
XYLENES	1.93E-04	25	4.81E-04	4.76E-03	2.38E-06

- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu
- Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #6 - 286 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	18.0	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	9,000	gal/yr =	1,246	MMBtu/yr	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.31	1,246	0.77	386.39	0.19
PM-10	0.31	1,246	0.77	386.39	0.19
PM-2.5	0.31	1,246	0.77	386.39	0.19
SOx	0.29	1,246	0.72	361.46	0.18
CO	0.95	1,246	2.37	1,184.09	0.59
NOx	4.41	1,246	10.99	5,496.67	2.75
VOC (non-methane)	0.36	1,246	0.90	448.71	0.22
AMMONIA	5.67E-03	1,246	1.41E-02	7.07	3.53E-03
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	7.67E-04	1,246	1.91E-03	0.96	4.78E-04
ACROLEIN	9.25E-05	1,246	2.31E-04	0.12	5.76E-05
BENZENE	9.33E-04	1,246	2.33E-03	1.16	5.81E-04
FORMALDEHYDE	1.18E-03	1,246	2.94E-03	1.47	7.35E-04
PAH	1.68E-04	1,246	4.19E-04	0.21	1.05E-04
TOLUENE	4.09E-04	1,246	1.02E-03	0.51	2.55E-04
XYLENES	2.85E-04	1,246	7.10E-04	0.36	1.78E-04
- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu - Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr) - SOx emission factor = fraction sulfur * density / heat value, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 * Maximum hours for emergency generators per EPA guidance. - Emission factors are from AP-42, Section 3.3, Tables 3.3-1 and 3.3-2 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Generator #7 - 1,005 Horse Power - Actual

Oracle America Inc.
 Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	54.7	gal/hr			
HRS OF OPERATION	10.1	hrs/yr			
ACTUAL USAGE	552	gal/yr =	76.51	MMBtu/yr	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	77	0.53	5.33	2.67E-03
PM-10	0.06	77	0.43	4.38	2.19E-03
PM-2.5	0.05	77	0.36	3.66	1.83E-03
SOx	0.002	77	0.01	0.12	5.80E-05
CO	0.85	77	6.44	65.03	0.03
NOx	3.2	77	24.24	244.84	0.12
VOC (non-methane)	0.08	77	0.62	6.27	3.13E-03
AMMONIA	0.02	77	0.16	1.58	7.92E-04
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	77	1.91E-03	0.02	9.64E-06
ACROLEIN	7.88E-06	77	5.97E-05	0.00	3.01E-07
BENZENE	7.76E-04	77	5.88E-03	0.06	2.97E-05
FORMALDEHYDE	7.89E-05	77	5.98E-04	6.04E-03	3.02E-06
PAH	2.12E-04	77	1.61E-03	0.02	8.11E-06
TOLUENE	2.81E-04	77	2.13E-03	0.02	1.07E-05
XYLENES	1.93E-04	77	1.46E-03	1.48E-02	7.38E-06
- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu - Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr) - SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 - Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Generator #7 - 1,005 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	54.7	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	27,350	gal/yr =	3,788	MMBtu/yr	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	3,788	0.53	264.00	0.13
PM-10	0.06	3,788	0.43	217.04	0.11
PM-2.5	0.05	3,788	0.36	181.43	0.09
SOx	0.002	3,788	0.01	5.74	2.87E-03
CO	0.85	3,788	6.44	3,219.55	1.61
NOx	3.2	3,788	24.24	12,120.64	6.06
VOC (non-methane)	0.08	3,788	0.62	310.21	0.16
AMMONIA	0.02	3,788	0.16	78.41	0.04
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	3,788	1.91E-03	0.95	4.77E-04
ACROLEIN	7.88E-06	3,788	5.97E-05	0.03	1.49E-05
BENZENE	7.76E-04	3,788	5.88E-03	2.94	1.47E-03
FORMALDEHYDE	7.89E-05	3,788	5.98E-04	0.30	1.49E-04
PAH	2.12E-04	3,788	1.61E-03	0.80	4.01E-04
TOLUENE	2.81E-04	3,788	2.13E-03	1.06	5.32E-04
XYLENES	1.93E-04	3,788	1.46E-03	0.73	3.66E-04
- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu - Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr) - SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 * Maximum hours for emergency generators per EPA guidance. - Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Generator #8 - 286 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	17.9	gal/hr			
HRS OF OPERATION	8.2	hrs/yr			
ACTUAL USAGE	147	gal/yr =	20 MMBtu/yr		
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.31	20	0.77	6.30	3.15E-03
PM-10	0.31	20	0.77	6.30	3.15E-03
PM-2.5	0.31	20	0.77	6.30	3.15E-03
SOx	0.29	20	0.72	5.89	2.95E-03
CO	0.95	20	2.36	19.31	9.66E-03
NOx	4.41	20	10.93	89.64	0.04
VOC (non-methane)	0.36	20	0.89	7.32	3.66E-03
AMMONIA	0.01	20	0.01	0.12	5.76E-05
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	7.67E-04	20	1.90E-03	0.02	7.80E-06
ACROLEIN	9.25E-05	20	2.29E-04	1.88E-03	9.40E-07
BENZENE	9.33E-04	20	2.31E-03	0.02	9.48E-06
FORMALDEHYDE	1.18E-03	20	2.93E-03	0.02	1.20E-05
PAH	1.68E-04	20	4.16E-04	3.42E-03	1.71E-06
TOLUENE	4.09E-04	20	1.01E-03	8.31E-03	4.16E-06
XYLENES	1.93E-04	20	4.78E-04	3.92E-03	1.96E-06
- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu - Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr) - SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 - Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Generator #8 - 286 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	17.9	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	8,950	gal/yr =	1,239	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.31	1,239	0.77	384.24	0.19
PM-10	0.31	1,239	0.77	384.24	0.19
PM-2.5	0.31	1,239	0.77	384.24	0.19
SOx	0.29	1,239	0.72	359.45	0.18
CO	0.95	1,239	2.36	1,177.51	0.59
NOx	4.41	1,239	10.93	5,466.13	2.73
VOC (non-methane)	0.36	1,239	0.89	446.21	0.22
AMMONIA	0.01	1,239	0.01	7.03	3.51E-03

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	7.67E-04	1,239	1.90E-03	0.95	4.75E-04
ACROLEIN	9.25E-05	1,239	2.29E-04	1.15E-01	5.73E-05
BENZENE	9.33E-04	1,239	2.31E-03	1.16	5.78E-04
FORMALDEHYDE	1.18E-03	1,239	2.93E-03	1.46	7.31E-04
PAH	1.68E-04	1,239	4.16E-04	0.21	1.04E-04
TOLUENE	4.09E-04	1,239	1.01E-03	0.51	2.53E-04
XYLENES	2.85E-04	1,239	7.07E-04	0.35	1.77E-04

- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu
- Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr)
- SOx emission factor = fraction sulfur * density / heat value, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- * Maximum hours for emergency generators per EPA guidance.
- Emission factors are from AP-42, Section 3.3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #9 - 2,011 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	130.6	gal/hr			
HRS OF OPERATION	15.4	hrs/yr			
ACTUAL USAGE	2,011	gal/yr =	278.54	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	279	1.26	19.41	9.71E-03
PM-10	0.06	279	1.04	15.96	7.98E-03
PM-2.5	0.05	279	0.87	13.34	6.67E-03
SOx	0.002	279	0.03	0.42	2.11E-04
CO	0.85	279	15.37	236.76	0.12
NOx	3.2	279	57.88	891.32	0.45
VOC (non-methane)	0.08	279	1.48	22.81	1.14E-02
AMMONIA	0.02	279	0.37	5.77	2.88E-03

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	279	4.56E-03	0.07	3.51E-05
ACROLEIN	7.88E-06	279	1.43E-04	2.19E-03	1.10E-06
BENZENE	7.76E-04	279	1.40E-02	0.22	1.08E-04
FORMALDEHYDE	7.89E-05	279	1.43E-03	0.02	1.10E-05
PAH	2.12E-04	279	3.83E-03	0.06	2.95E-05
TOLUENE	2.81E-04	279	5.08E-03	0.08	3.91E-05
XYLENES	1.93E-04	279	3.49E-03	5.38E-02	2.69E-05

- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu
- Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #9 - 2,011 Horse Power - Potential

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	130.6	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	65,300	gal/yr =	9,043	MMBtu/yr	

CRITERIA POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.07	9,043	1.26	630.32	0.32
PM-10	0.06	9,043	1.04	518.19	0.26
PM-2.5	0.05	9,043	0.87	433.18	0.22
SOx	0.002	9,043	0.03	13.70	6.85E-03
CO	0.85	9,043	15.37	7,686.89	3.84
NOx	3.2	9,043	57.88	28,938.87	14.47
VOC (non-methane)	0.08	9,043	1.48	740.65	0.37
AMMONIA	0.02	9,043	0.37	187.20	0.09

TOXIC POLLUTANTS EMISSIONS

POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	9,043	4.56E-03	2.28	1.14E-03
ACROLEIN	7.88E-06	9,043	1.43E-04	0.07	3.56E-05
BENZENE	7.76E-04	9,043	1.40E-02	7.02	3.51E-03
FORMALDEHYDE	7.89E-05	9,043	1.43E-03	0.71	3.57E-04
PAH	2.12E-04	9,043	3.83E-03	1.92	9.59E-04
TOLUENE	2.81E-04	9,043	5.08E-03	2.54	1.27E-03
XYLENES	1.93E-04	9,043	3.49E-03	1.75	8.73E-04

- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr)
- Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu
- Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr)
- SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx
- Fuel consumption rate is based on 100% firing rate
- Ammonia Emission Factor derived from FIRE 6.25
- * Maximum hours for emergency generators per EPA guidance.
- Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96).
- Heat Value from US Department of Energy for ULSD. (<https://afdc.energy.gov/fuels/properties/>)

Generator #10 - 201 Horse Power - Actual

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	14.1	gal/hr			
HRS OF OPERATION	7.9	hrs/yr			
ACTUAL USAGE	111	gal/yr =	15.43	MMBtu/yr	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.31	15	0.61	4.78	2.39E-03
PM-10	0.31	15	0.61	4.78	2.39E-03
PM-2.5	0.31	15	0.61	4.78	2.39E-03
SOx	0.29	15	0.57	4.47	2.24E-03
CO	0.95	15	1.86	14.66	7.33E-03
NOx	4.41	15	8.61	68.03	0.03
VOC (non-methane)	0.36	15	0.70	5.55	2.78E-03
AMMONIA	0.01	15	0.01	0.09	4.37E-05
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	ACTUAL USAGE (MMBtu/yr)	ACTUAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	7.67E-04	15	1.50E-03	1.18E-02	5.92E-06
ACROLEIN	9.25E-05	15	1.81E-04	1.43E-03	7.13E-07
BENZENE	9.33E-04	15	1.82E-03	1.44E-02	7.20E-06
FORMALDEHYDE	1.18E-03	15	2.30E-03	0.02	9.10E-06
PAH	1.68E-04	15	3.28E-04	2.59E-03	1.30E-06
TOLUENE	4.09E-04	15	7.99E-04	6.31E-03	3.15E-06
XYLENES	1.93E-04	15	3.77E-04	2.98E-03	1.49E-06
- Fuel consumption per manufacturer's estimated data. Actual fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Actual Usage (MMBtu/yr) = Actual Usage (gal/yr) x Heat Value (Btu/gal) / 1,000,000 Btu/MMBtu - Actual Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Actual Usage (MMBtu/yr) - SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 - Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Generator #10 - 201 Horse Power - Potential

Oracle America Inc.
 Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	14.1	gal/hr			
HRS OF OPERATION	500	hrs/yr*			
POTENTIAL USAGE	7,050	gal/yr =		976 MMBtu/yr	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
PM	0.31	976	0.61	302.67	0.15
PM-10	0.31	976	0.61	302.67	0.15
PM-2.5	0.31	976	0.61	302.67	0.15
SOx	0.29	976	0.57	283.14	0.14
CO	0.95	976	1.86	927.54	0.46
NOx	4.41	976	8.61	4,305.72	2.15
VOC (non-methane)	0.36	976	0.70	351.49	0.18
AMMONIA	0.01	976	0.01	5.54	2.77E-03
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	POTENTIAL EMISSIONS		
			(lb/hr)	(lb/yr)	(tons/yr)
ACETALDEHYDE	7.67E-04	976	1.50E-03	0.75	3.74E-04
ACROLEIN	9.25E-05	976	1.81E-04	0.09	4.52E-05
BENZENE	9.33E-04	976	1.82E-03	0.91	4.55E-04
FORMALDEHYDE	1.18E-03	976	2.30E-03	1.15	5.76E-04
PAH	1.68E-04	976	3.28E-04	0.16	8.20E-05
TOLUENE	4.09E-04	976	7.99E-04	0.40	2.00E-04
XYLENES	2.85E-04	976	5.57E-04	0.28	1.39E-04
- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu - Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr) - SOx emission factor = fraction sulfur * density / heat value, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 * Maximum hours for emergency generators per EPA guidance. - Emission factors are from AP-42, Section 3.3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Boilers Emissions Summary - Potential
Oracle America Inc.

Pollutant	Boiler #1			Boiler #2			Boiler #3			Boiler #4			Boiler #5			Hot Water Heaters			TOTAL		
	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY
CRITERIA POLLUTANT EMISSIONS																					
PM	267.61	0.03	0.13	267.61	3.05E-02	0.13	267.61	3.05E-02	0.13	267.61	3.05E-02	0.13	315.58	0.04	0.16	17.62	2.01E-03	8.81E-03	1.404	0.16	0.70
PM-10	200.71	0.02	0.10	200.71	2.29E-02	0.10	200.71	2.29E-02	0.10	200.71	2.29E-02	0.10	236.69	0.03	0.12	13.22	1.51E-03	6.61E-03	1.053	0.12	0.53
PM-2.5	200.71	0.02	0.10	200.71	2.29E-02	0.10	200.71	2.29E-02	0.10	200.71	2.29E-02	0.10	236.69	0.03	0.12	13.22	1.51E-03	6.61E-03	1.053	0.12	0.53
SOx	21.13	2.41E-03	1.06E-02	21.13	2.41E-03	1.06E-02	21.13	2.41E-03	1.06E-02	21.13	2.41E-03	1.06E-02	24.91	2.84E-03	1.25E-02	1.39	1.59E-04	6.90E-04	111	1.27E-02	0.06
CO	2957.79	0.34	1.48	2957.79	3.38E-01	1.48	2957.79	3.38E-01	1.48E+00	2957.79	3.38E-01	1.48	3488.03	0.40	1.74	92.75	1.06E-02	0.05	15.412	1.76	7.71
NOx	3521.18	0.40	1.76	3521.18	4.02E-01	1.76	3521.18	4.02E-01	1.76	3521.18	4.02E-01	1.76	4152.41	0.47	2.08	217.97	0.02	0.11	18.455	2.11	9.23
VOC(non-CH4)	193.66	0.02	0.10	193.66	2.21E-02	0.10	193.66	2.21E-02	0.10	193.66	2.21E-02	0.10	228.38	0.03	0.11	12.75	1.48E-03	6.38E-03	1.016	0.12	0.51
LEAD	1.76E-02	2.01E-06	8.80E-06	1.76E-02	2.01E-06	8.80E-06	1.76E-02	2.01E-06	8.80E-06	1.76E-02	2.01E-06	8.80E-06	2.08E-02	2.37E-06	1.04E-05	1.16E-03	1.32E-07	5.80E-07	9.23E-02	1.05E-05	4.62E-05
TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS																					
TOTAL HAPITAP EMISSIONS	66.50	7.59E-03	0.03	66.50	7.59E-03	3.32E-02	66.50	7.59E-03	3.32E-02	66.50	7.59E-03	3.32E-02	78.42	8.95E-03	3.92E-02	4.38	5.00E-04	2.19E-03	270.36	0.03	0.14
ACENAPHTHENE (H)	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	7.47E-05	8.53E-09	3.74E-08	4.17E-08	4.76E-10	2.09E-09	2.58E-04	2.94E-08	1.29E-07
ACENAPHTHYLENE (H)	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	7.47E-05	8.53E-09	3.74E-08	4.17E-08	4.76E-10	2.09E-09	2.58E-04	2.94E-08	1.29E-07
ANTHRACENE	8.45E-05	9.65E-09	4.23E-08	8.45E-05	9.65E-09	4.23E-08	8.45E-05	9.65E-09	4.23E-08	8.45E-05	9.65E-09	4.23E-08	9.07E-05	1.14E-08	4.98E-08	5.57E-08	6.35E-10	2.78E-09	3.44E-04	3.92E-08	1.72E-07
ARSENIC (H/T)	7.04E-03	8.04E-07	3.52E-06	7.04E-03	8.04E-07	3.52E-06	7.04E-03	8.04E-07	3.52E-06	7.04E-03	8.04E-07	3.52E-06	8.30E-03	9.48E-07	4.15E-06	4.84E-04	5.29E-08	2.32E-07	0.03	3.27E-06	1.43E-05
BENZENE (H/T)	0.07	8.44E-06	3.70E-05	7.39E-02	8.44E-06	3.70E-05	7.39E-02	8.44E-06	3.70E-05	7.39E-02	8.44E-06	3.70E-05	8.72E-02	9.95E-06	4.36E-05	4.87E-03	5.56E-07	2.43E-06	0.30	3.43E-05	1.50E-04
BENZ(a)ANTHRACENE (H)	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	7.47E-05	8.53E-09	3.74E-08	4.17E-08	4.76E-10	2.09E-09	2.58E-04	2.94E-08	1.29E-07
BENZ(b,k)FLUORANTHENE (H)	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	7.47E-05	8.53E-09	3.74E-08	4.17E-08	4.76E-10	2.09E-09	2.58E-04	2.94E-08	1.29E-07
BENZ(k)FLUORANTHENE (H/T)	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	7.47E-05	8.53E-09	3.74E-08	4.17E-08	4.76E-10	2.09E-09	2.58E-04	2.94E-08	1.29E-07
BENZO(g,h,i)PERYLENE (H/T)	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.98E-05	5.69E-09	2.49E-08	2.78E-06	3.18E-10	1.39E-09	1.72E-04	1.96E-08	8.59E-08
BENZO(a)PYRENE (H)	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.98E-05	5.69E-09	2.49E-08	2.78E-06	3.18E-10	1.39E-09	1.72E-04	1.96E-08	8.59E-08
BERYLLIUM (H/T)	4.23E-04	4.82E-08	2.11E-07	4.23E-04	4.82E-08	2.11E-07	4.23E-04	4.82E-08	2.11E-07	4.23E-04	4.82E-08	2.11E-07	4.98E-04	5.69E-08	2.49E-07	2.78E-05	3.18E-09	1.39E-08	1.72E-03	1.96E-07	8.59E-07
CADMIUM (H/T)	0.04	4.42E-06	1.94E-05	3.87E-02	4.42E-06	1.94E-05	3.87E-02	4.42E-06	1.94E-05	3.87E-02	4.42E-06	1.94E-05	0.05	5.21E-06	2.28E-05	2.55E-03	2.91E-07	1.28E-06	0.16	1.80E-05	7.87E-05
CHROMIUM (H)	0.05	5.63E-06	2.46E-05	4.93E-02	5.63E-06	2.46E-05	4.93E-02	5.63E-06	2.46E-05	4.93E-02	5.63E-06	2.46E-05	0.06	6.64E-06	2.91E-05	3.25E-03	3.71E-07	1.62E-06	0.20	2.29E-05	1.00E-04
CHRYSENE (H)	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	7.47E-05	8.53E-09	3.74E-08	4.17E-08	4.76E-10	2.09E-09	2.58E-04	2.94E-08	1.29E-07
COBALT (H)	2.96E-03	3.38E-07	1.48E-06	2.96E-03	3.38E-07	1.48E-06	2.96E-03	3.38E-07	1.48E-06	2.96E-03	3.38E-07	1.48E-06	3.49E-03	3.98E-07	1.74E-06	1.95E-04	2.22E-08	9.74E-08	1.20E-02	1.37E-06	6.01E-06
DIBENZO(a,h)ANTHRACENE (H)	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.23E-05	4.82E-09	2.11E-08	4.98E-05	5.69E-09	2.49E-08	2.78E-06	3.18E-10	1.39E-09	1.72E-04	1.96E-08	8.59E-08
DICHLOROBENZENE (H/T)	0.04	4.82E-06	2.11E-05	4.23E-02	4.82E-06	2.11E-05	4.23E-02	4.82E-06	2.11E-05	4.23E-02	4.82E-06	2.11E-05	0.05	5.69E-06	2.49E-05	2.78E-03	3.18E-07	1.39E-06	1.72E-01	1.96E-05	8.59E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	5.63E-04	6.43E-08	2.82E-07	5.63E-04	6.43E-08	2.82E-07	5.63E-04	6.43E-08	2.82E-07	5.63E-04	6.43E-08	2.82E-07	6.64E-04	7.58E-08	3.32E-07	3.71E-05	4.24E-09	1.86E-08	2.29E-03	2.61E-07	1.15E-06
FLUORANTHENE (H)	1.06E-04	1.21E-08	5.28E-08	1.06E-04	1.21E-08	5.28E-08	1.06E-04	1.21E-08	5.28E-08	1.06E-04	1.21E-08	5.28E-08	1.25E-04	1.42E-08	6.23E-08	6.96E-06	7.94E-10	3.48E-09	4.29E-04	4.90E-08	2.15E-07
FORMALDEHYDE (H/T)	2.64	3.01E-04	1.32E-03	2.64	3.01E-04	1.32E-03	2.64	3.01E-04	1.32E-03	2.64	3.01E-04	1.32E-03	3.11E+00	3.56E-04	1.56E-03	0.17	1.99E-05	8.70E-05	10.74	1.23E-03	5.37E-03
HEXANE (H/T)	63.38	7.24E-03	3.17E-02	63.38	7.24E-03	3.17E-02	63.38	7.24E-03	3.17E-02	63.38	7.24E-03	3.17E-02	74.74	8.53E-03	0.04	4.17	4.76E-04	2.09E-03	257.70	0.03	0.13
INDENO(1,2,3-cd)PYRENE (H)	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	7.47E-05	8.53E-09	3.74E-08	4.17E-08	4.76E-10	2.09E-09	2.58E-04	2.94E-08	1.29E-07
LEAD (H)	0.02	2.01E-06	8.80E-06	0.02	2.01E-06	8.80E-06	0.02	2.01E-06	8.80E-06	0.02	2.01E-06	8.80E-06	0.02	2.37E-06	1.04E-05	1.16E-03	1.32E-07	5.80E-07	0.07	8.17E-06	3.58E-05
MANGANESE (H/T)	1.34E-02	1.53E-06	6.69E-06	1.34E-02	1.53E-06	6.69E-06	1.34E-02	1.53E-06	6.69E-06	1.34E-02	1.53E-06	6.69E-06	0.02	1.80E-06	7.89E-06	8.81E-04	1.01E-07	4.41E-07	0.05	6.21E-06	2.72E-05
MERCURY (H/T)	9.16E-03	1.05E-06	4.58E-06	9.16E-03	1.05E-06	4.58E-06	9.16E-03	1.05E-06	4.58E-06	9.16E-03	1.05E-06	4.58E-06	1.08E-02	1.23E-06	5.40E-06	6.03E-04	6.88E-08	3.01E-07	0.04	4.25E-06	1.86E-05
2-METHYLNAPHTHALENE (H)	8.45E-04	9.65E-08	4.23E-07	8.45E-04	9.65E-08	4.23E-07	8.45E-04	9.65E-08	4.23E-07	8.45E-04	9.65E-08	4.23E-07	9.97E-04	1.14E-07	4.98E-07	5.57E-05	6.35E-09	2.78E-08	3.44E-03	3.92E-07	1.72E-06
3-METHYLCHLOROANTHRENE (H)	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	6.34E-05	7.24E-09	3.17E-08	7.47E-05	8.53E-09	3.74E-08	4.17E-08	4.76E-10	2.09E-09	2.58E-04	2.94E-08	1.29E-07
NAPHTHALENE (H)	2.15E-02	2.45E-06	1.07E-05	2.15E-02	2.45E-06	1.07E-05	2.15E-02	2.45E-06	1.07E-05	2.15E-02	2.45E-06	1.07E-05	0.03	2.89E-06	1.27E-05	1.41E-03	1.61E-07	7.07E-07	0.09	9.97E-06	4.37E-05
NICKEL (H)	0.07	8.44E-06	3.70E-05	7.39E-02	8.44E-06	3.70E-05	7.39E-02	8.44E-06	3.70E-05	7.39E-02	8.44E-06	3.70E-05	8.72E-02	9.95E-06	4.36E-05	4.87E-03	5.56E-07	2.43E-06	0.30	3.43E-05	1.50E-04
PHENANANTHRENE (H)	5.99E-04	6.83E-08	2.99E-07	5.99E-04	6.83E-08	2.99E-07	5.99E-04	6.83E-08	2.99E-07	5.99E-04	6.83E-08	2.99E-07	7.06E-04	8.06E-08	3.53E-07	3.94E-05	4.50E-09	1.97E-08	2.43E-03	2.78E-07	1.22E-06
PYRENE (H)	1.76E-04	2.01E-08	8.80E-08	1.76E-04	2.01E-08	8.80E-08	1.76E-04	2.01E-08	8.80E-08	1.76E-04	2.01E-08	8.80E-08	2.08E-04	2.37E-08	1.04E-07	1.16E-05	1.32E-09	5.80E-09	7.16E-04	8.17E-08	3.58E-07
SELENIUM (H)	8.45E-04	9.65E-08	4.23E-07	8.45E-04	9.65E-08	4.23E-07	8.45E-04	9.65E-08	4.23E-07	8.45E-04	9.65E-08	4.23E-07	9.97E-04	1.14E-07	4.98E-07	5.57E-05	6.35E-09	2.78E-08	3.44E-03	3.92E-07	1.72E-06

Boiler Information for APENs

Oracle America Inc.
 Oracle Brommfield Campus

	Hours Operation	Installation Date	Manufacturer	Model #	Serial #	Exhaust Stack						Seasonal Use (%)				Normal Operation		
						Stack ID	Height (ft)*	Diameter (ft)	Exhaust Temperature (F)	Flow Rate (CFM)*	Velocity (ft/sec)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr
Boiler #1 (4.1 MMBTU/hr)	8,760	1997	Ajax	WFG5000	52071	BS-01	52	2.33	477 @ 100%	2,000	7.8	46.00	22.00	10.00	22.00	24	7	52
Boiler #2 (4.1 MMBTU/hr)	8,760	1997	Ajax	WFG5000	52070							46.00	22.00	10.00	22.00	24	7	52
Boiler #3 (4.1 MMBTU/hr)	8,760	1997	Ajax	WFG5000	52072							46.00	22.00	10.00	22.00	24	7	52
Boiler #4 (4.1 MMBTU/hr)	8,760	2001	Ajax	WFG5000	55476	BS-02	52	2.16	263 @ 100%	2,000	9.1	46.00	22.00	10.00	22.00	24	7	52
Boiler #5 (4.835 MMBTU/hr)	8,760	2021	Buserus	G615/16	63130084-00-737-0124							46.00	22.00	10.00	22.00	24	7	52

- Boiler and heater exhaust flow estimated based on typical CO2 readings and formula from Cleaver-Brooks.
- Velocity (ft/sec) = flow rate (CFM) / [(Diameter (ft)/2)² x pi] / 60 (sec/min)
- * Height of boiler stack is total height above ground level. Stack height is approximately 15-feet above the roofline.
- Boiler operating hours estimated based on % firing rate and natural gas usage provided by facility.
- Boilers are used for 100% space heat.

Facility-Wide Limits

Oracle America Inc.

Oracle Brommfield Campus

Pollutant	Total (Hrs/yr) ⁽¹⁾	Generator #9 (2,011 HP) ⁽²⁾			Total (Hrs/yr)	Boilers and HW Heaters			Total (lbs/yr)	Total (TPY)
		lb/hr	lbs/yr	TPY		lb/hr	lbs/yr	TPY		
PM	400	1.26	504.26	0.25	8,760	0.16	1,421.27	0.71	1,925.53	0.96
PM-10		1.04	414.55	0.21		0.12	1,065.95	0.53	1,480.50	0.74
PM-2.5		0.87	346.54	0.17		0.12	1,065.95	0.53	1,412.49	0.71
SOx		0.03	10.96	0.01		0.01	112.21	0.06	123.17	0.06
CO		15.37	6,150	3.07		1.77	15,504.68	7.75	21,654.19	10.83
NOx		57.88	23,151	11.58		2.13	18,673.06	9.34	41,824.15	20.91
VOC		1.48	592.52	0.30		0.12	1,028.55	0.51	1,621.07	0.81
Benzene		1.40E-02	5.61	2.81E-03		3.49E-05	0.31	1.53E-04	5.92	2.96E-03
Formaldehyde		1.43E-03	0.57	2.85E-04		1.25E-03	10.91	5.46E-03	11.48	5.74E-03
Hexane		-	-	-		0.03	106.66	5.33E-02	106.66	0.05
Toluene		5.08E-03	2.03	1.02E-03		5.65E-05	4.95E-01	2.47E-04	2.53	1.26E-03
Xylene		3.49E-03	1.40	6.98E-04		-	-	-	1.40	6.98E-04

⁽¹⁾ Total for all generators⁽²⁾ Generator #9 as worst-case generator for total annual facility-wide generator run hour limits.

Generator #9 - 2,011 Horse Power - Potential for facility-wide Hours of Operation Annual total Limits

Oracle America Inc.

Oracle Brommfield Campus

EMISSION CALCULATIONS - DIESEL FUEL			HEAT VALUE	138,490	BTU/GAL
DIESEL INDUSTRIAL ENGINE			SULFUR =	0.0015	%
			DENSITY =	7.1	LB/GAL
FUEL CONSUMPTION	130.6	gal/hr			
HRS OF OPERATION	400	hrs/yr*			
POTENTIAL USAGE	52,240	gal/yr =		7,235	MMBtu/yr
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	(lb/hr)	POTENTIAL EMISSIONS (lb/yr)	(tons/yr)
PM	0.07	7,235	1.26	504.26	0.25
PM-10	0.06	7,235	1.04	414.55	0.21
PM-2.5	0.05	7,235	0.87	346.54	0.17
SOx	0.002	7,235	0.03	10.96	5.48E-03
CO	0.85	7,235	15.37	6,149.51	3.07
NOx	3.2	7,235	57.88	23,151.10	11.58
VOC (non-methane)	0.08	7,235	1.48	592.52	0.30
AMMONIA	0.02	7,235	0.37	149.76	0.07
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/MMBtu)	POTENTIAL USAGE (MMBtu/yr)	(lb/hr)	POTENTIAL EMISSIONS (lb/yr)	(tons/yr)
ACETALDEHYDE	2.52E-04	7,235	4.56E-03	1.82	9.12E-04
ACROLEIN	7.88E-06	7,235	1.43E-04	0.06	2.85E-05
BENZENE	7.76E-04	7,235	1.40E-02	5.61	2.81E-03
FORMALDEHYDE	7.89E-05	7,235	1.43E-03	0.57	2.85E-04
PAH	2.12E-04	7,235	3.83E-03	1.53	7.67E-04
TOLUENE	2.81E-04	7,235	5.08E-03	2.03	1.02E-03
XYLENES	1.93E-04	7,235	3.49E-03	1.40	6.98E-04
- Fuel consumption per manufacturer's estimated data. Fuel oil usage = operation (hrs/yr) x fuel consumption (gal/yr) - Potential Usage (MMBtu/yr) = [(Fuel Consumption (gal/hr) x Potential Hours/yr) x Heat Value (Btu/gal)] / 1,000,000 Btu/MMBtu - Potential Emissions (lb/yr) = Emission Factor (lb/MMBTU) x Potential Usage (MMBtu/yr) - SOx emission factor = 1.01 x %S, assuming all sulfur converts to SOx - Fuel consumption rate is based on 100% firing rate - Ammonia Emission Factor derived from FIRE 6.25 * Maximum hours for emergency generators per EPA guidance. - Emission factors are from AP-42, Section 3.4, Tables 3.4-1, 3.4-2, and 3.4-3 (10/96). - Heat Value from US Department of Energy for ULSD. (https://afdc.energy.gov/fuels/properties/)					

Facility-Wide Emission Calculations Summary - Actual
Oracle America Inc.

Pollutant	Generators			Boilers			Water Heaters			TOTAL		
	lb/hr	lbs/yr	TPY	lb/hr	lbs/yr	TPY	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY
CRITERIA POLLUTANT EMISSIONS												
PM	7.76	77.83	0.04	0.07	432.72	0.22	17.62	2.01E-03	8.81E-03	25.45	510.55	0.26
PM-10	6.76	67.31	0.03	0.05	324.54	0.16	13.22	1.51E-03	6.61E-03	20.03	391.86	0.20
PM-2.5	6.00	59.34	0.03	0.05	324.54	0.16	13.22	1.51E-03	6.61E-03	19.27	383.89	0.20
SOx	2.13	18.81	9.40E-03	5.45E-03	34.16	1.71E-02	1.39	1.59E-04	6.96E-04	3.53	52.97	0.03
CO	75.03	778.06	0.39	0.75	4,680.66	2.34	92.75	1.06E-02	0.05	168.53	5,458.73	2.78
NOx	288.24	2,979.53	1.49	0.91	5,679.77	2.84	217.97	0.02	0.11	507.12	8,659.32	4.44
VOC	9.09	91.19	0.05	0.05	313.15	0.16	12.75	1.46E-03	6.38E-03	21.89	404.35	0.21
AMMONIA	1.71	17.89	8.95E-03							1.71	17.89	8.95E-03
TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS												
TOTAL HAP/TAP EMISSIONS	1.40	0.39	8.15E-04	0.02	107.52	0.05	4.38	0.00	0.00	5.80	107.91	0.06
ACETALDEHYDE	2.34E-02	0.24	1.21E-04							0.02	0.24	1.21E-04
ACENAPHTHENE (H)				1.63E-08	1.02E-04	5.12E-08	4.17E-06	4.76E-10	2.09E-09	4.19E-06	1.02E-04	5.33E-08
ACENAPHTHYLENE (H)				1.63E-08	1.02E-04	5.12E-08	4.17E-06	4.76E-10	2.09E-09	4.19E-06	1.02E-04	5.33E-08
ACROLEIN	1.21E-03	1.17E-02	5.87E-06							1.21E-03	1.17E-02	5.87E-06
ANTHRACENE				2.18E-08	1.37E-04	6.83E-08	5.57E-06	6.35E-10	2.78E-09	5.59E-06	1.37E-04	7.11E-08
ARSENIC (H/T)				1.82E-06	1.14E-02	5.69E-06	4.64E-04	5.29E-08	2.32E-07	4.66E-04	1.14E-02	5.93E-06
BENZENE (H/T)	6.62E-01	0.06	3.31E-04	1.91E-05	0.12	5.98E-05	4.87E-03	5.56E-07	2.43E-06	0.67	0.18	3.93E-04
BENZ(a)ANTHRACENE (H)				1.63E-08	1.02E-04	5.12E-08	4.17E-06	4.76E-10	2.09E-09	4.19E-06	1.02E-04	5.33E-08
BENZ(b,k)FLUORANTHENE (H)				1.63E-08	1.02E-04	5.12E-08	4.17E-06	4.76E-10	2.09E-09	4.19E-06	1.02E-04	5.33E-08
BENZ(k)FLUORANTHENE (H/T)				1.63E-08	1.02E-04	5.12E-08	4.17E-06	4.76E-10	2.09E-09	4.19E-06	1.02E-04	5.33E-08
BENZO(g,h,i)PERYLENE (H/T)				1.09E-08	6.83E-05	3.42E-08	2.78E-06	3.18E-10	1.39E-09	2.79E-06	6.83E-05	3.56E-08
BENZO(a)PYRENE (H)				1.09E-08	6.83E-05	3.42E-08	2.78E-06	3.18E-10	1.39E-09	2.79E-06	6.83E-05	3.56E-08
BERYLLIUM (H/T)				1.09E-07	6.83E-04	3.42E-07	2.78E-05	3.18E-09	1.39E-08	2.79E-05	6.83E-04	3.56E-07
CADMIUM (H/T)				9.99E-06	0.06	3.13E-05	2.55E-03	2.91E-07	1.28E-06	2.56E-03	0.06	3.26E-05
CHROMIUM (H)				1.27E-05	0.08	3.99E-05	3.25E-03	3.71E-07	1.62E-06	3.26E-03	0.08	4.15E-05
CHRYSENE (H)				1.63E-08	1.02E-04	5.12E-08	4.17E-06	4.76E-10	2.09E-09	4.19E-06	1.02E-04	5.33E-08
COBALT (H)				7.63E-07	4.78E-03	2.39E-06	1.95E-04	2.22E-08	9.74E-08	1.96E-04	4.78E-03	2.49E-06
DIBENZO(a,h)ANTHRACENE (H)				1.09E-08	6.83E-05	3.42E-08	2.78E-06	3.18E-10	1.39E-09	2.79E-06	6.83E-05	3.56E-08
DICHLOROBENZENE (H/T)				1.09E-05	0.07	3.42E-05	2.78E-03	3.18E-07	1.39E-06	2.79E-03	0.07	3.56E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)				1.45E-07	9.11E-04	4.55E-07	3.71E-05	4.24E-09	1.86E-08	3.72E-05	9.11E-04	4.74E-07
FLUORANTHENE (H)				2.72E-08	1.71E-04	8.54E-08	6.96E-06	7.94E-10	3.48E-09	6.98E-06	1.71E-04	8.89E-08
FORMALDEHYDE (H/T)	0.13	1.38E-02	6.64E-05	6.81E-04	4.27	2.14E-03	0.17	1.99E-05	8.70E-05	0.31	4.28	2.29E-03
HEXANE (H/T)				1.63E-02	102.49	5.12E-02	4.17	4.76E-04	2.09E-03	4.19	102.49	0.05
INDENO(1,2,3-cd)PYRENE (H)				1.63E-08	1.02E-04	5.12E-08	4.17E-06	4.76E-10	2.09E-09	4.19E-06	1.02E-04	5.33E-08
LEAD (H)				4.54E-06	0.03	1.42E-05	1.16E-03	1.32E-07	5.80E-07	1.16E-03	0.03	1.48E-05
MANGANESE (H/T)				3.45E-06	2.16E-02	1.08E-05	8.81E-04	1.01E-07	4.41E-07	8.85E-04	2.16E-02	1.13E-05
MERCURY (H/T)				2.36E-06	1.48E-02	7.40E-06	6.03E-04	6.88E-08	3.01E-07	6.05E-04	1.48E-02	7.70E-06
2-METHYLNAPHTHALENE (H)				2.18E-07	1.37E-03	6.83E-07	5.57E-05	6.35E-09	2.78E-08	5.59E-05	1.37E-03	7.11E-07
3-METHYLCHLOROANTHRENE (H)				1.63E-08	1.02E-04	5.12E-08	4.17E-06	4.76E-10	2.09E-09	4.19E-06	1.02E-04	5.33E-08
NAPHTHALENE (H)				5.54E-06	0.03	1.74E-05	1.41E-03	1.61E-07	7.07E-07	1.42E-03	0.03	1.81E-05
NICKEL (H)				1.91E-05	0.12	5.98E-05	4.87E-03	5.56E-07	2.43E-06	4.89E-03	0.12	6.22E-05
PHENANTHRENE (H)				1.54E-07	9.68E-04	4.84E-07	3.94E-05	4.50E-09	1.97E-08	3.96E-05	9.68E-04	5.04E-07
PAH	0.18	0.02	8.78E-05							0.18	0.02	8.78E-05
PYRENE (H)				4.54E-08	2.85E-04	1.42E-07	1.16E-05	1.32E-09	5.80E-09	1.16E-05	2.85E-04	1.48E-07
SELENIUM (H)				2.18E-07	1.37E-03	6.83E-07	5.57E-05	6.35E-09	2.78E-08	5.59E-05	1.37E-03	7.11E-07
TOLUENE (H/T)	0.24	0.02	1.22E-04	3.09E-05	0.19	9.68E-05	7.88E-03	9.00E-07	3.94E-06	0.25	0.22	2.23E-04
XYLENE	0.16	0.02	8.11E-05							0.16	0.02	8.11E-05

Calculations for Boilers and Generators Colorado - 10-31-2023: Facility-Wide Actual Emissions

Emergency Generators Emission Summary - Actual
Orack America Inc.

Pollutant	Generator #1 (1,341 HP)			Generator #2 (1,341 HP)			Generator #3 (1,341 HP)			Generator #4 (1,341 HP)			Generator #5 (2,011 HP)			Generator #6 (266 HP)			Generator #7 (1,005 HP)			Generator #8 (266 HP)			Generator #9 (2,011 HP)			Generator #10 (201 HP)			TOTAL		
	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY	lb/hr	lb/yr	TPY			
CRITERIA POLLUTANT EMISSIONS																																	
PM	0.69	5.55	2.78E-03	0.69	8.88	4.44E-03	0.69	5.82	2.81E-03	0.69	5.48	2.74E-03	1.05	8.81	4.40E-03	0.77	7.65	3.83E-03	0.53	5.33	2.67E-03	0.77	6.30	3.15E-03	1.26	10.41	5.71E-03	0.61	4.78	2.39E-03	77.83	7.78	0.04
PM10	0.57	4.56	2.28E-03	0.57	7.30	3.65E-03	0.57	4.42	2.21E-03	0.57	4.51	2.25E-03	0.96	7.24	3.62E-03	0.77	7.65	3.83E-03	0.43	4.38	2.19E-03	0.77	6.30	3.15E-03	1.04	15.96	7.98E-03	0.61	4.78	2.39E-03	67.31	6.75	0.03
PM2.5	0.48	3.82	1.91E-03	0.48	6.11	3.05E-03	0.48	3.88	1.93E-03	0.48	3.77	1.88E-03	0.72	6.05	3.03E-03	0.77	7.65	3.83E-03	0.38	3.68	1.83E-03	0.77	6.30	3.15E-03	0.87	13.34	6.67E-03	0.61	4.78	2.39E-03	59.34	6.00	0.03
SOx	0.02	0.12	6.05E-05	0.02	0.19	9.60E-05	0.02	0.12	6.11E-05	0.02	0.12	6.96E-05	0.02	0.19	9.67E-05	0.72	7.16	3.58E-03	0.01	0.12	5.89E-05	0.72	5.89	2.94E-03	0.03	0.42	2.11E-04	0.07	4.47	2.24E-03	18.81	2.13	9.48E-03
CO	8.46	67.71	0.03	0.40	108.14	0.05	8.46	69.50	0.03	8.46	66.86	0.03	37.78	107.19	0.05	2.37	23.44	1.17E-03	0.44	65.03	0.03	2.36	19.31	9.66E-03	10.37	236.76	6.12	1.88	14.68	7.33E-03	778.06	79.03	0.36
NOx	31.88	254.91	0.13	31.88	407.86	0.20	31.88	258.10	0.13	31.88	251.72	0.13	68.13	404.28	0.20	10.99	109.83	0.05	24.24	244.84	0.12	10.93	89.64	0.04	57.88	601.32	0.45	8.81	68.03	0.03	2,970.03	288.24	1.49
VOC	0.82	6.52	3.25E-03	0.82	10.44	5.22E-03	0.82	6.61	3.30E-03	0.82	6.44	3.22E-03	1.23	10.35	5.17E-03	0.90	8.88	4.44E-03	0.62	6.27	3.13E-03	0.89	7.32	3.66E-03	1.48	22.81	1.14E-02	0.70	5.55	2.78E-03	91.19	9.09	0.05
AMMONIA	0.21	1.65	8.24E-04	0.21	2.64	1.32E-03	0.21	1.67	8.36E-04	0.21	1.63	8.14E-04	0.31	2.42	1.31E-03	1.41E-02	0.14	7.00E-05	0.16	1.68	7.82E-04	1.41E-02	0.12	5.19E-05	0.37	5.77	2.88E-03	1.11E-02	0.08	4.37E-05	17.49	1.71	8.95E-03
TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS																																	
TOTAL HAP/TAP EMISSIONS	0.02	0.14	7.17E-05	0.02	0.23	1.15E-04	0.02	0.15	7.28E-05	2.48E-03	0.02	9.81E-05	0.03	0.23	1.14E-04	9.33E-03	0.09	4.62E-05	1.39E-02	0.14	6.89E-03	9.28E-03	0.08	3.80E-05	0.03	0.50	2.61E-04	7.31E-03	0.06	2.88E-05	1.63	0.16	8.19E-04
ACETALDEHYDE	2.81E-03	0.02	1.00E-05	2.91E-03	3.21E-02	1.61E-05	2.91E-03	0.02	1.00E-05	3.49E-04	2.75E-03	1.37E-06	3.99E-03	0.09	1.08E-05	1.81E-03	0.02	8.40E-06	1.01E-03	0.02	8.40E-06	1.05E-03	0.02	7.80E-06	1.68E-03	0.07	3.51E-05	1.00E-03	1.48E-03	5.92E-06	0.24	0.02	1.21E-04
ACROLEIN	7.85E-05	6.28E-04	3.14E-07	7.85E-05	1.00E-03	5.02E-07	7.85E-05	6.36E-04	3.18E-07	1.09E-05	8.08E-06	4.26E-08	1.10E-04	9.96E-04	4.98E-07	2.31E-04	2.38E-03	1.14E-06	5.97E-06	6.03E-04	3.01E-07	2.29E-04	1.88E-03	9.40E-07	1.43E-04	2.10E-03	1.10E-06	1.81E-04	1.43E-03	7.13E-07	1.17E-02	1.21E-03	5.87E-06
BENZENE (HT)	7.73E-03	6.18E-02	3.09E-05	7.73E-03	0.10	4.85E-05	7.73E-03	0.06	3.13E-05	1.07E-03	8.49E-03	4.23E-06	1.17E-02	0.10	4.90E-05	2.33E-03	0.02	1.10E-05	5.89E-03	0.05	2.07E-05	2.31E-03	0.02	9.48E-06	1.40E-02	0.22	1.08E-04	1.62E-03	1.44E-02	7.20E-06	0.66	0.06	3.31E-04
FORMALDEHYDE (HT)	7.86E-04	6.26E-03	3.14E-06	7.86E-04	1.01E-02	5.03E-05	7.86E-04	6.36E-03	3.18E-06	1.09E-04	9.09E-04	4.30E-07	1.18E-03	9.97E-03	4.96E-06	2.14E-03	0.03	1.46E-05	5.99E-04	6.04E-03	3.02E-06	2.93E-03	0.02	1.39E-05	1.43E-03	0.02	1.10E-05	2.30E-03	0.02	8.10E-06	0.13	1.38E-05	6.64E-05
PAH	2.11E-03	0.02	8.44E-06	2.11E-03	2.70E-02	1.38E-05	2.11E-03	0.02	8.55E-06	2.92E-04	2.31E-03	1.18E-06	3.19E-03	0.03	1.34E-05	4.19E-04	4.19E-03	2.67E-06	1.61E-03	0.02	8.11E-06	4.16E-04	3.42E-03	1.71E-04	3.83E-03	0.06	2.95E-06	3.28E-04	2.98E-03	1.30E-06	0.18	0.02	8.78E-05
TOLUENE (HT)	2.80E-03	0.02	1.12E-05	2.80E-03	0.04	1.79E-05	2.80E-03	0.02	1.13E-05	3.88E-04	3.00E-03	1.53E-06	4.27E-03	0.04	1.78E-05	1.02E-03	1.01E-02	5.05E-06	2.13E-03	0.02	1.07E-05	1.01E-03	8.31E-03	4.10E-06	5.08E-03	0.08	3.91E-05	7.99E-04	6.31E-03	3.19E-06	0.24	0.02	1.22E-04
XYLENE	1.10E-03	1.94E-05	7.69E-05	1.10E-03	0.02	1.20E-05	1.10E-03	0.02	7.78E-06	2.68E-04	2.10E-03	1.05E-06	2.90E-03	0.02	1.20E-05	4.81E-04	4.78E-03	2.38E-06	1.46E-03	0.01	7.38E-06	2.17E-04	3.90E-03	1.96E-06	3.49E-03	5.38E-06	2.09E-05	3.77E-04	2.98E-03	1.49E-06	0.16	0.02	8.11E-05
TOTAL CALCULATED FUEL USAGE (gal/yr @ 100% load, 500 hrs/yr Maximum)																																	
575 920 982 968 912 178 552 147 2,011 111 6,508																																	

- Potential emissions for emergency generators are based on a maximum of 500 hours/yr operation, per EPA guidance, with a 100% load.

Boilers Emissions Summary - Actual
Oracle America Inc.

Pollutant	Boiler #1 - #4			Boiler #5			Hot Water Heaters			TOTAL		
	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY	lbs/yr	lb/hr	TPY
CRITERIA POLLUTANT EMISSIONS												
PM	271.45	0.03	0.14	143.65	0.04	7.18E-02	17.62	2.01E-03	8.81E-03	433	0.07	0.22
PM-10	203.59	0.02	0.10	107.74	0.03	5.39E-02	13.22	1.51E-03	6.61E-03	325	0.05	0.16
PM-2.5	203.59	0.02	0.10	107.74	0.03	5.39E-02	13.22	1.51E-03	6.61E-03	325	0.05	0.16
SOx	21.43	2.45E-03	1.07E-02	11.34	2.84E-03	5.67E-03	1.39	1.59E-04	6.96E-04	34	5.45E-03	0.02
CO	3000.23	0.34	1.50	1587.68	0.40	7.94E-01	92.75	1.06E-02	0.05	4.681	0.75	2.34
NOx	3571.70	0.41	1.79	1890.10	0.47	9.45E-01	217.97	0.02	0.11	5.680	0.91	2.84
VOC(non-CH4)	196.44	0.02	0.10	103.96	0.03	5.20E-02	12.75	1.46E-03	6.38E-03	313	0.05	0.16
LEAD	1.79E-02	2.04E-06	8.93E-06	9.45E-03	2.37E-06	4.73E-06	1.16E-03	1.32E-07	5.80E-07	0.03	4.54E-06	1.42E-05
TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS												
TOTAL HAP/TAP EMISSIONS	67.45	7.70E-03	0.03	35.69	8.95E-03	1.78E-02	4.38	5.00E-04	2.19E-03	107.52	0.02	0.05
ACENAPHTHENE (H)	6.43E-05	7.34E-09	3.21E-08	3.40E-05	8.53E-09	1.70E-08	4.17E-06	4.76E-10	2.09E-09	1.02E-04	1.63E-08	5.12E-08
ACENAPHTHYLENE (H)	6.43E-05	7.34E-09	3.21E-08	3.40E-05	8.53E-09	1.70E-08	4.17E-06	4.76E-10	2.09E-09	1.02E-04	1.63E-08	5.12E-08
ANTHRACENE	8.57E-05	9.79E-09	4.29E-08	4.54E-05	1.14E-08	2.27E-08	5.57E-06	6.35E-10	2.78E-09	1.37E-04	2.18E-08	6.83E-08
ARSENIC (H/T)	7.14E-03	8.15E-07	3.57E-06	3.78E-03	9.48E-07	1.89E-06	4.64E-04	5.29E-08	2.32E-07	1.14E-02	1.82E-06	5.69E-06
BENZENE (H/T)	7.50E-02	8.56E-06	3.75E-05	3.97E-02	9.95E-06	1.98E-05	4.87E-03	5.56E-07	2.43E-06	0.12	1.91E-05	5.98E-05
BENZ(a)ANTHRACENE (H)	6.43E-05	7.34E-09	3.21E-08	3.40E-05	8.53E-09	1.70E-08	4.17E-06	4.76E-10	2.09E-09	1.02E-04	1.63E-08	5.12E-08
BENZ(b,k)FLUORANTHENE (H)	6.43E-05	7.34E-09	3.21E-08	3.40E-05	8.53E-09	1.70E-08	4.17E-06	4.76E-10	2.09E-09	1.02E-04	1.63E-08	5.12E-08
BENZ(k)FLUORANTHENE (H/T)	6.43E-05	7.34E-09	3.21E-08	3.40E-05	8.53E-09	1.70E-08	4.17E-06	4.76E-10	2.09E-09	1.02E-04	1.63E-08	5.12E-08
BENZO(g,h,i)PERYLENE (H/T)	4.29E-05	4.89E-09	2.14E-08	2.27E-05	5.69E-09	1.13E-08	2.78E-06	3.18E-10	1.39E-09	6.83E-05	1.09E-08	3.42E-08
BENZO(a)PYRENE (H)	4.29E-05	4.89E-09	2.14E-08	2.27E-05	5.69E-09	1.13E-08	2.78E-06	3.18E-10	1.39E-09	6.83E-05	1.09E-08	3.42E-08
BERYLLIUM (H/T)	4.29E-04	4.89E-08	2.14E-07	2.27E-04	5.69E-08	1.13E-07	2.78E-05	3.18E-09	1.39E-08	6.83E-04	1.09E-07	3.42E-07
CADMIUM (H/T)	3.93E-02	4.49E-06	1.96E-05	2.08E-02	5.21E-06	1.04E-05	2.55E-03	2.91E-07	1.28E-06	0.06	9.99E-06	3.13E-05
CHROMIUM (H)	5.00E-02	5.71E-06	2.50E-05	2.65E-02	6.64E-06	1.32E-05	3.25E-03	3.71E-07	1.62E-06	0.08	1.27E-05	3.99E-05
CHRYSENE (H)	6.43E-05	7.34E-09	3.21E-08	3.40E-05	8.53E-09	1.70E-08	4.17E-06	4.76E-10	2.09E-09	1.02E-04	1.63E-08	5.12E-08
COBALT (H)	3.00E-03	3.42E-07	1.50E-06	1.59E-03	3.98E-07	7.94E-07	1.95E-04	2.22E-08	9.74E-08	4.78E-03	7.63E-07	2.39E-06
DIBENZO(a,h)ANTHRACENE (H)	4.29E-05	4.89E-09	2.14E-08	2.27E-05	5.69E-09	1.13E-08	2.78E-06	3.18E-10	1.39E-09	6.83E-05	1.09E-08	3.42E-08
DICHLOROBENZENE (H/T)	4.29E-02	4.89E-06	2.14E-05	2.27E-02	5.69E-06	1.13E-05	2.78E-03	3.18E-07	1.39E-06	0.07	1.09E-05	3.42E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	5.71E-04	6.52E-08	2.86E-07	3.02E-04	7.58E-08	1.51E-07	3.71E-05	4.24E-09	1.86E-08	9.11E-04	1.45E-07	4.55E-07
FLUORANTHENE (H)	1.07E-04	1.22E-08	5.36E-08	5.67E-05	1.42E-08	2.84E-08	6.96E-06	7.94E-10	3.48E-09	1.71E-04	2.72E-08	8.54E-08
FORMALDEHYDE (H/T)	2.68E+00	3.06E-04	1.34E-03	1.42E+00	3.56E-04	7.09E-04	1.74E-01	1.99E-05	8.70E-05	4.27	6.81E-04	2.14E-03
HEXANE (H/T)	6.43E+01	7.34E-03	3.21E-02	34.02	8.53E-03	1.70E-02	4.17E+00	4.76E-04	2.09E-03	102.49	0.02	0.05
INDENO(1,2,3-cd)PYRENE (H)	6.43E-05	7.34E-09	3.21E-08	3.40E-05	8.53E-09	1.70E-08	4.17E-06	4.76E-10	2.09E-09	1.02E-04	1.63E-08	5.12E-08
LEAD (H)	1.79E-02	2.04E-06	8.93E-06	9.45E-03	2.37E-06	4.73E-06	1.16E-03	1.32E-07	5.80E-07	0.03	4.54E-06	1.42E-05
MANGANESE (H/T)	1.36E-02	1.55E-06	6.79E-06	7.18E-03	1.80E-06	3.59E-06	8.81E-04	1.01E-07	4.41E-07	0.02	3.45E-06	1.08E-05
MERCURY (H/T)	9.29E-03	1.06E-06	4.64E-06	4.91E-03	1.23E-06	2.46E-06	6.03E-04	6.88E-08	3.01E-07	1.48E-02	2.36E-06	7.40E-06
2-METHYLNAPHTHALENE (H)	8.57E-04	9.79E-08	4.29E-07	4.54E-04	1.14E-07	2.27E-07	5.57E-05	6.35E-09	2.78E-08	1.37E-03	2.18E-07	6.83E-07
3-METHYLCHLOROANTHRENE (H)	6.43E-05	7.34E-09	3.21E-08	3.40E-05	8.53E-09	1.70E-08	4.17E-06	4.76E-10	2.09E-09	1.02E-04	1.63E-08	5.12E-08
NAPHTHALENE (H)	2.18E-02	2.49E-06	1.09E-05	1.15E-02	2.89E-06	5.76E-06	1.41E-03	1.61E-07	7.07E-07	0.03	5.54E-06	1.74E-05
NICKEL (H)	7.50E-02	8.56E-06	3.75E-05	3.97E-02	9.95E-06	1.98E-05	4.87E-03	5.56E-07	2.43E-06	0.12	1.91E-05	5.98E-05
PHENANANTHRENE (H)	6.07E-04	6.93E-08	3.04E-07	3.21E-04	8.06E-08	1.61E-07	3.94E-05	4.50E-09	1.97E-08	9.68E-04	1.54E-07	4.84E-07
PYRENE (H)	1.79E-04	2.04E-08	8.93E-08	9.45E-05	2.37E-08	4.73E-08	1.16E-05	1.32E-09	5.80E-09	2.85E-04	4.54E-08	1.42E-07
SELENIUM (H)	8.57E-04	9.79E-08	4.29E-07	4.54E-04	1.14E-07	2.27E-07	5.57E-05	6.35E-09	2.78E-08	1.37E-03	2.18E-07	6.83E-07
TOLUENE (H/T)	1.21E-01	1.39E-05	6.07E-05	6.43E-02	1.61E-05	3.21E-05	7.88E-03	9.00E-07	3.94E-06	0.19	3.09E-05	9.68E-05
TOTAL CALCULATED FUEL USAGE (CF/yr) @ firing 100 %	35,717,000			18,901,000			2,318,824			56,936,824		

Calculations for Boilers and Generators Colorado - 10-31-2023: Boiler Emissions ACT Summary

Boiler 1 (Bldg 2) - NG fired - Potential

Oracle America Inc.

Oracle Brommfield Campus

BOILER - ACTUAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. =	8,760 HOURS/YEAR				
RATED INPUT =	4.10 MM BTU/HR				
FIRING RATE =	100.00 %				
ACTUAL NATURAL GAS USAGE =	4,020 CUBIC FT/HOUR			35,211,765 CUBIC FT/YEAR	
CRITERIA POLLUTANTS EMISSIONS					
	EMISSION	USAGE	EMISSIONS		
POLLUTANT	FACTOR	(cu ft/yr)	(lb/yr)	(lb/hr)	(tpy)
	(lb/10^6 cu ft)				
PM	7.60	35,211,765	267.61	0.03	0.13
PM-10	5.70	35,211,765	200.71	0.02	0.10
PM-2.5	5.70	35,211,765	200.71	0.02	0.10
SOx	0.60	35,211,765	21.13	2.41E-03	1.06E-02
CO	84.00	35,211,765	2,957.79	0.34	1.48
NOx	100.00	35,211,765	3,521.18	0.40	1.76
VOC(non-CH4)	5.50	35,211,765	193.66	2.21E-02	0.10
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor					
- Emissions (lb/hr) = Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-2					
TOXIC POLLUTANTS EMISSIONS					
	EMISSION	USAGE	EMISSIONS		
POLLUTANT	FACTOR	(cu ft/yr)	(lb/yr)	(lb/hr)	(tpy)
	(lb/10^6 cu ft)				
ACENAPHTHENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
ACENAPHTHYLENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
ANTHRACENE	2.40E-06	35,211,765	8.45E-05	9.65E-09	4.23E-08
ARSENIC (H/T)	2.00E-04	35,211,765	7.04E-03	8.04E-07	3.52E-06
BENZENE (H/T)	2.10E-03	35,211,765	0.07	8.44E-06	3.70E-05
BENZ(a)ANTHRACENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZ(b)FLUORANTHENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
BENZO(a)PYRENE (H)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
BERYLLIUM (H/T)	1.20E-05	35,211,765	4.23E-04	4.82E-08	2.11E-07
CADMIUM (H/T)	1.10E-03	35,211,765	0.04	4.42E-06	1.94E-05
CHROMIUM (H)	1.40E-03	35,211,765	0.05	5.63E-06	2.46E-05
CHRYSENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
COBALT (H)	8.40E-05	35,211,765	2.96E-03	3.38E-07	1.48E-06
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
DICHLOROBENZENE (H/T)	1.20E-03	35,211,765	0.04	4.82E-06	2.11E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	35,211,765	5.63E-04	6.43E-08	2.82E-07
FLUORANTHENE (H)	3.00E-06	35,211,765	1.06E-04	1.21E-08	5.28E-08
FORMALDEHYDE (H/T)	0.08	35,211,765	2.64	3.01E-04	1.32E-03
HEXANE (H/T)	1.8	35,211,765	63.38	7.24E-03	0.03
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
LEAD (H)	5.00E-04	35,211,765	1.76E-02	2.01E-06	8.80E-06
MANGANESE (H/T)	3.80E-04	35,211,765	1.34E-02	1.53E-06	6.69E-06
MERCURY (H/T)	2.60E-04	35,211,765	9.16E-03	1.05E-06	4.58E-06
2-METHYLNAPHTHALENE (H)	2.40E-05	35,211,765	8.45E-04	9.65E-08	4.23E-07
3-METHYLCHLOROANTHRENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
NAPHTHALENE (H)	6.10E-04	35,211,765	2.15E-02	2.45E-06	1.07E-05
NICKEL (H)	2.10E-03	35,211,765	0.07	8.44E-06	3.70E-05
PHENANATHRENE (H)	1.70E-05	35,211,765	5.99E-04	6.83E-08	2.99E-07
PYRENE (H)	5.00E-06	35,211,765	1.76E-04	2.01E-08	8.80E-08
SELENIUM (H)	2.40E-05	35,211,765	8.45E-04	9.65E-08	4.23E-07
TOLUENE (H/T)	3.40E-03	35,211,765	0.12	1.37E-05	5.99E-05
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	7.59E-03	0.03
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	7.24E-03	0.03
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					

Boiler 2 (Bldg 2) - NG fired - Potential

Oracle America Inc.

Oracle Brommfield Campus

BOILER - ACTUAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. =	8,760 HOURS/YEAR				
RATED INPUT =	4.10 MM BTU/HR				
FIRING RATE =	100.00 %				
ACTUAL NATURAL GAS USAGE =	4,020 CUBIC FT/HOUR			35,211,765 CUBIC FT/YEAR	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
PM	7.60	35,211,765	267.61	3.05E-02	1.34E-01
PM-10	5.70	35,211,765	200.71	2.29E-02	1.00E-01
PM-2.5	5.70	35,211,765	200.71	2.29E-02	1.00E-01
SOx	0.60	35,211,765	21.13	2.41E-03	1.06E-02
CO	84.00	35,211,765	2,957.79	0.34	1.48
NOx	100.00	35,211,765	3,521.18	0.40	1.76
VOC(non-CH4)	5.50	35,211,765	193.66	2.21E-02	9.68E-02
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor					
- Emissions (lb/hr) = Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-2					
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
ACENAPHTHENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
ACENAPHTHYLENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
ANTHRACENE	2.40E-06	35,211,765	8.45E-05	9.65E-09	4.23E-08
ARSENIC (H/T)	2.00E-04	35,211,765	7.04E-03	8.04E-07	3.52E-06
BENZENE (H/T)	2.10E-03	35,211,765	7.39E-02	8.44E-06	3.70E-05
BENZ(a)ANTHRACENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZ(b,k)FLUORANTHENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
BENZO(a)PYRENE (H)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
BERYLLIUM (H/T)	1.20E-05	35,211,765	4.23E-04	4.82E-08	2.11E-07
CADMIUM (H/T)	1.10E-03	35,211,765	3.87E-02	4.42E-06	1.94E-05
CHROMIUM (H)	1.40E-03	35,211,765	4.93E-02	5.63E-06	2.46E-05
CHRYSENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
COBALT (H)	8.40E-05	35,211,765	2.96E-03	3.38E-07	1.48E-06
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
DICHLOROBENZENE (H/T)	1.20E-03	35,211,765	4.23E-02	4.82E-06	2.11E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	35,211,765	5.63E-04	6.43E-08	2.82E-07
FLUORANTHENE (H)	3.00E-06	35,211,765	1.06E-04	1.21E-08	5.28E-08
FORMALDEHYDE (H/T)	0.08	35,211,765	2.64	3.01E-04	1.32E-03
HEXANE (H/T)	1.8	35,211,765	63.38	7.24E-03	3.17E-02
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
LEAD (H)	5.00E-04	35,211,765	1.76E-02	2.01E-06	8.80E-06
MANGANESE (H/T)	3.80E-04	35,211,765	1.34E-02	1.53E-06	6.69E-06
MERCURY (H/T)	2.60E-04	35,211,765	9.16E-03	1.05E-06	4.58E-06
2-METHYLNAPHTHALENE (H)	2.40E-05	35,211,765	8.45E-04	9.65E-08	4.23E-07
3-METHYLCHLOROANTHRENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
NAPHTHALENE (H)	6.10E-04	35,211,765	2.15E-02	2.45E-06	1.07E-05
NICKEL (H)	2.10E-03	35,211,765	7.39E-02	8.44E-06	3.70E-05
PHENANATHRENE (H)	1.70E-05	35,211,765	5.99E-04	6.83E-08	2.99E-07
PYRENE (H)	5.00E-06	35,211,765	1.76E-04	2.01E-08	8.80E-08
SELENIUM (H)	2.40E-05	35,211,765	8.45E-04	9.65E-08	4.23E-07
TOLUENE (H/T)	3.40E-03	35,211,765	1.20E-01	1.37E-05	5.99E-05
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	7.59E-03	3.32E-02
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	7.24E-03	3.17E-02
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					

Boiler 3 (Bldg 2) - NG fired - Potential

Oracle America Inc.

Oracle Brommfield Campus

BOILER - ACTUAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. =	8,760 HOURS/YEAR				
RATED INPUT =	4.10 MM BTU/HR				
FIRING RATE =	100.00 %				
ACTUAL NATURAL GAS USAGE =	4,020 CUBIC FT/HOUR			35,211,765 CUBIC FT/YEAR	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
PM	7.60	35,211,765	267.61	3.05E-02	1.34E-01
PM-10	5.70	35,211,765	200.71	2.29E-02	1.00E-01
PM-2.5	5.70	35,211,765	200.71	2.29E-02	1.00E-01
SOx	0.60	35,211,765	21.13	2.41E-03	1.06E-02
CO	84.00	35,211,765	2,957.79	0.34	1.48
NOx	100.00	35,211,765	3,521.18	0.40	1.76
VOC(non-CH4)	5.50	35,211,765	193.66	2.21E-02	9.68E-02
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor					
- Emissions (lb/hr) = Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-2					
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
ACENAPHTHENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
ACENAPHTHYLENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
ANTHRACENE	2.40E-06	35,211,765	8.45E-05	9.65E-09	4.23E-08
ARSENIC (H/T)	2.00E-04	35,211,765	7.04E-03	8.04E-07	3.52E-06
BENZENE (H/T)	2.10E-03	35,211,765	7.39E-02	8.44E-06	3.70E-05
BENZ(a)ANTHRACENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZ(b,k)FLUORANTHENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
BENZO(a)PYRENE (H)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
BERYLLIUM (H/T)	1.20E-05	35,211,765	4.23E-04	4.82E-08	2.11E-07
CADMIUM (H/T)	1.10E-03	35,211,765	3.87E-02	4.42E-06	1.94E-05
CHROMIUM (H)	1.40E-03	35,211,765	4.93E-02	5.63E-06	2.46E-05
CHRYSENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
COBALT (H)	8.40E-05	35,211,765	2.96E-03	3.38E-07	1.48E-06
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
DICHLOROBENZENE (H/T)	1.20E-03	35,211,765	4.23E-02	4.82E-06	2.11E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	35,211,765	5.63E-04	6.43E-08	2.82E-07
FLUORANTHENE (H)	3.00E-06	35,211,765	1.06E-04	1.21E-08	5.28E-08
FORMALDEHYDE (H/T)	0.08	35,211,765	2.64	3.01E-04	1.32E-03
HEXANE (H/T)	1.8	35,211,765	63.38	7.24E-03	3.17E-02
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
LEAD (H)	5.00E-04	35,211,765	1.76E-02	2.01E-06	8.80E-06
MANGANESE (H/T)	3.80E-04	35,211,765	1.34E-02	1.53E-06	6.69E-06
MERCURY (H/T)	2.60E-04	35,211,765	9.16E-03	1.05E-06	4.58E-06
2-METHYLNAPHTHALENE (H)	2.40E-05	35,211,765	8.45E-04	9.65E-08	4.23E-07
3-METHYLCHLOROANTHRENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
NAPHTHALENE (H)	6.10E-04	35,211,765	2.15E-02	2.45E-06	1.07E-05
NICKEL (H)	2.10E-03	35,211,765	7.39E-02	8.44E-06	3.70E-05
PHENANATHRENE (H)	1.70E-05	35,211,765	5.99E-04	6.83E-08	2.99E-07
PYRENE (H)	5.00E-06	35,211,765	1.76E-04	2.01E-08	8.80E-08
SELENIUM (H)	2.40E-05	35,211,765	8.45E-04	9.65E-08	4.23E-07
TOLUENE (H/T)	3.40E-03	35,211,765	1.20E-01	1.37E-05	5.99E-05
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	7.59E-03	3.32E-02
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	7.24E-03	3.17E-02
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					

Boiler 4 (Bludg 2) - NG fired - Potential

Oracle America Inc.

Oracle Brommfield Campus

BOILER - ACTUAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. =	8,760 HOURS/YEAR				
RATED INPUT =	4.10 MM BTU/HR				
FIRING RATE =	100.00 %				
ACTUAL NATURAL GAS USAGE =	4,020 CUBIC FT/HOUR			35,211,765 CUBIC FT/YEAR	
CRITERIA POLLUTANTS EMISSIONS					
	EMISSION		EMISSIONS		
POLLUTANT	FACTOR	USAGE			
	(lb/10^6 cu ft)	(cu ft/yr)	(lb/yr)	(lb/hr)	(tpy)
PM	7.60	35,211,765	267.61	3.05E-02	1.34E-01
PM-10	5.70	35,211,765	200.71	2.29E-02	1.00E-01
PM-2.5	5.70	35,211,765	200.71	2.29E-02	1.00E-01
SOx	0.60	35,211,765	21.13	2.41E-03	1.06E-02
CO	84.00	35,211,765	2,957.79	0.34	1.48
NOx	100.00	35,211,765	3,521.18	0.40	1.76
VOC(non-CH4)	5.50	35,211,765	193.66	2.21E-02	9.68E-02
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor					
- Emissions (lb/hr) = Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-2					
TOXIC POLLUTANTS EMISSIONS					
	EMISSION		EMISSIONS		
POLLUTANT	FACTOR	USAGE			
	(lb/10^6 cu ft)	(cu ft/yr)	(lb/yr)	(lb/hr)	(tpy)
ACENAPHTHENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
ACENAPHTHYLENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
ANTHRACENE	2.40E-06	35,211,765	8.45E-05	9.65E-09	4.23E-08
ARSENIC (H/T)	2.00E-04	35,211,765	7.04E-03	8.04E-07	3.52E-06
BENZENE (H/T)	2.10E-03	35,211,765	7.39E-02	8.44E-06	3.70E-05
BENZ(a)ANTHRACENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZ(b,k)FLUORANTHENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
BENZO(a)PYRENE (H)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
BERYLLIUM (H/T)	1.20E-05	35,211,765	4.23E-04	4.82E-08	2.11E-07
CADMIUM (H/T)	1.10E-03	35,211,765	3.87E-02	4.42E-06	1.94E-05
CHROMIUM (H)	1.40E-03	35,211,765	4.93E-02	5.63E-06	2.46E-05
CHRYSENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
COBALT (H)	8.40E-05	35,211,765	2.96E-03	3.38E-07	1.48E-06
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	35,211,765	4.23E-05	4.82E-09	2.11E-08
DICHLOROBENZENE (H/T)	1.20E-03	35,211,765	4.23E-02	4.82E-06	2.11E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	35,211,765	5.63E-04	6.43E-08	2.82E-07
FLUORANTHENE (H)	3.00E-06	35,211,765	1.06E-04	1.21E-08	5.28E-08
FORMALDEHYDE (H/T)	7.50E-02	35,211,765	2.64	3.01E-04	1.32E-03
HEXANE (H/T)	1.8	35,211,765	63.38	7.24E-03	3.17E-02
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
LEAD (H)	5.00E-04	35,211,765	1.76E-02	2.01E-06	8.80E-06
MANGANESE (H/T)	3.80E-04	35,211,765	1.34E-02	1.53E-06	6.69E-06
MERCURY (H/T)	2.60E-04	35,211,765	9.16E-03	1.05E-06	4.58E-06
2-METHYLNAPHTHALENE (H)	2.40E-05	35,211,765	8.45E-04	9.65E-08	4.23E-07
3-METHYLCHLOROANTHRENE (H)	1.80E-06	35,211,765	6.34E-05	7.24E-09	3.17E-08
NAPHTHALENE (H)	6.10E-04	35,211,765	2.15E-02	2.45E-06	1.07E-05
NICKEL (H)	2.10E-03	35,211,765	7.39E-02	8.44E-06	3.70E-05
PHENANATHRENE (H)	1.70E-05	35,211,765	5.99E-04	6.83E-08	2.99E-07
PYRENE (H)	5.00E-06	35,211,765	1.76E-04	2.01E-08	8.80E-08
SELENIUM (H)	2.40E-05	35,211,765	8.45E-04	9.65E-08	4.23E-07
TOLUENE (H/T)	3.40E-03	35,211,765	1.20E-01	1.37E-05	5.99E-05
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	7.59E-03	3.32E-02
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	7.24E-03	3.17E-02
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					

Boiler 1 through 4 (Bldg 2) - NG fired - Actual

Oracle America Inc.

Oracle Brommfield Campus

BOILER - ACTUAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. =	8,760 HOURS/YEAR				
RATED INPUT =	4.10 MM BTU/HR				
FIRING RATE =	100.00 %				
ACTUAL NATURAL GAS USAGE =	4,077 CUBIC FT/HOUR			35,717,000 CUBIC FT/YEAR	
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	EMISSIONS		
			(lb/yr)	(lb/hr)	(tpy)
PM	7.60	35,717,000	271.45	0.03	0.14
PM-10	5.70	35,717,000	203.59	0.02	0.10
PM-2.5	5.70	35,717,000	203.59	0.02	0.10
SOx	0.60	35,717,000	21.43	2.45E-03	1.07E-02
CO	84.00	35,717,000	3,000	0.34	1.50
NOx	100.00	35,717,000	3,572	0.41	1.79
VOC(non-CH4)	5.50	35,717,000	196.44	2.24E-02	9.82E-02
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor					
- Emissions (lb/hr) = Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-2					
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	EMISSIONS		
			(lb/yr)	(lb/hr)	(tpy)
ACENAPHTHENE (H)	1.80E-06	35,717,000	6.43E-05	7.34E-09	3.21E-08
ACENAPHTHYLENE (H)	1.80E-06	35,717,000	6.43E-05	7.34E-09	3.21E-08
ANTHRACENE	2.40E-06	35,717,000	8.57E-05	9.79E-09	4.29E-08
ARSENIC (H/T)	2.00E-04	35,717,000	7.14E-03	8.15E-07	3.57E-06
BENZENE (H/T)	2.10E-03	35,717,000	7.50E-02	8.56E-06	3.75E-05
BENZ(a)ANTHRACENE (H)	1.80E-06	35,717,000	6.43E-05	7.34E-09	3.21E-08
BENZ(b,k)FLUORANTHENE (H)	1.80E-06	35,717,000	6.43E-05	7.34E-09	3.21E-08
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	35,717,000	6.43E-05	7.34E-09	3.21E-08
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	35,717,000	4.29E-05	4.89E-09	2.14E-08
BENZO(a)PYRENE (H)	1.20E-06	35,717,000	4.29E-05	4.89E-09	2.14E-08
BERYLLIUM (H/T)	1.20E-05	35,717,000	4.29E-04	4.89E-08	2.14E-07
CADMIUM (H/T)	1.10E-03	35,717,000	3.93E-02	4.49E-06	1.96E-05
CHROMIUM (H)	1.40E-03	35,717,000	5.00E-02	5.71E-06	2.50E-05
CHRYSENE (H)	1.80E-06	35,717,000	6.43E-05	7.34E-09	3.21E-08
COBALT (H)	8.40E-05	35,717,000	3.00E-03	3.42E-07	1.50E-06
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	35,717,000	4.29E-05	4.89E-09	2.14E-08
DICHLOROBENZENE (H/T)	1.20E-03	35,717,000	4.29E-02	4.89E-06	2.14E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	35,717,000	5.71E-04	6.52E-08	2.86E-07
FLUORANTHENE (H)	3.00E-06	35,717,000	1.07E-04	1.22E-08	5.36E-08
FORMALDEHYDE (H/T)	7.50E-02	35,717,000	2.68	3.06E-04	1.34E-03
HEXANE (H/T)	1.8	35,717,000	64.29	7.34E-03	3.21E-02
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	35,717,000	6.43E-05	7.34E-09	3.21E-08
LEAD (H)	5.00E-04	35,717,000	1.79E-02	2.04E-06	8.93E-06
MANGANESE (H/T)	3.80E-04	35,717,000	1.36E-02	1.55E-06	6.79E-06
MERCURY (H/T)	2.60E-04	35,717,000	9.29E-03	1.06E-06	4.64E-06
2-METHYLNAPHTHALENE (H)	2.40E-05	35,717,000	8.57E-04	9.79E-08	4.29E-07
3-METHYLCHLOROANTHRENE (H)	1.80E-06	35,717,000	6.43E-05	7.34E-09	3.21E-08
NAPHTHALENE (H)	6.10E-04	35,717,000	2.18E-02	2.49E-06	1.09E-05
NICKEL (H)	2.10E-03	35,717,000	7.50E-02	8.56E-06	3.75E-05
PHENANATHRENE (H)	1.70E-05	35,717,000	6.07E-04	6.93E-08	3.04E-07
PYRENE (H)	5.00E-06	35,717,000	1.79E-04	2.04E-08	8.93E-08
SELENIUM (H)	2.40E-05	35,717,000	8.57E-04	9.79E-08	4.29E-07
TOLUENE (H/T)	3.40E-03	35,717,000	1.21E-01	1.39E-05	6.07E-05
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	7.70E-03	3.37E-02
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	7.34E-03	3.21E-02
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					

Boiler 5 (Bldg 9) - NG fired - Potential

Oracle America Inc.

Oracle Brommfield Campus

BOILER - ACTUAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. =	8,760 HOURS/YEAR				
RATED INPUT =	4.835 MM BTU/HR				
FIRING RATE =	100.00 %				
ACTUAL NATURAL GAS USAGE =	4,740 CUBIC FT/HOUR		41,524,118 CUBIC FT/YEAR		
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
PM	7.60	41,524,118	315.58	3.60E-02	1.58E-01
PM-10	5.70	41,524,118	236.69	2.70E-02	1.18E-01
PM-2.5	5.70	41,524,118	236.69	2.70E-02	1.18E-01
SOx	0.60	41,524,118	24.91	2.84E-03	1.25E-02
CO	84.00	41,524,118	3,488.03	0.40	1.74
NOx	100.00	41,524,118	4,152.41	0.47	2.08
VOC(non-CH4)	5.50	41,524,118	228.38	2.61E-02	1.14E-01
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor					
- Emissions (lb/hr) = Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-2					
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
ACENAPHTHENE (H)	1.80E-06	41,524,118	7.47E-05	8.53E-09	3.74E-08
ACENAPHTHYLENE (H)	1.80E-06	41,524,118	7.47E-05	8.53E-09	3.74E-08
ANTHRACENE	2.40E-06	41,524,118	9.97E-05	1.14E-08	4.98E-08
ARSENIC (H/T)	2.00E-04	41,524,118	8.30E-03	9.48E-07	4.15E-06
BENZENE (H/T)	2.10E-03	41,524,118	8.72E-02	9.95E-06	4.36E-05
BENZ(a)ANTHRACENE (H)	1.80E-06	41,524,118	7.47E-05	8.53E-09	3.74E-08
BENZ(b,k)FLUORANTHENE (H)	1.80E-06	41,524,118	7.47E-05	8.53E-09	3.74E-08
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	41,524,118	7.47E-05	8.53E-09	3.74E-08
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	41,524,118	4.98E-05	5.69E-09	2.49E-08
BENZO(a)PYRENE (H)	1.20E-06	41,524,118	4.98E-05	5.69E-09	2.49E-08
BERYLLIUM (H/T)	1.20E-05	41,524,118	4.98E-04	5.69E-08	2.49E-07
CADMIUM (H/T)	1.10E-03	41,524,118	4.57E-02	5.21E-06	2.28E-05
CHROMIUM (H)	1.40E-03	41,524,118	5.81E-02	6.64E-06	2.91E-05
CHRYSENE (H)	1.80E-06	41,524,118	7.47E-05	8.53E-09	3.74E-08
COBALT (H)	8.40E-05	41,524,118	3.49E-03	3.98E-07	1.74E-06
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	41,524,118	4.98E-05	5.69E-09	2.49E-08
DICHLOROBENZENE (H/T)	1.20E-03	41,524,118	4.98E-02	5.69E-06	2.49E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	41,524,118	6.64E-04	7.58E-08	3.32E-07
FLUORANTHENE (H)	3.00E-06	41,524,118	1.25E-04	1.42E-08	6.23E-08
FORMALDEHYDE (H/T)	7.50E-02	41,524,118	3.11	3.56E-04	1.56E-03
HEXANE (H/T)	1.8	41,524,118	74.74	8.53E-03	3.74E-02
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	41,524,118	7.47E-05	8.53E-09	3.74E-08
LEAD (H)	5.00E-04	41,524,118	2.08E-02	2.37E-06	1.04E-05
MANGANESE (H/T)	3.80E-04	41,524,118	1.58E-02	1.80E-06	7.89E-06
MERCURY (H/T)	2.60E-04	41,524,118	1.08E-02	1.23E-06	5.40E-06
2-METHYLNAPHTHALENE (H)	2.40E-05	41,524,118	9.97E-04	1.14E-07	4.98E-07
3-METHYLCHLOROANTHRENE (H)	1.80E-06	41,524,118	7.47E-05	8.53E-09	3.74E-08
NAPHTHALENE (H)	6.10E-04	41,524,118	2.53E-02	2.89E-06	1.27E-05
NICKEL (H)	2.10E-03	41,524,118	8.72E-02	9.95E-06	4.36E-05
PHENANATHRENE (H)	1.70E-05	41,524,118	7.06E-04	8.06E-08	3.53E-07
PYRENE (H)	5.00E-06	41,524,118	2.08E-04	2.37E-08	1.04E-07
SELENIUM (H)	2.40E-05	41,524,118	9.97E-04	1.14E-07	4.98E-07
TOLUENE (H/T)	3.40E-03	41,524,118	1.41E-01	1.61E-05	7.06E-05
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	8.95E-03	3.92E-02
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	8.53E-03	3.74E-02
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					

Boiler 5 (Bldg 9) - NG fired - Actual

Oracle America Inc.

Oracle Brommfield Campus

BOILER - ACTUAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. =	3,987 HOURS/YEAR				
RATED INPUT =	4.835 MM BTU/HR				
FIRING RATE =	100.00 %				
ACTUAL NATURAL GAS USAGE =	4,740 CUBIC FT/HOUR			18,901,000 CUBIC FT/YEAR	
CRITERIA POLLUTANTS EMISSIONS					
	EMISSION		EMISSIONS		
POLLUTANT	FACTOR	USAGE			
	(lb/10^6 cu ft)	(cu ft/yr)	(lb/yr)	(lb/hr)	(tpy)
PM	7.60	18,901,000	143.65	0.04	0.07
PM-10	5.70	18,901,000	107.74	0.03	0.05
PM-2.5	5.70	18,901,000	107.74	0.03	0.05
SOx	0.60	18,901,000	11.34	2.84E-03	5.67E-03
CO	84.00	18,901,000	1,588	0.40	0.79
NOx	100.00	18,901,000	1,890	0.47	0.95
VOC(non-CH4)	5.50	18,901,000	103.96	0.03	0.05
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor					
- Emissions (lb/hr) = Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-2					
TOXIC POLLUTANTS EMISSIONS					
	EMISSION		EMISSIONS		
POLLUTANT	FACTOR	USAGE			
	(lb/10^6 cu ft)	(cu ft/yr)	(lb/yr)	(lb/hr)	(tpy)
ACENAPHTHENE (H)	1.80E-06	18,901,000	3.40E-05	8.53E-09	1.70E-08
ACENAPHTHYLENE (H)	1.80E-06	18,901,000	3.40E-05	8.53E-09	1.70E-08
ANTHRACENE	2.40E-06	18,901,000	4.54E-05	1.14E-08	2.27E-08
ARSENIC (H/T)	2.00E-04	18,901,000	3.78E-03	9.48E-07	1.89E-06
BENZENE (H/T)	2.10E-03	18,901,000	3.97E-02	9.95E-06	1.98E-05
BENZ(a)ANTHRACENE (H)	1.80E-06	18,901,000	3.40E-05	8.53E-09	1.70E-08
BENZ(b,k)FLUORANTHENE (H)	1.80E-06	18,901,000	3.40E-05	8.53E-09	1.70E-08
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	18,901,000	3.40E-05	8.53E-09	1.70E-08
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	18,901,000	2.27E-05	5.69E-09	1.13E-08
BENZO(a)PYRENE (H)	1.20E-06	18,901,000	2.27E-05	5.69E-09	1.13E-08
BERYLLIUM (H/T)	1.20E-05	18,901,000	2.27E-04	5.69E-08	1.13E-07
CADMIUM (H/T)	1.10E-03	18,901,000	2.08E-02	5.21E-06	1.04E-05
CHROMIUM (H)	1.40E-03	18,901,000	2.65E-02	6.64E-06	1.32E-05
CHRYSENE (H)	1.80E-06	18,901,000	3.40E-05	8.53E-09	1.70E-08
COBALT (H)	8.40E-05	18,901,000	1.59E-03	3.98E-07	7.94E-07
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	18,901,000	2.27E-05	5.69E-09	1.13E-08
DICHLOROBENZENE (H/T)	1.20E-03	18,901,000	2.27E-02	5.69E-06	1.13E-05
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	18,901,000	3.02E-04	7.58E-08	1.51E-07
FLUORANTHENE (H)	3.00E-06	18,901,000	5.67E-05	1.42E-08	2.84E-08
FORMALDEHYDE (H/T)	7.50E-02	18,901,000	1.42	3.56E-04	7.09E-04
HEXANE (H/T)	1.8	18,901,000	34.02	8.53E-03	1.70E-02
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	18,901,000	3.40E-05	8.53E-09	1.70E-08
LEAD (H)	5.00E-04	18,901,000	9.45E-03	2.37E-06	4.73E-06
MANGANESE (H/T)	3.80E-04	18,901,000	7.18E-03	1.80E-06	3.59E-06
MERCURY (H/T)	2.60E-04	18,901,000	4.91E-03	1.23E-06	2.46E-06
2-METHYLNAPHTHALENE (H)	2.40E-05	18,901,000	4.54E-04	1.14E-07	2.27E-07
3-METHYLCHLOROANTHRENE (H)	1.80E-06	18,901,000	3.40E-05	8.53E-09	1.70E-08
NAPHTHALENE (H)	6.10E-04	18,901,000	1.15E-02	2.89E-06	5.76E-06
NICKEL (H)	2.10E-03	18,901,000	3.97E-02	9.95E-06	1.98E-05
PHENANATHRENE (H)	1.70E-05	18,901,000	3.21E-04	8.06E-08	1.61E-07
PYRENE (H)	5.00E-06	18,901,000	9.45E-05	2.37E-08	4.73E-08
SELENIUM (H)	2.40E-05	18,901,000	4.54E-04	1.14E-07	2.27E-07
TOLUENE (H/T)	3.40E-03	18,901,000	6.43E-02	1.61E-05	3.21E-05
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	8.95E-03	1.78E-02
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	8.53E-03	1.70E-02
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					

Two (2) Hot Water Heaters - NG fired - Potential

Oracle America Inc.

Oracle Brommfield Campus

BOILER - POTENTIAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. = 8,760 HOURS/YEAR					
RATED INPUT = 0.27 MM BTU/HR (two @ 0.135 MMBTU/hr each)					
FIRING RATE = 100.00 %					
POTENTIAL NATURAL GAS USAGE = 265 CUBIC FT/HOUR			2,318,824 CUBIC FT/YEAR		
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
PM	7.60	2,318,824	17.62	2.01E-03	8.81E-03
PM-10	5.70	2,318,824	13.22	1.51E-03	6.61E-03
PM-2.5	5.70	2,318,824	13.22	1.51E-03	6.61E-03
SOx	0.60	2,318,824	1.39	1.59E-04	6.96E-04
CO	40.00	2,318,824	92.75	0.01	0.05
NOx	94.00	2,318,824	217.97	0.02	0.11
VOC(non-CH4)	5.50	2,318,824	12.75	1.46E-03	6.38E-03
- Potential Emissions (lb/yr) = (Actual Usage (cu ft/yr)/10^6) x emission factor					
- Potential Emissions (lb/hr) = Actual Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-1 - Residential Furnaces					
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
ACENAPHTHENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
ACENAPHTHYLENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
ANTHRACENE	2.40E-06	2,318,824	5.57E-06	6.35E-10	2.78E-09
ARSENIC (H/T)	2.00E-04	2,318,824	4.64E-04	5.29E-08	2.32E-07
BENZENE (H/T)	2.10E-03	2,318,824	4.87E-03	5.56E-07	2.43E-06
BENZ(a)ANTHRACENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
BENZ(b,k)FLUORANTHENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	2,318,824	2.78E-06	3.18E-10	1.39E-09
BENZO(a)PYRENE (H)	1.20E-06	2,318,824	2.78E-06	3.18E-10	1.39E-09
BERYLLIUM (H/T)	1.20E-05	2,318,824	2.78E-05	3.18E-09	1.39E-08
CADMIUM (H/T)	1.10E-03	2,318,824	2.55E-03	2.91E-07	1.28E-06
CHROMIUM (H)	1.40E-03	2,318,824	3.25E-03	3.71E-07	1.62E-06
CHRYSENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
COBALT (H)	8.40E-05	2,318,824	1.95E-04	2.22E-08	9.74E-08
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	2,318,824	2.78E-06	3.18E-10	1.39E-09
DICHLOROBENZENE (H/T)	1.20E-03	2,318,824	2.78E-03	3.18E-07	1.39E-06
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	2,318,824	3.71E-05	4.24E-09	1.86E-08
FLUORANTHENE (H)	3.00E-06	2,318,824	6.96E-06	7.94E-10	3.48E-09
FORMALDEHYDE (H/T)	7.50E-02	2,318,824	0.17	1.99E-05	8.70E-05
HEXANE (H/T)	1.8	2,318,824	4.17	4.76E-04	2.09E-03
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
LEAD (H)	5.00E-04	2,318,824	1.16E-03	1.32E-07	5.80E-07
MANGANESE (H/T)	3.80E-04	2,318,824	8.81E-04	1.01E-07	4.41E-07
MERCURY (H/T)	2.60E-04	2,318,824	6.03E-04	6.88E-08	3.01E-07
2-METHYLNAPHTHALENE (H)	2.40E-05	2,318,824	5.57E-05	6.35E-09	2.78E-08
3-METHYLCHLOROANTHRENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
NAPHTHALENE (H)	6.10E-04	2,318,824	1.41E-03	1.61E-07	7.07E-07
NICKEL (H)	2.10E-03	2,318,824	4.87E-03	5.56E-07	2.43E-06
PHENANATHRENE (H)	1.70E-05	2,318,824	3.94E-05	4.50E-09	1.97E-08
PYRENE (H)	5.00E-06	2,318,824	1.16E-05	1.32E-09	5.80E-09
SELENIUM (H)	2.40E-05	2,318,824	5.57E-05	6.35E-09	2.78E-08
TOLUENE (H/T)	3.40E-03	2,318,824	7.88E-03	9.00E-07	3.94E-06
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	5.00E-04	2.19E-03
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	4.76E-04	2.09E-03
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					

Two (2) Hot Water Heaters - NG fired - Actual

Oracle America Inc.

Oracle Brommfield Campus

BOILER - POTENTIAL EMISSIONS - NATURAL GAS			HEAT VALUE : 1,020		
INDUSTRIAL BOILER			(BTU/CU FT)		
HOURS OF OPER. =	8,760 HOURS/YEAR				
RATED INPUT =	0.27 MM BTU/HR (two @ 0.135 MMBTU/hr each)				
FIRING RATE =	100.00 %				
POTENTIAL NATURAL GAS USAGE =	265 CUBIC FT/HOUR		2,318,824 CUBIC FT/YEAR		
CRITERIA POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
PM	7.60	2,318,824	17.62	2.01E-03	8.81E-03
PM-10	5.70	2,318,824	13.22	1.51E-03	6.61E-03
PM-2.5	5.70	2,318,824	13.22	1.51E-03	6.61E-03
SOx	0.60	2,318,824	1.39	1.59E-04	6.96E-04
CO	40.00	2,318,824	92.75	0.01	0.05
NOx	94.00	2,318,824	217.97	0.02	0.11
VOC(non-CH4)	5.50	2,318,824	12.75	1.46E-03	6.38E-03
- Potential Emissions (lb/yr) = (Actual Usage (cu ft/yr)/10^6) x emission factor					
- Potential Emissions (lb/hr) = Actual Emissions (lb/yr) / actual hrs of operation					
- Emission Factors from AP-42, Table 1.4-1 - Residential Furnaces					
TOXIC POLLUTANTS EMISSIONS					
POLLUTANT	EMISSION FACTOR (lb/10^6 cu ft)	USAGE (cu ft/yr)	(lb/yr)	EMISSIONS (lb/hr)	(tpy)
ACENAPHTHENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
ACENAPHTHYLENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
ANTHRACENE	2.40E-06	2,318,824	5.57E-06	6.35E-10	2.78E-09
ARSENIC (H/T)	2.00E-04	2,318,824	4.64E-04	5.29E-08	2.32E-07
BENZENE (H/T)	2.10E-03	2,318,824	4.87E-03	5.56E-07	2.43E-06
BENZ(a)ANTHRACENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
BENZ(b,k)FLUORANTHENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
BENZ(k)FLUORANTHENE (H/T)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
BENZO(g,h,i)PERYLENE (H/T)	1.20E-06	2,318,824	2.78E-06	3.18E-10	1.39E-09
BENZO(a)PYRENE (H)	1.20E-06	2,318,824	2.78E-06	3.18E-10	1.39E-09
BERYLLIUM (H/T)	1.20E-05	2,318,824	2.78E-05	3.18E-09	1.39E-08
CADMIUM (H/T)	1.10E-03	2,318,824	2.55E-03	2.91E-07	1.28E-06
CHROMIUM (H)	1.40E-03	2,318,824	3.25E-03	3.71E-07	1.62E-06
CHRYSENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
COBALT (H)	8.40E-05	2,318,824	1.95E-04	2.22E-08	9.74E-08
DIBENZO(a,h)ANTHRACENE (H)	1.20E-06	2,318,824	2.78E-06	3.18E-10	1.39E-09
DICHLOROBENZENE (H/T)	1.20E-03	2,318,824	2.78E-03	3.18E-07	1.39E-06
7,12-DIMETHYLBENZ(a)ANTHRACENE (H)	1.60E-05	2,318,824	3.71E-05	4.24E-09	1.86E-08
FLUORANTHENE (H)	3.00E-06	2,318,824	6.96E-06	7.94E-10	3.48E-09
FORMALDEHYDE (H/T)	7.50E-02	2,318,824	0.17	1.99E-05	8.70E-05
HEXANE (H/T)	1.8	2,318,824	4.17	4.76E-04	2.09E-03
INDENO(1,2,3-cd)PYRENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
LEAD (H)	5.00E-04	2,318,824	1.16E-03	1.32E-07	5.80E-07
MANGANESE (H/T)	3.80E-04	2,318,824	8.81E-04	1.01E-07	4.41E-07
MERCURY (H/T)	2.60E-04	2,318,824	6.03E-04	6.88E-08	3.01E-07
2-METHYLNAPHTHALENE (H)	2.40E-05	2,318,824	5.57E-05	6.35E-09	2.78E-08
3-METHYLCHLOROANTHRENE (H)	1.80E-06	2,318,824	4.17E-06	4.76E-10	2.09E-09
NAPHTHALENE (H)	6.10E-04	2,318,824	1.41E-03	1.61E-07	7.07E-07
NICKEL (H)	2.10E-03	2,318,824	4.87E-03	5.56E-07	2.43E-06
PHENANATHRENE (H)	1.70E-05	2,318,824	3.94E-05	4.50E-09	1.97E-08
PYRENE (H)	5.00E-06	2,318,824	1.16E-05	1.32E-09	5.80E-09
SELENIUM (H)	2.40E-05	2,318,824	5.57E-05	6.35E-09	2.78E-08
TOLUENE (H/T)	3.40E-03	2,318,824	7.88E-03	9.00E-07	3.94E-06
- Emissions (lb/yr) = (Usage (cu ft/yr)/10^6) x emission factor			total HAPs:	5.00E-04	2.19E-03
- Emissions (lb/hr) = Emissions (lb/yr) / hrs of operation			Max HAP:	4.76E-04	2.09E-03
- Emission Factors from AP-42, Tables 1.4-2 and 1.4-3 (07/98)					



Non-Oil & Gas Industry Construction Permit Application Completeness Checklist Form APCD-100a Air Pollution Control Division

Company Name: Oracle America, Inc.
Source Name: Oracle Broomfield Campus
Date: 10/26/2023

Are you requesting a facility wide permit for multiple emissions points? ☒ ☐

In order to have a complete application, the following attachments must be provided, unless stated otherwise.
If application is incomplete, it will be returned to sender and **filing fees will not be refunded.**

Attachment	Application Element	Attached?
A	APEN Filing Fee(s)	☒
B	Air Pollutant Emission Notice(s) (APENs) - APCD Form Series 200	☒
C	Emissions Calculations and Supporting Documentation	☒
D	Company Contact Information - Form APCD-101 ☐ Check here if there will only be one point of contact (Attachment D not required)	☒
E	Ambient Air Impact Analysis (One of the following MUST be selected in order for the application to be considered complete) ☒ Check here if source is exempt from modeling determination requirements per "Interim Colorado Modeling Guideline for Air Quality Permits" and/or "Permitting Section Addendum to the Modeling Guideline". ☐ Check here if operator submitted a request for modeling determination (Form APCD-114) to the Division's Permit Modeling Unit (PMU) prior to application submittal, and the Division determined that modeling was not required. (Include the version of form APCD-114 that was approved and returned by the PMU.) ☐ Check here if operator submitted a modeling analysis to the Division which was approved by the Division prior to application submittal. (Include form APCD-114, operator's approved modeling analysis, and the PMU Modeling Review Report provided by the Division which documents compliance with the NAAQS and conditions of approval for proposed source.) ☐ Check here if operator is submitting a modeling analysis to the Division concurrently with the application submittal, or if the already-submitted modeling analysis has not yet been approved by the Division.	☐
F	Facility Emissions Inventory - Form APCD-102a ☐ Check here if single emissions point source (Attachment F not required)	☒
G	Process description, flow diagram, plot plan of emissions unit and/or facility ☐ Check here if single emissions point source (Attachment G not required)	☒
H	Regulatory Analysis ☒ Check here to request APCD to complete regulatory analysis (Attachment H not required)	☐

Additional attachments

Certain sources may require additional forms. Refer to <https://www.colorado.gov/pacific/cdphe/air/air-permit> to check if any APEN supplement forms are required for your source.

Send **Complete** Application to:

Colorado Department of Public Health & Environment
APCD-SS-B1
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Check box if facility is an existing Title V source: ☐ Send an additional application copy

Check box if refined modeling analysis included: ☐ Send an additional application copy

Check box if application is for major NANSR or PSD permit:

NANSR = Nonattainment Area New Source Review

PSD = Prevention of Significant Deterioration

☐ Send eight (8) total application copies



Emission Source List

Combustion Source Information for APENS

Boiler Information for APENS

Emergency Generator Information for APENS



Emission Calculations for Boilers and Generators



Environmental Justice Report

Applicant Information

Company Name: Oracle America, Inc.

Facility Name: Broomfield Campus

Plant AIRS ID Number:

Permit Type:

Permit Number:

Facility location used for generating the report: 39.920 , -105.1287

Environmental Justice Summary

Broomfield County

Census Block Group 080140311001

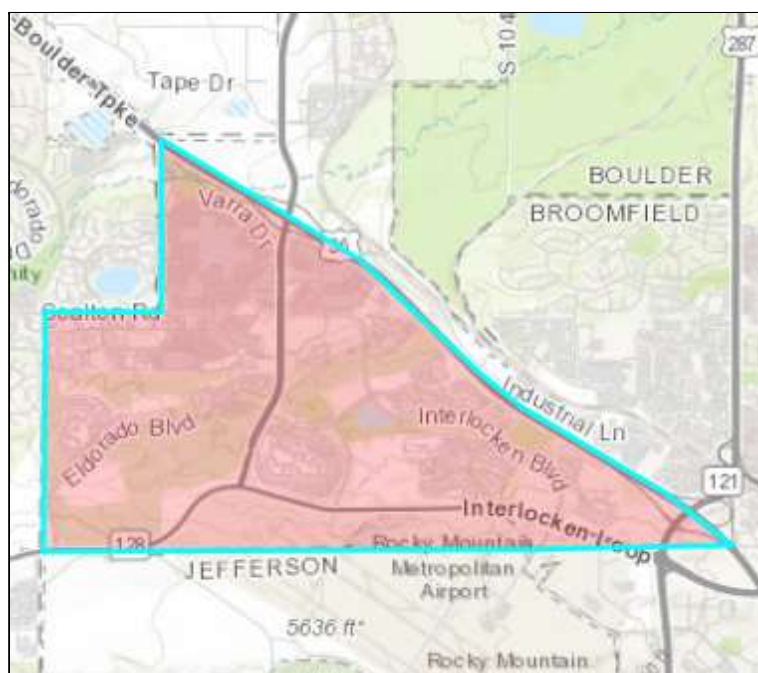
Air Quality Reg. 3 Disproportionately Impacted (DI) Community

No

Air Quality Reg. 3 Community Type

Not Disproportionately Impacted

Low-income Population	21.5%
People of Color Population	21.3%
Limited English Proficiency Population	2.3%
Housing Cost Burdened Population	43.4%
CO EnviroScreen Percentile Score	21.66



Environmental Justice Overview

Environmental Exposures Percentile Score 25.37

The environmental exposures score represents a community's exposure to certain environmental risks relative to the rest of the state. The score ranges from 0 to 100, with higher scores indicating higher burden. The environmental exposures score does not cover all pollutants; it is the average of data on diesel particulate matter, traffic proximity, ozone, PM 2.5, air toxics, other air pollutants, lead exposure risk, drinking water violations, and noise.

Environmental Effects Percentile Score 58.18

The environmental effects score represents how many hazardous or toxic sites are in a community relative to the rest of the state. The score ranges from 0 to 100, with a higher score indicating higher burden. The score is the average of data on proximity to mining, oil and gas operations, impaired surface waters, wastewater discharge facilities, Superfund sites, facilities that use hazardous chemicals, and facilities that generate, treat, store, or dispose of hazardous wastes.

Climate Vulnerability Percentile Score 75.23

The climate burden score represents a community's risk of drought, flood, extreme heat, and wildfire compared to the rest of the state. The score ranges from 0 to 100, the higher the score, the higher the burden.

Sensitive Populations Percentile Score 2.35

The sensitive populations score captures how at risk a community is to environmental exposures and climate impacts as it relates to health. For example, air pollution has stronger impacts on older and younger people, and people with chronic conditions such as asthma. The score ranges from 0 to 100, with a higher score being worse. The score is calculated using data on asthma hospitalization rate, cancer prevalence, diabetes prevalence, heart disease prevalence, life expectancy, low birth weight rate, mental health, population over 65, and population under 5.

Demographics Percentile Score 47.34

The demographics score represents a community's social and economic vulnerabilities. The score ranges from 0 to 100, with a higher number representing a higher vulnerability. It is calculated using data on people living with disabilities, housing cost burden, educational attainment, limited English proficiency, income, and race and ethnicity.

Pollution and Climate Indicators

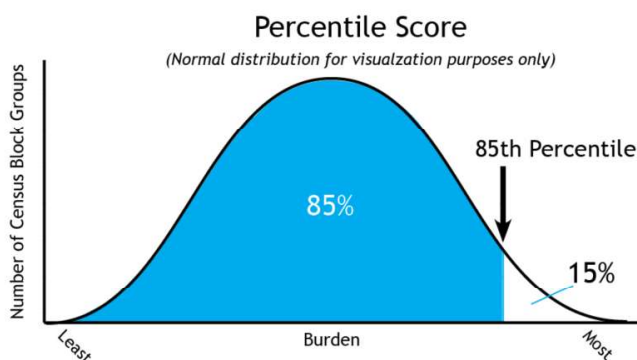
Indicator	Original Unit of Measure	Percentile
Air Toxics Emissions	distance weighted measure of estimated air toxics emissions	61.18
Diesel Particulate Matter	micrograms per cubic meter	40.34
Drinking Water Regulations	population weighted duration (in weeks) of resolved and unresolved health based violations from active community public water systems	2.52
Fine Particle Pollution (PM 2.5)	micrograms per cubic meter	61.81
Impaired Streams and Rivers	average impairment and assessment status of streams	45.95
Lead Exposure Risk	percentage of housing units built before 1960, as an indicator of potential exposure to lead	23.05
Noise	decibels A	61.13
Other Air Pollutants	distance weighted measure of estimated other air pollutant emissions	91.02
Ozone	parts per billion	70.33
Proximity to Hazardous Waste Facilities	distance weighted count of hazardous waste facilities within 5 km	46.83
Proximity to Mining Locations	distance weighted measure of the total number of active coal, hard rock, and construction materials mining permits	83.46
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Proximity to Oil and Gas	distance weighted measure of the total number of active oil and gas locations	87.74
Proximity to Risk Management Plan Sites	distance weighted count of RMP facilities within 5 km	31
Traffic Proximity and Volume	amount of vehicular traffic nearby, and distance from roads	28.14
Wastewater Discharge Indicator	toxic chemical concentrations in stream segments per km	53.38
Drought	sum of weekly total percent of an area experiencing a severe, extreme, or exceptional drought	63.02
Extreme Heat Days	average number of high heat days between May and September from 2016 to 2020	47.37
Floodplains	percentage of each geographic area where there is at least a one percent chance of flooding annually	73.36
Wildfire Risk	mean wildfire hazard potential within each geographic area as determined by the US Forest Service, 2021	62.37

Health and Social Indicators

Indicator	Original Unit of Measure	Percentile
Asthma Hospitalization Rate	rate of hospitalization per 100,000 people	32.6
Cancer Prevalence	percent of adults	2.44
Diabetes Prevalence	percent of adults	47.23
Heart Disease in Adults	percent of adults	1.5
Life Expectancy	years	38.59
Low Birth Weight	percent of singleton births	74.19
Mental Health Indicator	percent of adults	0.79
Population over 64 years of age	percent of total population	29.02
Population under 5 years of age	percent of total population	24.74
Disability	percent of total population	46.83
Housing Cost Burdened	percent of total population	82.08
Less Than High School Education	percent of total population	12.91
Linguistic Isolation	percent of total population	68.63
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People of Color	percent of total population	43.6

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The data in the report comes from Colorado EnviroScreen version 1.0. Developed in 2022 by CDPHE and Colorado State University, EnviroScreen maps the overlap of environmental exposures and effects, climate vulnerability, sensitive populations, and demographics to better understand environmental injustice and environmental health risks in Colorado. For more detailed information on the data sources used in Colorado EnviroScreen Version 1.0 see the [technical documentation](#).

On the first page of the report, red text highlights if values for a census block group meet or exceed the criteria for definition of Disproportionately Impacted Community for Air Quality Regulation 3. On subsequent pages of the report, red text highlights indicators in the top percentiles for Colorado that may warrant additional consideration during the permitting process. The Environmental Justice Report is not intended to show individual health risk or exposure.

In the Environmental Justice Summary on the first page, values shown in red indicate a census block group that meets or exceeds the following criteria to qualify as a Disproportionately Impacted (DI) Community for Air Quality Reg 3:

- Over 40% of households are low-income (meaning they are at or below 200% of the federal poverty level),
- 40% of the population identify as people of color,
- 50% of households are housing-cost burdened (meaning they spend more than 30% of household income on housing costs), or
- 20% of the population is linguistically isolated (meaning no adults in a household speak English well).

A census block group that meets or exceeds any of these percentages is labeled as a Socioeconomically Vulnerable Community (SVC).

The CO EnviroScreen Percentile Score, which is also found on the first page of the Environmental Justice Report, is written in red if it is above the 80th percentile. A census block group with a CO EnviroScreen Score above the 80th percentile is labeled as a Cumulatively Impacted Community (CIC).

In other sections of the Environmental Justice Report, including the Environmental Justice Overview, Pollution and Climate Indicators, and Health and Social Indicators sections, indicator and component scores over the 80th percentile are also highlighted in red. The 80th percentile threshold is used in most cases to flag census block groups that have indicators and groups of indicators (components) that are in the top 20% of census block groups in Colorado. These indicators and components are flagged because they may warrant further review in the permitting process by the permit applicant and/or the Division staff reviewing the permit.

As explained on page 11 of the User Guide, for most indicators, the indicator is highlighted in red if it is above the 80th percentile to indicate that the census block group where the facility is located faces higher risks based on that indicator compared to other Colorado communities. However, less than 20% of census block groups in Colorado have oil and gas facilities or mining locations. Accordingly, all census block groups in Colorado score above the 80th percentile for proximity to these two types of facilities because even having zero facilities puts a community in the top 20%. Accordingly, the Environmental Justice Report highlights a census block group in red if it is above the 85th percentile for mining facilities and above the 90th percentile for oil and gas facilities. This ensures that only census block groups with a greater number of facilities than the statewide average of zero are highlighted on the EJ Report.

Colorado EnviroScreen does:

- Show which areas in Colorado are more likely to have higher environmental health injustices.
- Identify areas in Colorado where government agencies can prioritize resources and work to reduce pollution and other sources of environmental injustice.
- Provide information to empower communities to advocate to improve public health and the environment.
- Identify areas that meet the updated definition of "Disproportionately Impacted Community" under House Bill 23-1233 adopted a definition that applies to all state agencies, including CDPHE.
- Identify areas where the Air Quality Regulation (Reg.) Number 3, which governs permitting in disproportionately impacted communities, applies.
- Identify areas that meet the prior definition of "Disproportionately Impacted Community" under the Colorado Environmental Justice Act (HB21-1266).

Colorado EnviroScreen does not:

- Define a healthy or unhealthy environment.
- Establish causal associations between environmental risks and health.
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- Provide information about an individual person's health status or environment.
- Take all environmental exposures into account.
- Tell us about smaller areas within a census block group that may be more vulnerable to environmental exposures than other areas.
- Provide information about non-human health or ecosystem risks.

Additional Resources

[Frequently Asked Questions: Environmental Justice Report Tool for Air Quality Regulation 3](#)

[Air Pollution Control Division's Small Business Assistance Program](#)

[CDPHE Environmental Justice Program](#)

[Colorado EnviroScreen Version 1.0 Reports, Guides, and Resources Folder](#)



COLORADO

Air Pollution Control Division

Department of Public Health & Environment

Troy Vincent
Oracle America, Inc.
Oracle Broomfield Campus
Census Block Group 080140311001

August 4, 2023

Dear Troy Vincent,

We have reviewed the complete Environmental Justice Summary for the Oracle Broomfield Campus in census block group 080140311001 submitted on July 31, 2023. Based on this information, the facility is not located in a Disproportionately Impacted Community. You can now move forward with submitting your permit application to the Air Pollution Control Division.

Please include this full document as part of your permit application package. It includes the Environmental Justice Summary information you submitted, as well as this letter of concurrence. The Environmental Justice Summary is part of the permit record. If the main permit application does not include this letter of concurrence and the information attached, it may be rejected as incomplete.

If you have any questions about the Environmental Justice Summary, please email cdphe_apcd_ejreports@state.co.us.

Thank you,

Air Pollution Control Division's Environmental Justice in Permitting Team





Environmental Justice Report

Applicant Information

Company Name: Oracle America, Inc.

Facility Name: Broomfield Campus

Plant AIRS ID Number:

Permit Type:

Permit Number:

Facility location used for generating the report: 39.920 , -105.1287

Environmental Justice Summary

Broomfield County

Census Block Group 080140311001

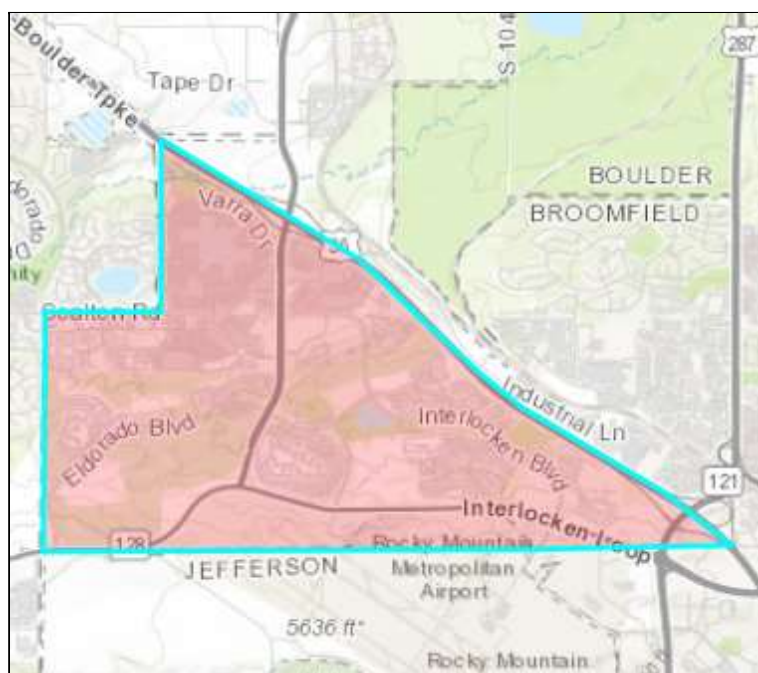
Air Quality Reg. 3 Disproportionately Impacted (DI) Community

No

Air Quality Reg. 3 Community Type

Not Disproportionately Impacted

Low-income Population	21.5%
People of Color Population	21.3%
Limited English Proficiency Population	2.3%
Housing Cost Burdened Population	43.4%
CO EnviroScreen Percentile Score	21.66



Environmental Justice Overview

Environmental Exposures Percentile Score 25.37

The environmental exposures score represents a community's exposure to certain environmental risks relative to the rest of the state. The score ranges from 0 to 100, with higher scores indicating higher burden. The environmental exposures score does not cover all pollutants; it is the average of data on diesel particulate matter, traffic proximity, ozone, PM 2.5, air toxics, other air pollutants, lead exposure risk, drinking water violations, and noise.

Environmental Effects Percentile Score 58.18

The environmental effects score represents how many hazardous or toxic sites are in a community relative to the rest of the state. The score ranges from 0 to 100, with a higher score indicating higher burden. The score is the average of data on proximity to mining, oil and gas operations, impaired surface waters, wastewater discharge facilities, Superfund sites, facilities that use hazardous chemicals, and facilities that generate, treat, store, or dispose of hazardous wastes.

Climate Vulnerability Percentile Score 75.23

The climate burden score represents a community's risk of drought, flood, extreme heat, and wildfire compared to the rest of the state. The score ranges from 0 to 100, the higher the score, the higher the burden.

Sensitive Populations Percentile Score 2.35

The sensitive populations score captures how at risk a community is to environmental exposures and climate impacts as it relates to health. For example, air pollution has stronger impacts on older and younger people, and people with chronic conditions such as asthma. The score ranges from 0 to 100, with a higher score being worse. The score is calculated using data on asthma hospitalization rate, cancer prevalence, diabetes prevalence, heart disease prevalence, life expectancy, low birth weight rate, mental health, population over 65, and population under 5.

Demographics Percentile Score 47.34

The demographics score represents a community's social and economic vulnerabilities. The score ranges from 0 to 100, with a higher number representing a higher vulnerability. It is calculated using data on people living with disabilities, housing cost burden, educational attainment, limited English proficiency, income, and race and ethnicity.

Pollution and Climate Indicators

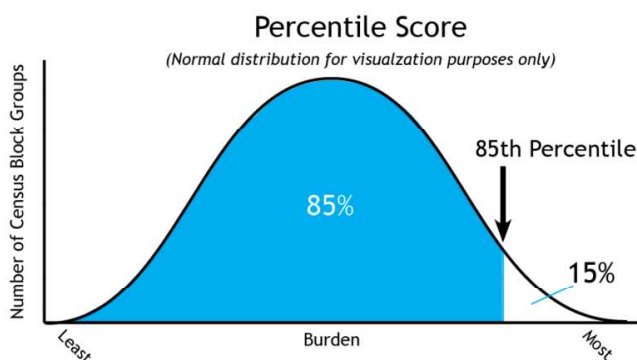
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Search Google Maps



Restaurants

Hotels

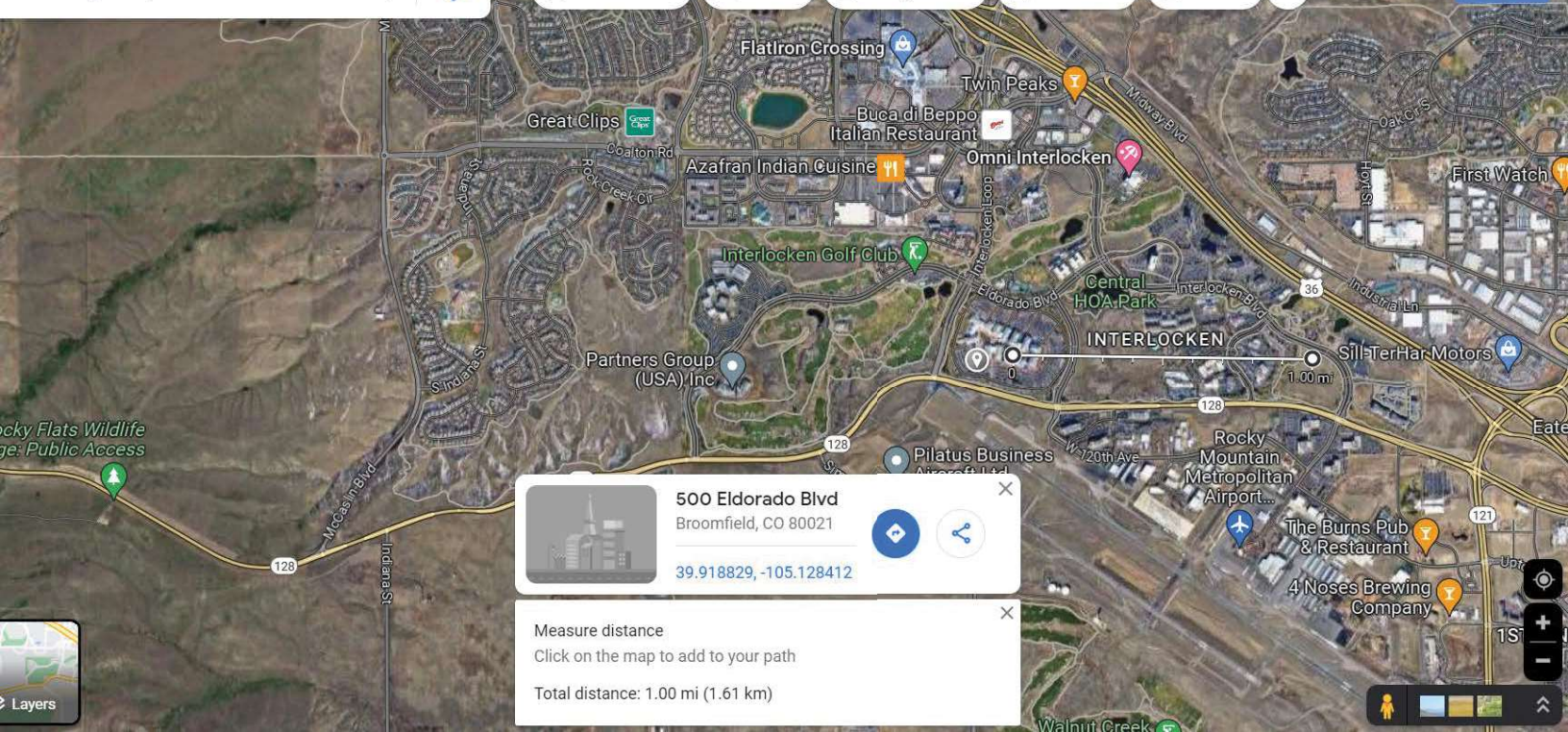
Things to do

Museums

Transit



Sign in



500 Eldorado Blvd

Broomfield, CO 80021

39.918829, -105.128412



Measure distance

Click on the map to add to your path

Total distance: 1.00 mi (1.61 km)

Environmental Justice Summary Supplemental Information for Air Quality Regulation 3

Air Pollution Control Division

Background: Under Colorado's Air Quality Regulation 3, an Environmental Justice Summary ("EJ Summary") is required for all applicable permit applications. This EJ Summary consists of:

1. **Environmental Justice Report ("EJ Report" - submitted separately as an email attachment to cdphe_apcd_ejreports@state.co.us).**
2. **Environmental Justice Summary Supplemental Information Form (this form).**
3. **Any additional supporting documentation (such as map images).**

You must submit a complete EJ Summary to the Air Pollution Control Division (APCD) for review and approval **before** submitting your main permit application. You will then receive a letter of concurrence from the Division's Environmental Justice in Permitting Specialist. The Environmental Justice Summary, including the Environmental Justice Report, is part of the permit record. If the main permit application does not include a letter of concurrence, it may be rejected as incomplete.

Additional information is available on the [EJ Report Tool website](#).

Note: If a [modeling determination \(form APCD-114\)](#) is required for this emission source, you should submit your modeling determination request at the same time you submit the Environmental Justice Summary by following the instructions on form APCD-114. If you are unsure whether a modeling determination is required for this emission source, please consult the [Air Pollution Control Division's website](#).

Note: Small businesses can contact the Air Pollution Control Division's Small Business Assistance Program for assistance: cdphe_apcd_sbap@state.co.us. For information about which businesses qualify for assistance as a small business, visit the program's [website](#).

A copy of your responses will be emailed to you upon form submission.

Email *

ronald.stow@oracle.com

Section 1: Background Information (Company/Facility)

Company name *

Oracle America, Inc.

Facility name (If the facility does not have a name, enter the company name.) *

Oracle Broomfield Campus

Facility location (street address or coordinates) *

500 Eldorado Boulevard, Broomfield, CO 80021

Census block group(s) in which the facility is located (this information is found in the facility's Environmental Justice Report) *

080140311001

Which type of air permit will you be applying for? *

- ☐ Initial Title V Permit
- ☐ Title V Permit Renewal or Modification
- ☐ General Permit
- ☐ Unsure
- ☒ Other: Construction Permit/ non-Title V

Has this facility previously received an official permit or exemption letter from the Air Pollution Control Division (APCD)? *

- ☒ Yes
- ☐ No
- ☐ Unsure

Section 1: Background Information (Company/Facility)

What is the AIRS ID of this facility? (The AIRS ID number will be listed on the permit or exemption letter. It is seven or ten digits, usually written "XXX-XXXX" or "XXX-XXXX-XXX"). *

014-1333

What is the permit number or exemption number? *

07BR0956 (former)

Section 2: Company/Facility Contact Information

Company representative name *

Troy Vincent

Company representative phone number *

(303) 435-5492

Company representative email address *

troy.vincent@oracle.com

Company representative name #2 (optional)

Aaron Faatz

Company representative phone number #2 (optional)

(720) 373-4672

Company representative email address #2 (optional)

aaron.faatz@oracle.com

Section 3: Environmental Justice Requirements

The Environmental Justice Report Tool and how-to instructions are available on the Air Pollution Control Division's [website](#). Please run a report for your facility to answer the questions below.

Based on the Environmental Justice Report generated, is this facility located in a Disproportionately Impacted (DI) Community? *

☐ Yes

☒ No

Section 3: Environmental Justice Requirements

What type of Disproportionately Impacted (DI) Community is the facility located in based on the Environmental Justice Report? *

- ☐ Cumulatively Impacted (CI) Community only
- ☐ Socioeconomically Vulnerable (SV) Community only
- ☐ Both a Cumulatively Impacted (CI) Community and a Socioeconomically Vulnerable (SV) Community

Section 4: Description of Proposed Permit Application

Will this facility emit any Affected Pollutants? (Check all that apply.) *

- ☒ Volatile organic compounds (VOCs)
- ☒ Nitrogen oxides (NOx)
- ☐ Particulate matter ≤ 2.5 microns in diameter (PM2.5)
- ☐ Benzene
- ☐ Toluene
- ☐ Ethylbenzene
- ☐ Xylene
- ☐ Not applicable/unsure

Describe the proposed permit application, including the estimated emission rates (in tons per year) of any and all Affected Pollutants. (Note: Please do not send this information as additional attachments. Provide the information requested as a short plain language summary below.) *

<25 Tons NOx PTE

Is the proposed permit application for a new source or modification to an existing source that will increase emissions of Affected Pollutants in a Disproportionately Impacted Community? *

☐ Yes

☒ No

Describe any mitigation measures and/or changes to the proposed emission sources that were made based on the results of the facility's Environmental Justice Report and Summary, if any (such as enhanced monitoring, recordkeeping, and/or reporting). (Note: If you prefer to send this as an email attachment to cdphe_apcd_ejreports@state.co.us, write "Will send via email." If the facility is not located in a Disproportionately Impacted Community, write "N/A.") *

N/A

Describe any emission reduction strategies that were considered in relation to the Colorado EnviroScreen indicator data, if any (i.e., information in the facility's Environmental Justice Report). (Note: If you prefer to send this as an email attachment to cdphe_apcd_ejreports@state.co.us, write "Will send via email." If the facility is not located in a Disproportionately Impacted Community or no such mitigation measures or changes were made, write "N/A.") *

N/A

Describe any changes that were made to the originally-planned source equipment or operations based on engagement with and assessment of the Disproportionately Impacted Community, if any. (Note: If you prefer to send this as an email attachment to cdphe_apcd_ejreports@state.co.us, write "Will send via email." If the facility is not located in a Disproportionately Impacted Community or no such changes were made, write "N/A.") *

N/A

I acknowledge that, if applicable, I provided complete answers to the questions above in this section OR I will submit a summary of the information requested in the questions above to cdphe_apcd_ejreports@state.co.us. *

☒ Yes

Section 5: Public Outreach

For facilities located in Disproportionately Impacted Communities, the Air Pollution Control Division encourages thoughtful and culturally-sensitive enhanced public outreach by the facility to keep communities informed and engaged with the latest information. This includes any engagement with members of the Disproportionately Impacted Community who reside within one mile of the proposed Affected Construction Source or frequent an Occupied Area within one mile of the proposed Affected Construction Source, unless the Occupied Area is under the control of the proposed Affected Construction Source's owner/operator.

Did the owner/operator of the facility conduct or plan to conduct enhanced community outreach to the impacted community prior to submitting the main permit application? *

☐ Yes

☒ No

Provide a summary of community outreach the owner/operator of the facility conducted, or plans to conduct, if any. (Note: If you prefer to send this as an email attachment to cdphe_apcd_ejreports@state.co.us, write "Will send via email." If the facility is not located in a Disproportionately Impacted Community or no such engagement will be conducted, write "N/A.") *

N/A

Describe any other considerations intended to facilitate the fair treatment and meaningful involvement of Disproportionately Impacted Community members, if any. (Note: If you prefer to send this as an email attachment to cdphe_apcd_ejreports@state.co.us, write "Will send via email." If the facility is not located in a Disproportionately Impacted Community or no such considerations have been implemented, write "N/A.") *

N/A

I acknowledge that, if applicable, I provided complete answers to the questions above in this section OR I will submit a summary of community outreach the facility conducted, or plans to conduct, to cdphe_apcd_ejreports@state.co.us. *

☒ Yes

Section 6: Acknowledgements and Supplement Submission

To submit a complete Environmental Justice Summary to the Division, email the following documents to cdphe_apcd_ejreports@state.co.us before or after submitting this online form.

1. Facility's Environmental Justice Report generated by the Environmental Justice Report Tool.
2. If this facility is located in a Disproportionately Impacted (DI) Community, a summary of any community outreach activities conducted or planned as mentioned in Section 5.
3. Any additional supporting documentation (such as aerial or satellite map images).

I acknowledge that I will submit a complete Environmental Justice Summary to the Air Pollution Control Division prior to submitting the main permit application. *

☒ Yes

I acknowledge that, if applicable, I must also submit a completed Form APCD-114 prior to submitting the main permit application. (Information on Form APCD-114 can be found [here](#)). *

☒ Yes

I acknowledge that I must submit an aerial or satellite image of the location of the facility as documentation of any Occupied Areas not within Owner/Operator control within one mile of the Source, to cdphe_apcd_ejreports@state.co.us. Instructions on how to submit this image are available on [the Air Pollution Control Division's website](#). *

☒ Yes

This form was created inside of State.co.us Executive Branch.

Google Forms



APENS

APCD-102a Emissions Inventory

APCD- 103a Application Checklist

APCD-220 Boilers

APCE-233 Compression Ignition Engine