

**AIR QUALITY and GHG IMPACT ANALYSES**

**1424 DEEPWATER AVENUE RESIDENTIAL PROJECT**

**CITY OF LOS ANGELES, CALIFORNIA**

Prepared by:

*Hans D. Giroux*

Hans Giroux  
Senior Analyst  
Giroux & Associates  
1800 E Garry St., #205  
Santa Ana, CA 92705

Prepared for:

LINC Housing  
Attn: Cody Snyder  
3590 Elm Avenue  
Long Beach, CA 90807-3903

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# AIR QUALITY IMPACT

## STANDARDS OF SIGNIFICANCE

The SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Daily Emissions Thresholds		
Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

## CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The proposed project entails construction of a 56-unit 3-story residential building. Estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum daily emissions for each pollutant using default durations and equipment fleets found in CalEEMod for the proposed residential use as shown below:

### Construction Activity Equipment Fleet

<b>Phase Name and Duration</b>	<b>Equipment</b>
Grading (4 days)	1 Grader
	1 Dozer
	1 Loader/Backhoe
Construction (200 days)	1 Crane
	1 Forklift
	1 Generator Set
	3 Welders
	1 Loader/Backhoe
Paving (10 days)	1 Paver
	1 Cement Mixer
	1 Loader/Backhoe
	1 Paving Equipment
	1 Roller
Painting (10 days)	1 Air Compressor

Utilizing the indicated equipment fleet and durations the following worst case daily construction emissions are calculated by CalEEMod:

### Construction Activity Emissions Maximum Daily Emissions (pounds/day)

<b>Maximal Construction Emissions</b>	<b>ROG</b>	<b>NOx</b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM-10</b>	<b>PM-2.5</b>
<b>2020</b>						
<b>Unmitigated</b>	35.3	15.6	15.1	0.0	5.7	3.2
<b>SCAQMD Rule 403 Compliant</b>	35.3	15.6	15.1	0.0	2.7	1.6
<b>SCAQMD Thresholds</b>	75	100	550	150	150	55

Peak daily construction activity emissions are estimated be below SCAQMD CEQA thresholds without the need for added mitigation. SCAQMD Rule 403 requires control of fugitive dust during periods of soil disturbance. CalEEMod considers adequate daily watering to meet Rule 403 requirements. The only model-based measure that was applied for this project was watering export surfaces three times per day to minimize the generation of fugitive dust generation during grading.

### **LOCALIZED SIGNIFICANCE THRESHOLDS**

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs).

For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project, there are several adjacent residential uses such that the most conservative 25-meter distance was modeled.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this project, the most stringent thresholds for a 1-acre site were applied.

The following thresholds and emissions are therefore determined (pounds per day):

**LST and Project Emissions (pounds/day)**

LST 1 acre/25 meters S Coastal LA County	CO	NOx	PM-10	PM-2.5
<b>LST Threshold</b>	585	57	4	3
<b>Max On-Site Emissions</b>				
<b>Unmitigated</b>	15	22	6	3
<b>Rule 403 Compliant</b>	15	22	3	2

CalEEMod Output in Appendix

LSTs were compared to the maximum daily construction activities. With active dust suppression to meet Rule 403, controlled emissions meet the LST for construction thresholds. LST impacts are less-than-significant. With compliance with SCAMD Rule 403 (Fugitive Dust), there will be no significant construction activity air quality impacts.

## **OPERATIONAL IMPACTS**

Operational emissions were calculated using CalEEMod2016.3.2 for an assumed project build-out year of 2020 as a target for full occupancy. The project would generate 372 weekday trips using default trip rates in CalEEMod for the proposed use. In addition to mobile sources from vehicles, general development causes smaller amounts of “area source” air pollution to be generated from on-site energy consumption (primarily space heating, hot water and landscaping). These sources represent a minimal percentage of the total project NOx and CO burdens, and a few percent of other pollutants. The inclusion of such emissions adds negligibly to the total significant project-related emissions burden as shown below.

### Daily Operational Impacts

Source	Operational Emissions (lbs/day)					
	ROG	NOx	CO	SO <sub>2</sub>	PM-10	PM-2.5
Area	16.0	1.2	33.0	0.1	4.3	4.3
Energy	0.0	0.1	0.1	0.0	0.1	0.0
Mobile	0.8	3.7	10.8	0.0	2.7	0.8
<b>Total</b>	<b>16.8</b>	<b>5.0</b>	<b>43.9</b>	<b>0.1</b>	<b>7.1</b>	<b>5.1</b>
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod2016.3.2 Output in Appendix

The project would not cause any operational emissions to exceed their respective SCAQMD CEQA significance thresholds. Operational emission impacts are judged to be less than significant. No impact mitigation for operational activity emissions is considered necessary to support this finding.

### GHG EMISSIONS THRESHOLDS

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO<sub>2</sub> equivalent/year CO<sub>2</sub>e. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO<sub>2</sub>e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

### PROJECT GHG EMISSIONS GENERATION

#### Construction Activity GHG Emissions

The project is assumed to require less than one year for construction. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO<sub>2</sub>e emissions identified below.

#### Construction Emissions (Metric Tons CO<sub>2</sub>e)

	CO <sub>2</sub> e
Year 2020	249.1
<b>Amortized</b>	<b>8.3</b>

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

### **Project Operational GHG Emissions**

The input assumptions for operational GHG emissions calculations and the GHG conversion from consumption to annual regional CO<sub>2</sub>e emissions are summarized in the CalEEMod2016.3.2 output files found in the appendix of this report.

The total operational and annualized construction emissions for the proposed project are identified as follows:

**Proposed Uses Operational Emissions**

<b>Consumption Source</b>	
Area Sources	18.9
Energy Utilization	159.7
Mobile Source	555.4
Waste	12.9
Water	45.7
Construction	8.3
<b>Total</b>	<b>800.9</b>
Guideline Threshold	3,000
Exceeds Threshold?	No

Total project GHG emissions would be substantially below the proposed significance threshold of 3,000 MT suggested by the SCAQMD. Hence, the project would not result in generation of a significant level of greenhouse gases.

## **CALEEMOD2016.3.2 COMPUTER MODEL OUTPUT**

- DAILY EMISSIONS
- ANNUAL EMISSIONS

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**1424 Deepwater LA**  
**Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	56.00	Dwelling Unit	1.29	56,000.00	160

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - site acreage

Construction Off-road Equipment Mitigation -

Area Mitigation -

Construction Phase - Grading: 4 days, Construction: 200 days, Paving: 10 days, Painting: 10 days

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	1.47	1.29

**2.0 Emissions Summary**

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Year	lb/day											lb/day					
2020	35.3196	15.5574	15.1067	0.0283	5.0037	0.8027	5.6888	2.5493	0.7752	3.1796	0.0000	2,637.819	2,637.819	0.4447	0.0000	2,647.7311	
Maximum	35.3196	15.5574	15.1067	0.0283	5.0037	0.8027	5.6888	2.5493	0.7752	3.1796	0.0000	2,637.819	2,637.819	0.4447	0.0000	2,647.731	

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Year	lb/day											lb/day					
2020	35.3196	15.5574	15.1067	0.0283	2.0060	0.8027	2.6911	1.0087	0.7752	1.6390	0.0000	2,637.819	2,637.819	0.4447	0.0000	2,647.7311	
Maximum	35.3196	15.5574	15.1067	0.0283	2.0060	0.8027	2.6911	1.0087	0.7752	1.6390	0.0000	2,637.819	2,637.819	0.4447	0.0000	2,647.731	

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	59.91	0.00	52.69	60.43	0.00	48.45	0.00	0.00	0.00	0.00	0.00	0.00

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
Area	16.0200	1.2155	33.1143	0.0729		4.3032	4.3032		4.3032	4.3032	524.5474	1,016.318 9	1,540.866 4	1.5724	0.0356	1,590.786 3	
Energy	0.0182	0.1552	0.0661	9.9000e-004		0.0126	0.0126		0.0126	0.0126		198.1557	198.1557	3.8000e-003	3.6300e-003	199.3333	
Mobile	0.7831	3.6816	10.7737	0.0351	2.7061	0.0349	2.7410	0.7243	0.0328	0.7570		3,562.766 4	3,562.766 4	0.1931		3,567.594 3	
<b>Total</b>	<b>16.8212</b>	<b>5.0524</b>	<b>43.9540</b>	<b>0.1090</b>	<b>2.7061</b>	<b>4.3507</b>	<b>7.0568</b>	<b>0.7243</b>	<b>4.3486</b>	<b>5.0728</b>	<b>524.5474</b>	<b>4,777.241 0</b>	<b>5,301.788 5</b>	<b>1.7693</b>	<b>0.0392</b>	<b>5,357.713 8</b>	

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
Area	1.4438	0.8897	4.9912	5.5800e-003		0.0931	0.0931		0.0931	0.0931	0.0000	1,075.613 1	1,075.613 1	0.0286	0.0196	1,082.158 2	
Energy	0.0182	0.1552	0.0661	9.9000e-004		0.0126	0.0126		0.0126	0.0126		198.1557	198.1557	3.8000e-003	3.6300e-003	199.3333	
Mobile	0.7831	3.6816	10.7737	0.0351	2.7061	0.0349	2.7410	0.7243	0.0328	0.7570		3,562.766 4	3,562.766 4	0.1931		3,567.594 3	
<b>Total</b>	<b>2.2450</b>	<b>4.7265</b>	<b>15.8309</b>	<b>0.0417</b>	<b>2.7061</b>	<b>0.1406</b>	<b>2.8466</b>	<b>0.7243</b>	<b>0.1384</b>	<b>0.8627</b>	<b>0.0000</b>	<b>4,836.535 2</b>	<b>4,836.535 2</b>	<b>0.2255</b>	<b>0.0232</b>	<b>4,849.085 8</b>	

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	86.65	6.45	63.98	61.78	0.00	96.77	59.66	0.00	96.82	82.99	100.00	-1.24	8.78	87.26	40.86	9.49

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/4/2020	2/7/2020	5	4	
2	Building Construction	Building Construction	2/8/2020	11/13/2020	5	200	
3	Paving	Paving	11/14/2020	11/27/2020	5	10	
4	Architectural Coating	Architectural Coating	11/28/2020	12/11/2020	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 113,400; Residential Outdoor: 37,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	40.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**3.2 Grading - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000	
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.718 3	1,365.718 3	0.4417		1,376.760 9	
<b>Total</b>	<b>1.3498</b>	<b>15.0854</b>	<b>6.4543</b>	<b>0.0141</b>	<b>4.9143</b>	<b>0.6844</b>	<b>5.5986</b>	<b>2.5256</b>	<b>0.6296</b>	<b>3.1552</b>			<b>1,365.718 3</b>	<b>1,365.718 3</b>	<b>0.4417</b>		<b>1,376.760 9</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	
Worker	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244			94.0890	94.0890	2.9700e-003	94.1632	
<b>Total</b>	<b>0.0368</b>	<b>0.0262</b>	<b>0.3503</b>	<b>9.4000e-004</b>	<b>0.0894</b>	<b>7.5000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.9000e-004</b>	<b>0.0244</b>			<b>94.0890</b>	<b>94.0890</b>	<b>2.9700e-003</b>	<b>94.1632</b>	

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**3.2 Grading - 2020****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					1.9166	0.0000	1.9166	0.9850	0.0000	0.9850			0.0000			0.0000	
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9	
<b>Total</b>	<b>1.3498</b>	<b>15.0854</b>	<b>6.4543</b>	<b>0.0141</b>	<b>1.9166</b>	<b>0.6844</b>	<b>2.6009</b>	<b>0.9850</b>	<b>0.6296</b>	<b>1.6146</b>	<b>0.0000</b>	<b>1,365.718 3</b>	<b>1,365.718 3</b>	<b>0.4417</b>		<b>1,376.760 9</b>	

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	
Worker	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244			94.0890	94.0890	2.9700e-003	94.1632	
<b>Total</b>	<b>0.0368</b>	<b>0.0262</b>	<b>0.3503</b>	<b>9.4000e-004</b>	<b>0.0894</b>	<b>7.5000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.9000e-004</b>	<b>0.0244</b>			<b>94.0890</b>	<b>94.0890</b>	<b>2.9700e-003</b>	<b>94.1632</b>	

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**3.3 Building Construction - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.159 5	2,001.159 5	0.3715		2,010.446 7	
<b>Total</b>	<b>2.0305</b>	<b>14.7882</b>	<b>13.1881</b>	<b>0.0220</b>		<b>0.7960</b>	<b>0.7960</b>		<b>0.7688</b>	<b>0.7688</b>		<b>2,001.159 5</b>	<b>2,001.159 5</b>	<b>0.3715</b>		<b>2,010.446 7</b>	

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000	
Vendor	0.0213	0.6382	0.1672	1.5600e-003	0.0384	3.0000e-003	0.0414	0.0111	2.8700e-003	0.0139		166.2148	166.2148	0.0101		166.4684	
Worker	0.1841	0.1310	1.7514	4.7200e-003	0.4471	3.7400e-003	0.4508	0.1186	3.4400e-003	0.1220		470.4452	470.4452	0.0148		470.8160	
<b>Total</b>	<b>0.2054</b>	<b>0.7692</b>	<b>1.9186</b>	<b>6.2800e-003</b>	<b>0.4855</b>	<b>6.7400e-003</b>	<b>0.4923</b>	<b>0.1296</b>	<b>6.3100e-003</b>	<b>0.1360</b>		<b>636.6600</b>	<b>636.6600</b>	<b>0.0250</b>		<b>637.2843</b>	

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**3.3 Building Construction - 2020****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.159 5	2,001.159 5	0.3715		2,010.446 7	
<b>Total</b>	<b>2.0305</b>	<b>14.7882</b>	<b>13.1881</b>	<b>0.0220</b>		<b>0.7960</b>	<b>0.7960</b>		<b>0.7688</b>	<b>0.7688</b>	<b>0.0000</b>	<b>2,001.159 5</b>	<b>2,001.159 5</b>	<b>0.3715</b>		<b>2,010.446 7</b>	

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0213	0.6382	0.1672	1.5600e-003	0.0384	3.0000e-003	0.0414	0.0111	2.8700e-003	0.0139	166.2148	166.2148	0.0101			166.4684	
Worker	0.1841	0.1310	1.7514	4.7200e-003	0.4471	3.7400e-003	0.4508	0.1186	3.4400e-003	0.1220	470.4452	470.4452	0.0148			470.8160	
<b>Total</b>	<b>0.2054</b>	<b>0.7692</b>	<b>1.9186</b>	<b>6.2800e-003</b>	<b>0.4855</b>	<b>6.7400e-003</b>	<b>0.4923</b>	<b>0.1296</b>	<b>6.3100e-003</b>	<b>0.1360</b>	<b>636.6600</b>	<b>636.6600</b>	<b>0.0250</b>			<b>637.2843</b>	

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**3.4 Paving - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	1,296.946 1	1,296.946 1	0.4111			1,307.224 6	
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
<b>Total</b>	<b>0.8402</b>	<b>8.4514</b>	<b>8.8758</b>	<b>0.0135</b>		<b>0.4695</b>	<b>0.4695</b>		<b>0.4328</b>	<b>0.4328</b>		<b>1,296.946 1</b>	<b>1,296.946 1</b>	<b>0.4111</b>			<b>1,307.224 6</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397	152.8947	152.8947	4.8200e-003			153.0152
<b>Total</b>	<b>0.0598</b>	<b>0.0426</b>	<b>0.5692</b>	<b>1.5400e-003</b>	<b>0.1453</b>	<b>1.2100e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.1200e-003</b>	<b>0.0397</b>		<b>152.8947</b>	<b>152.8947</b>	<b>4.8200e-003</b>		<b>153.0152</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**3.4 Paving - 2020****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.946 1	1,296.946 1	0.4111		1,307.224 6
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8402</b>	<b>8.4514</b>	<b>8.8758</b>	<b>0.0135</b>		<b>0.4695</b>	<b>0.4695</b>		<b>0.4328</b>	<b>0.4328</b>	<b>0.0000</b>	<b>1,296.946 1</b>	<b>1,296.946 1</b>	<b>0.4111</b>		<b>1,307.224 6</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397	152.8947	152.8947	4.8200e-003			153.0152
<b>Total</b>	<b>0.0598</b>	<b>0.0426</b>	<b>0.5692</b>	<b>1.5400e-003</b>	<b>0.1453</b>	<b>1.2100e-003</b>	<b>0.1465</b>	<b>0.0385</b>	<b>1.1200e-003</b>	<b>0.0397</b>	<b>152.8947</b>	<b>152.8947</b>	<b>4.8200e-003</b>			<b>153.0152</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**3.5 Architectural Coating - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	35.0406						0.0000	0.0000		0.0000	0.0000			0.0000		0.0000	
Off-Road	0.2422	1.6838	1.8314	2.9700e-003			0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
<b>Total</b>	<b>35.2828</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>			<b>0.1109</b>	<b>0.1109</b>		<b>0.1109</b>	<b>0.1109</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9928</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	
Worker	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244			94.0890	94.0890	2.9700e-003		94.1632
<b>Total</b>	<b>0.0368</b>	<b>0.0262</b>	<b>0.3503</b>	<b>9.4000e-004</b>	<b>0.0894</b>	<b>7.5000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.9000e-004</b>	<b>0.0244</b>			<b>94.0890</b>	<b>94.0890</b>	<b>2.9700e-003</b>		<b>94.1632</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**3.5 Architectural Coating - 2020****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	35.0406						0.0000	0.0000		0.0000	0.0000			0.0000		0.0000	
Off-Road	0.2422	1.6838	1.8314	2.9700e-003			0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
<b>Total</b>	<b>35.2828</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>			<b>0.1109</b>	<b>0.1109</b>		<b>0.1109</b>	<b>0.1109</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9928</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244	94.0890	94.0890	2.9700e-003			94.1632
<b>Total</b>	<b>0.0368</b>	<b>0.0262</b>	<b>0.3503</b>	<b>9.4000e-004</b>	<b>0.0894</b>	<b>7.5000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.9000e-004</b>	<b>0.0244</b>		<b>94.0890</b>	<b>94.0890</b>	<b>2.9700e-003</b>		<b>94.1632</b>

**4.0 Operational Detail - Mobile**

1424 Deepwater LA - Los Angeles-South Coast County, Summer

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7831	3.6816	10.7737	0.0351	2.7061	0.0349	2.7410	0.7243	0.0328	0.7570	3,562.766 4	3,562.766 4	0.1931		3,567.594 3	
Unmitigated	0.7831	3.6816	10.7737	0.0351	2.7061	0.0349	2.7410	0.7243	0.0328	0.7570	3,562.766 4	3,562.766 4	0.1931		3,567.594 3	

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Mid Rise	372.40	357.84	328.16	1,243,843		1,243,843	
Total	372.40	357.84	328.16	1,243,843		1,243,843	

#### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

1424 Deepwater LA - Los Angeles-South Coast County, Summer

## 5.0 Energy Detail

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Historical Energy Use: N

### 5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
NaturalGas Mitigated	0.0182	0.1552	0.0661	9.9000e-004			0.0126	0.0126		0.0126	0.0126	198.1557	198.1557	3.8000e-003	3.6300e-003	199.3333	
NaturalGas Unmitigated	0.0182	0.1552	0.0661	9.9000e-004			0.0126	0.0126		0.0126	0.0126	198.1557	198.1557	3.8000e-003	3.6300e-003	199.3333	

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1684.32	0.0182	0.1552	0.0661	9.9000e-004		0.0126	0.0126		0.0126	0.0126	198.1557	198.1557	3.8000e-003	3.6300e-003	199.3333	
<b>Total</b>		<b>0.0182</b>	<b>0.1552</b>	<b>0.0661</b>	<b>9.9000e-004</b>		<b>0.0126</b>	<b>0.0126</b>		<b>0.0126</b>	<b>0.0126</b>		<b>198.1557</b>	<b>198.1557</b>	<b>3.8000e-003</b>	<b>3.6300e-003</b>	<b>199.3333</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.68432	0.0182	0.1552	0.0661	9.9000e-004		0.0126	0.0126		0.0126	0.0126	198.1557	198.1557	3.8000e-003	3.6300e-003	199.3333	
<b>Total</b>		<b>0.0182</b>	<b>0.1552</b>	<b>0.0661</b>	<b>9.9000e-004</b>		<b>0.0126</b>	<b>0.0126</b>		<b>0.0126</b>	<b>0.0126</b>		<b>198.1557</b>	<b>198.1557</b>	<b>3.8000e-003</b>	<b>3.6300e-003</b>	<b>199.3333</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## 1424 Deepwater LA - Los Angeles-South Coast County, Summer

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4438	0.8897	4.9912	5.5800e-003		0.0931	0.0931		0.0931	0.0931	0.0000	1,075.6131	1,075.6131	0.0286	0.0196	1,082.1582
Unmitigated	16.0200	1.2155	33.1143	0.0729		4.3032	4.3032		4.3032	4.3032	524.5474	1,016.3189	1,540.8664	1.5724	0.0356	1,590.7863

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0960					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	14.6740	1.1619	28.4789	0.0727		4.2778	4.2778		4.2778	4.2778	524.5474	1,008.0000	1,532.5474	1.5643	0.0356	1,582.2645
Landscaping	0.1412	0.0536	4.6354	2.4000e-004		0.0255	0.0255		0.0255	0.0255		8.3189	8.3189	8.1100e-003		8.5217
<b>Total</b>	<b>16.0200</b>	<b>1.2155</b>	<b>33.1143</b>	<b>0.0729</b>		<b>4.3032</b>	<b>4.3032</b>		<b>4.3032</b>	<b>4.3032</b>	<b>524.5474</b>	<b>1,016.3189</b>	<b>1,540.8664</b>	<b>1.5724</b>	<b>0.0356</b>	<b>1,590.7863</b>

1424 Deepwater LA - Los Angeles-South Coast County, Summer

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0960					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0978	0.8361	0.3558	5.3400e-003		0.0676	0.0676		0.0676	0.0676	0.0000	1,067.294 1	1,067.294 1	0.0205	0.0196	1,073.636 5
Landscaping	0.1412	0.0536	4.6354	2.4000e-004		0.0255	0.0255		0.0255	0.0255		8.3189	8.3189	8.1100e-003		8.5217
<b>Total</b>	<b>1.4438</b>	<b>0.8897</b>	<b>4.9912</b>	<b>5.5800e-003</b>		<b>0.0931</b>	<b>0.0931</b>		<b>0.0931</b>	<b>0.0931</b>	<b>0.0000</b>	<b>1,075.613 1</b>	<b>1,075.613 1</b>	<b>0.0286</b>	<b>0.0196</b>	<b>1,082.158 2</b>

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

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1424 Deepwater LA - Los Angeles-South Coast County, Summer

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

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

Equipment Type	Number
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**11.0 Vegetation**

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## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**1424 Deepwater LA**  
**Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	56.00	Dwelling Unit	1.29	56,000.00	160

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - site acreage

Construction Off-road Equipment Mitigation -

Area Mitigation -

Construction Phase - Grading: 4 days, Construction: 200 days, Paving: 10 days, Painting: 10 days

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	1.47	1.29

**2.0 Emissions Summary**

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Year	tons/yr											MT/yr					
2020	0.4076	1.6400	1.5725	2.9300e-003	0.0588	0.0846	0.1433	0.0181	0.0815	0.0996	0.0000	248.1750	248.1750	0.0387	0.0000	249.1435	
Maximum	0.4076	1.6400	1.5725	2.9300e-003	0.0588	0.0846	0.1433	0.0181	0.0815	0.0996	0.0000	248.1750	248.1750	0.0387	0.0000	249.1435	

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Year	tons/yr											MT/yr					
2020	0.4076	1.6400	1.5725	2.9300e-003	0.0528	0.0846	0.1373	0.0151	0.0815	0.0966	0.0000	248.1747	248.1747	0.0387	0.0000	249.1432	
Maximum	0.4076	1.6400	1.5725	2.9300e-003	0.0528	0.0846	0.1373	0.0151	0.0815	0.0966	0.0000	248.1747	248.1747	0.0387	0.0000	249.1432	

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	10.21	0.00	4.19	17.03	0.00	3.09	0.00	0.00	0.00	0.00	0.00	0.00

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2020	4-2-2020	0.3738	0.3738
2	4-3-2020	7-2-2020	0.5783	0.5783
3	7-3-2020	9-30-2020	0.5719	0.5719
		Highest	0.5783	0.5783

**2.2 Overall Operational**Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4210	0.0212	0.9354	9.4000e-004		0.0567	0.0567		0.0567	0.0567	5.9483	12.3739	18.3222	0.0187	4.0000e-004	18.9089
Energy	3.3100e-003	0.0283	0.0121	1.8000e-004		2.2900e-003	2.2900e-003		2.2900e-003	2.2900e-003	0.0000	159.2390	159.2390	3.6100e-003	1.2200e-003	159.6927
Mobile	0.1325	0.6863	1.8474	6.0200e-003	0.4721	6.2200e-003	0.4783	0.1266	5.8300e-003	0.1324	0.0000	554.6665	554.6665	0.0309	0.0000	555.4391
Waste						0.0000	0.0000		0.0000	0.0000	5.2291	0.0000	5.2291	0.3090	0.0000	12.9547
Water						0.0000	0.0000		0.0000	0.0000	1.1575	40.6940	41.8515	0.1199	3.0100e-003	45.7436
Total	0.5567	0.7358	2.7948	7.1400e-003	0.4721	0.0652	0.5373	0.1266	0.0648	0.1913	12.3349	766.9733	779.3082	0.4821	4.6300e-003	792.7391

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Area	0.2387	0.0172	0.5839	1.0000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	13.0463	13.0463	1.1500e-003	2.2000e-004	13.1412	
Energy	3.3100e-003	0.0283	0.0121	1.8000e-004		2.2900e-003	2.2900e-003		2.2900e-003	2.2900e-003	0.0000	159.2390	159.2390	3.6100e-003	1.2200e-003	159.6927	
Mobile	0.1325	0.6863	1.8474	6.0200e-003	0.4721	6.2200e-003	0.4783	0.1266	5.8300e-003	0.1324	0.0000	554.6665	554.6665	0.0309	0.0000	555.4391	
Waste						0.0000	0.0000		0.0000	0.0000	5.2291	0.0000	5.2291	0.3090	0.0000	12.9547	
Water						0.0000	0.0000		0.0000	0.0000	1.1575	40.6940	41.8515	0.1199	3.0100e-003	45.7436	
<b>Total</b>	<b>0.3745</b>	<b>0.7317</b>	<b>2.4433</b>	<b>6.3000e-003</b>	<b>0.4721</b>	<b>0.0125</b>	<b>0.4846</b>	<b>0.1266</b>	<b>0.0122</b>	<b>0.1387</b>	<b>6.3866</b>	<b>767.6457</b>	<b>774.0323</b>	<b>0.4645</b>	<b>4.4500e-003</b>	<b>786.9714</b>	

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	32.73	0.55	12.58	11.76	0.00	80.76	9.80	0.00	81.24	27.51	48.22	-0.09	0.68	3.63	3.89	0.73

**3.0 Construction Detail****Construction Phase**

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/4/2020	2/7/2020	5	4	
2	Building Construction	Building Construction	2/8/2020	11/13/2020	5	200	
3	Paving	Paving	11/14/2020	11/27/2020	5	10	
4	Architectural Coating	Architectural Coating	11/28/2020	12/11/2020	5	10	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.5**

**Acres of Paving: 0**

**Residential Indoor: 113,400; Residential Outdoor: 37,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0  
(Architectural Coating – sqft)**

**OffRoad Equipment**

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	40.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**3.2 Grading - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980	
<b>Total</b>	<b>2.7000e-003</b>	<b>0.0302</b>	<b>0.0129</b>	<b>3.0000e-005</b>	<b>9.8300e-003</b>	<b>1.3700e-003</b>	<b>0.0112</b>	<b>5.0500e-003</b>	<b>1.2600e-003</b>	<b>6.3100e-003</b>	<b>0.0000</b>	<b>2.4779</b>	<b>2.4779</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>2.4980</b>	

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	7.0000e-005	6.0000e-005	6.6000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1634	0.1634	1.0000e-005	0.0000	0.1635	
<b>Total</b>	<b>7.0000e-005</b>	<b>6.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1634</b>	<b>0.1634</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1635</b>	

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**3.2 Grading - 2020****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Fugitive Dust					3.8300e-003	0.0000	3.8300e-003	1.9700e-003	0.0000	1.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980	
<b>Total</b>	<b>2.7000e-003</b>	<b>0.0302</b>	<b>0.0129</b>	<b>3.0000e-005</b>	<b>3.8300e-003</b>	<b>1.3700e-003</b>	<b>5.2000e-003</b>	<b>1.9700e-003</b>	<b>1.2600e-003</b>	<b>3.2300e-003</b>	<b>0.0000</b>	<b>2.4779</b>	<b>2.4779</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>2.4980</b>	

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	7.0000e-005	6.0000e-005	6.6000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1634	0.1634	1.0000e-005	0.0000	0.1635	
<b>Total</b>	<b>7.0000e-005</b>	<b>6.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1634</b>	<b>0.1634</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1635</b>	

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**3.3 Building Construction - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2031	1.4788	1.3188	2.2000e-003		0.0796	0.0796		0.0769	0.0769	0.0000	181.5421	181.5421	0.0337	0.0000	182.3847
<b>Total</b>	<b>0.2031</b>	<b>1.4788</b>	<b>1.3188</b>	<b>2.2000e-003</b>		<b>0.0796</b>	<b>0.0796</b>		<b>0.0769</b>	<b>0.0769</b>	<b>0.0000</b>	<b>181.5421</b>	<b>181.5421</b>	<b>0.0337</b>	<b>0.0000</b>	<b>182.3847</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1800e-003	0.0650	0.0176	1.5000e-004	3.7800e-003	3.0000e-004	4.0800e-003	1.0900e-003	2.9000e-004	1.3800e-003	0.0000	14.9056	14.9056	9.5000e-004	0.0000	14.9293
Worker	0.0185	0.0149	0.1647	4.5000e-004	0.0438	3.7000e-004	0.0442	0.0116	3.4000e-004	0.0120	0.0000	40.8540	40.8540	1.2900e-003	0.0000	40.8862
<b>Total</b>	<b>0.0206</b>	<b>0.0799</b>	<b>0.1823</b>	<b>6.0000e-004</b>	<b>0.0476</b>	<b>6.7000e-004</b>	<b>0.0483</b>	<b>0.0127</b>	<b>6.3000e-004</b>	<b>0.0134</b>	<b>0.0000</b>	<b>55.7596</b>	<b>55.7596</b>	<b>2.2400e-003</b>	<b>0.0000</b>	<b>55.8155</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**3.3 Building Construction - 2020****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2031	1.4788	1.3188	2.2000e-003		0.0796	0.0796		0.0769	0.0769	0.0000	181.5419	181.5419	0.0337	0.0000	182.3844
<b>Total</b>	<b>0.2031</b>	<b>1.4788</b>	<b>1.3188</b>	<b>2.2000e-003</b>		<b>0.0796</b>	<b>0.0796</b>		<b>0.0769</b>	<b>0.0769</b>	<b>0.0000</b>	<b>181.5419</b>	<b>181.5419</b>	<b>0.0337</b>	<b>0.0000</b>	<b>182.3844</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1800e-003	0.0650	0.0176	1.5000e-004	3.7800e-003	3.0000e-004	4.0800e-003	1.0900e-003	2.9000e-004	1.3800e-003	0.0000	14.9056	14.9056	9.5000e-004	0.0000	14.9293
Worker	0.0185	0.0149	0.1647	4.5000e-004	0.0438	3.7000e-004	0.0442	0.0116	3.4000e-004	0.0120	0.0000	40.8540	40.8540	1.2900e-003	0.0000	40.8862
<b>Total</b>	<b>0.0206</b>	<b>0.0799</b>	<b>0.1823</b>	<b>6.0000e-004</b>	<b>0.0476</b>	<b>6.7000e-004</b>	<b>0.0483</b>	<b>0.0127</b>	<b>6.3000e-004</b>	<b>0.0134</b>	<b>0.0000</b>	<b>55.7596</b>	<b>55.7596</b>	<b>2.2400e-003</b>	<b>0.0000</b>	<b>55.8155</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**3.4 Paving - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.2000e-003</b>	<b>0.0423</b>	<b>0.0444</b>	<b>7.0000e-005</b>		<b>2.3500e-003</b>	<b>2.3500e-003</b>		<b>2.1600e-003</b>	<b>2.1600e-003</b>	<b>0.0000</b>	<b>5.8829</b>	<b>5.8829</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>5.9295</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.4000e-004	2.6800e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6639	0.6639	2.0000e-005	0.0000	0.6644
<b>Total</b>	<b>3.0000e-004</b>	<b>2.4000e-004</b>	<b>2.6800e-003</b>	<b>1.0000e-005</b>	<b>7.1000e-004</b>	<b>1.0000e-005</b>	<b>7.2000e-004</b>	<b>1.9000e-004</b>	<b>1.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.6639</b>	<b>0.6639</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6644</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**3.4 Paving - 2020****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.2000e-003</b>	<b>0.0423</b>	<b>0.0444</b>	<b>7.0000e-005</b>		<b>2.3500e-003</b>	<b>2.3500e-003</b>		<b>2.1600e-003</b>	<b>2.1600e-003</b>	<b>0.0000</b>	<b>5.8828</b>	<b>5.8828</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>5.9295</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.4000e-004	2.6800e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6639	0.6639	2.0000e-005	0.0000	0.6644
<b>Total</b>	<b>3.0000e-004</b>	<b>2.4000e-004</b>	<b>2.6800e-003</b>	<b>1.0000e-005</b>	<b>7.1000e-004</b>	<b>1.0000e-005</b>	<b>7.2000e-004</b>	<b>1.9000e-004</b>	<b>1.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.6639</b>	<b>0.6639</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6644</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**3.5 Architectural Coating - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1752						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
<b>Total</b>	<b>0.1764</b>	<b>8.4200e-003</b>	<b>9.1600e-003</b>	<b>1.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.2791</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.5000e-004	1.6500e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4085	0.4085	1.0000e-005	0.0000	0.4089
<b>Total</b>	<b>1.8000e-004</b>	<b>1.5000e-004</b>	<b>1.6500e-003</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.4085</b>	<b>0.4085</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.4089</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**3.5 Architectural Coating - 2020****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1752						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
<b>Total</b>	<b>0.1764</b>	<b>8.4200e-003</b>	<b>9.1600e-003</b>	<b>1.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.2791</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.5000e-004	1.6500e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4085	0.4085	1.0000e-005	0.0000	0.4089
<b>Total</b>	<b>1.8000e-004</b>	<b>1.5000e-004</b>	<b>1.6500e-003</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.4085</b>	<b>0.4085</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.4089</b>

**4.0 Operational Detail - Mobile**

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1325	0.6863	1.8474	6.0200e-003	0.4721	6.2200e-003	0.4783	0.1266	5.8300e-003	0.1324	0.0000	554.6665	554.6665	0.0309	0.0000	555.4391
Unmitigated	0.1325	0.6863	1.8474	6.0200e-003	0.4721	6.2200e-003	0.4783	0.1266	5.8300e-003	0.1324	0.0000	554.6665	554.6665	0.0309	0.0000	555.4391

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Mid Rise	372.40	357.84	328.16	1,243,843	1,243,843	1,243,843	1,243,843
Total	372.40	357.84	328.16	1,243,843	1,243,843	1,243,843	1,243,843

#### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

## 5.0 Energy Detail

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Historical Energy Use: N

### 5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	126.4321	126.4321	2.9900e-003	6.2000e-004	126.6909	
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	126.4321	126.4321	2.9900e-003	6.2000e-004	126.6909	
NaturalGas Mitigated	3.3100e-003	0.0283	0.0121	1.8000e-004			2.2900e-003	2.2900e-003		2.2900e-003	2.2900e-003	0.0000	32.8069	32.8069	6.3000e-004	6.0000e-004	33.0019
NaturalGas Unmitigated	3.3100e-003	0.0283	0.0121	1.8000e-004			2.2900e-003	2.2900e-003		2.2900e-003	2.2900e-003	0.0000	32.8069	32.8069	6.3000e-004	6.0000e-004	33.0019

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	614778	3.3100e-003	0.0283	0.0121	1.8000e-004		2.2900e-003	2.2900e-003		2.2900e-003	2.2900e-003	0.0000	32.8069	32.8069	6.3000e-004	6.0000e-004	33.0019
<b>Total</b>		<b>3.3100e-003</b>	<b>0.0283</b>	<b>0.0121</b>	<b>1.8000e-004</b>		<b>2.2900e-003</b>	<b>2.2900e-003</b>		<b>2.2900e-003</b>	<b>2.2900e-003</b>	<b>0.0000</b>	<b>32.8069</b>	<b>32.8069</b>	<b>6.3000e-004</b>	<b>6.0000e-004</b>	<b>33.0019</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	614778	3.3100e-003	0.0283	0.0121	1.8000e-004		2.2900e-003	2.2900e-003		2.2900e-003	2.2900e-003	0.0000	32.8069	32.8069	6.3000e-004	6.0000e-004	33.0019
<b>Total</b>		<b>3.3100e-003</b>	<b>0.0283</b>	<b>0.0121</b>	<b>1.8000e-004</b>		<b>2.2900e-003</b>	<b>2.2900e-003</b>		<b>2.2900e-003</b>	<b>2.2900e-003</b>	<b>0.0000</b>	<b>32.8069</b>	<b>32.8069</b>	<b>6.3000e-004</b>	<b>6.0000e-004</b>	<b>33.0019</b>

1424 Deepwater LA - Los Angeles-South Coast County, Annual

## 5.3 Energy by Land Use - Electricity

### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	227003	126.4321	2.9900e-003	6.2000e-004	126.6909
<b>Total</b>		<b>126.4321</b>	<b>2.9900e-003</b>	<b>6.2000e-004</b>	<b>126.6909</b>

### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	227003	126.4321	2.9900e-003	6.2000e-004	126.6909
<b>Total</b>		<b>126.4321</b>	<b>2.9900e-003</b>	<b>6.2000e-004</b>	<b>126.6909</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2387	0.0172	0.5839	1.0000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	13.0463	13.0463	1.1500e-003	2.2000e-004	13.1412
Unmitigated	0.4210	0.0212	0.9354	9.4000e-004		0.0567	0.0567		0.0567	0.0567	5.9483	12.3739	18.3222	0.0187	4.0000e-004	18.9089

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0175					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2024					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1834	0.0145	0.3560	9.1000e-004		0.0535	0.0535		0.0535	0.0535	5.9483	11.4305	17.3788	0.0177	4.0000e-004	17.9426
Landscaping	0.0176	6.7000e-003	0.5794	3.0000e-005		3.1900e-003	3.1900e-003		3.1900e-003	3.1900e-003	0.0000	0.9434	0.9434	9.2000e-004	0.0000	0.9664
<b>Total</b>	<b>0.4210</b>	<b>0.0212</b>	<b>0.9354</b>	<b>9.4000e-004</b>		<b>0.0567</b>	<b>0.0567</b>		<b>0.0567</b>	<b>0.0567</b>	<b>5.9483</b>	<b>12.3739</b>	<b>18.3222</b>	<b>0.0187</b>	<b>4.0000e-004</b>	<b>18.9089</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0175					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2024					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.2200e-003	0.0105	4.4500e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	12.1029	12.1029	2.3000e-004	2.2000e-004	12.1748
Landscaping	0.0176	6.7000e-003	0.5794	3.0000e-005		3.1900e-003	3.1900e-003		3.1900e-003	3.1900e-003	0.0000	0.9434	0.9434	9.2000e-004	0.0000	0.9664
<b>Total</b>	<b>0.2387</b>	<b>0.0172</b>	<b>0.5839</b>	<b>1.0000e-004</b>		<b>4.0300e-003</b>	<b>4.0300e-003</b>		<b>4.0300e-003</b>	<b>4.0300e-003</b>	<b>0.0000</b>	<b>13.0463</b>	<b>13.0463</b>	<b>1.1500e-003</b>	<b>2.2000e-004</b>	<b>13.1412</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	41.8515	0.1199	3.0100e-003	45.7436
Unmitigated	41.8515	0.1199	3.0100e-003	45.7436

**7.2 Water by Land Use****Unmitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.64863 / 2.30022	41.8515	0.1199	3.0100e-003	45.7436
<b>Total</b>		<b>41.8515</b>	<b>0.1199</b>	<b>3.0100e-003</b>	<b>45.7436</b>

## 1424 Deepwater LA - Los Angeles-South Coast County, Annual

**7.2 Water by Land Use****Mitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.64863 / 2.30022	41.8515	0.1199	3.0100e- 003	45.7436
<b>Total</b>		<b>41.8515</b>	<b>0.1199</b>	<b>3.0100e- 003</b>	<b>45.7436</b>

**8.0 Waste Detail****8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.2291	0.3090	0.0000	12.9547
Unmitigated	5.2291	0.3090	0.0000	12.9547

1424 Deepwater LA - Los Angeles-South Coast County, Annual

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	25.76	5.2291	0.3090	0.0000	12.9547
<b>Total</b>		<b>5.2291</b>	<b>0.3090</b>	<b>0.0000</b>	<b>12.9547</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	25.76	5.2291	0.3090	0.0000	12.9547
<b>Total</b>		<b>5.2291</b>	<b>0.3090</b>	<b>0.0000</b>	<b>12.9547</b>

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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1424 Deepwater LA - Los Angeles-South Coast County, Annual

## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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### Boilers

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

Equipment Type	Number
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## 11.0 Vegetation

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