

**APPENDIX D**

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**Air Quality: CalEEMod Output Data and Health Risk Assessment Report**

**APPENDIX D.1**

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**Air Quality: CalEEMod Output Data**

Existing Compton HS - Los Angeles-South Coast County, Annual

**Existing Compton HS  
Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	190.00	Space	1.71	117,100.00	0
Other Non-Asphalt Surfaces	12.60	Acre	12.60	548,700.00	0
High School	333.39	1000sqft	7.65	333,390.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2018
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -

Land Use - High School includes Educational/Administrative Buildings including Eddie Thomas Gym and District Facilities

Construction Phase - Existing Conditions - No Construction

Off-road Equipment -

Vehicle Trips - Based on traffic study, with a capacity of 3,186 students, the High School generates 6,468 weekday daily trips

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00



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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

## 2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4122	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0133	0.0133	4.0000e-005	0.0000	0.0142
Energy	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129	0.0000	826.9379	826.9379	0.0301	8.8800e-003	830.3338
Mobile	0.2614	1.3464	3.9371	0.0114	0.8586	0.0139	0.8725	0.2302	0.0131	0.2433	0.0000	1,048.6900	1,048.6900	0.0636	0.0000	1,050.2795
Waste						0.0000	0.0000		0.0000	0.0000	87.9783	0.0000	87.9783	5.1994	0.0000	217.9626
Water						0.0000	0.0000		0.0000	0.0000	3.5120	146.6935	150.2055	0.3668	9.7700e-003	162.2865
<b>Total</b>	<b>1.6923</b>	<b>1.5164</b>	<b>4.0868</b>	<b>0.0124</b>	<b>0.8586</b>	<b>0.0268</b>	<b>0.8854</b>	<b>0.2302</b>	<b>0.0260</b>	<b>0.2562</b>	<b>91.4903</b>	<b>2,022.3346</b>	<b>2,113.8249</b>	<b>5.6598</b>	<b>0.0187</b>	<b>2,260.8765</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	tons/yr										MT/yr					



Demolition	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
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### 3.1 Mitigation Measures Construction

### 3.2 Demolition - 2018

#### 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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</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	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

#### 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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</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	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2614	1.3464	3.9371	0.0114	0.8586	0.0139	0.8725	0.2302	0.0131	0.2433	0.0000	1,048.690 0	1,048.690 0	0.0636	0.0000	1,050.279 5
Unmitigated	0.2614	1.3464	3.9371	0.0114	0.8586	0.0139	0.8725	0.2302	0.0131	0.2433	0.0000	1,048.690 0	1,048.690 0	0.0636	0.0000	1,050.279 5

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	676.78	230.04	93.35	2,261,865	2,261,865
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	676.78	230.04	93.35	2,261,865	2,261,865

#### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Other Non-Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Parking Lot	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

#### 5.0 Energy Detail

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	641.9119	641.9119	0.0265	5.4800e-003	644.2083
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	641.9119	641.9119	0.0265	5.4800e-003	644.2083
NaturalGas Mitigated	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129	0.0000	185.0260	185.0260	3.5500e-003	3.3900e-003	186.1255
NaturalGas Unmitigated	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129	0.0000	185.0260	185.0260	3.5500e-003	3.3900e-003	186.1255

**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					
High School	3.46726e+006	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129	0.0000	185.0260	185.0260	3.5500e-003	3.3900e-003	186.1255
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0187</b>	<b>0.1700</b>	<b>0.1428</b>	<b>1.0200e-003</b>		<b>0.0129</b>	<b>0.0129</b>		<b>0.0129</b>	<b>0.0129</b>	<b>0.0000</b>	<b>185.0260</b>	<b>185.0260</b>	<b>3.5500e-003</b>	<b>3.3900e-003</b>	<b>186.1255</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
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Land Use	kBTU/yr	tons/yr										MT/yr					
High School	3.46726e+006	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129	0.0000	185.0260	185.0260	3.5500e-003	3.3900e-003	186.1255
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0187</b>	<b>0.1700</b>	<b>0.1428</b>	<b>1.0200e-003</b>		<b>0.0129</b>	<b>0.0129</b>		<b>0.0129</b>	<b>0.0129</b>	<b>0.0000</b>	<b>185.0260</b>	<b>185.0260</b>	<b>3.5500e-003</b>	<b>3.3900e-003</b>	<b>186.1255</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	1.97367e+006	628.8532	0.0260	5.3700e-003	631.1029
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	40985	13.0587	5.4000e-004	1.1000e-004	13.1054
<b>Total</b>		<b>641.9119</b>	<b>0.0265</b>	<b>5.4800e-003</b>	<b>644.2083</b>

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	1.97367e+006	628.8532	0.0260	5.3700e-003	631.1029
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	40985	13.0587	5.4000e-004	1.1000e-004	13.1054

Total		641.9119	0.0265	5.4800e-003	644.2083
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## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4122	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0133	0.0133	4.0000e-005	0.0000	0.0142
Unmitigated	1.4122	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0133	0.0133	4.0000e-005	0.0000	0.0142

### 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	0.1638					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2477					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.6000e-004	6.0000e-005	6.9400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0133	0.0133	4.0000e-005	0.0000	0.0142
<b>Total</b>	<b>1.4122</b>	<b>6.0000e-005</b>	<b>6.9400e-003</b>	<b>0.0000</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0133</b>	<b>0.0133</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.0142</b>

**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	0.1638						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2477						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.6000e-004	6.0000e-005	6.9400e-003	0.0000			2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0133	0.0133	4.0000e-005	0.0000	0.0142
<b>Total</b>	<b>1.4122</b>	<b>6.0000e-005</b>	<b>6.9400e-003</b>	<b>0.0000</b>			<b>2.0000e-005</b>	<b>2.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0133</b>	<b>0.0133</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.0142</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	150.2055	0.3668	9.7700e-003	162.2865
Unmitigated	150.2055	0.3668	9.7700e-003	162.2865

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	11.0701 / 28.466	150.2055	0.3668	9.7700e-003	162.2865
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>150.2055</b>	<b>0.3668</b>	<b>9.7700e-003</b>	<b>162.2865</b>

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	11.0701 / 28.466	150.2055	0.3668	9.7700e-003	162.2865
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>150.2055</b>	<b>0.3668</b>	<b>9.7700e-003</b>	<b>162.2865</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e

	MT/yr			
Mitigated	87.9783	5.1994	0.0000	217.9626
Unmitigated	87.9783	5.1994	0.0000	217.9626

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	433.41	87.9783	5.1994	0.0000	217.9626
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>87.9783</b>	<b>5.1994</b>	<b>0.0000</b>	<b>217.9626</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	433.41	87.9783	5.1994	0.0000	217.9626
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Total		87.9783	5.1994	0.0000	217.9626
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## 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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### 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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Existing Compton HS - Los Angeles-South Coast County, Summer

**Existing Compton HS  
Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	190.00	Space	1.71	117,100.00	0
Other Non-Asphalt Surfaces	12.60	Acre	12.60	548,700.00	0
High School	333.39	1000sqft	7.65	333,390.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2018
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -

Land Use - High School includes Educational/Administrative Buildings including Eddie Thomas Gym and District Facilities

Construction Phase - Existing Conditions - No Construction

Off-road Equipment -

Vehicle Trips - Based on traffic study, with a capacity of 3,186 students, the High School generates 6,468 weekday daily trips

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00



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

## 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	7.7397	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004		0.1254
Energy	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
Mobile	1.9169	8.9482	28.7922	0.0830	6.1472	0.0973	6.2445	1.6456	0.0916	1.7371		8,417.1849	8,417.1849	0.4980		8,429.6339
<b>Total</b>	<b>9.7590</b>	<b>9.8800</b>	<b>29.6300</b>	<b>0.0886</b>	<b>6.1472</b>	<b>0.1683</b>	<b>6.3155</b>	<b>1.6456</b>	<b>0.1626</b>	<b>1.8081</b>		<b>9,534.8706</b>	<b>9,534.8706</b>	<b>0.5197</b>	<b>0.0205</b>	<b>9,553.9688</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	7.7397	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004		0.1254
Energy	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
Mobile	1.9169	8.9482	28.7922	0.0830	6.1472	0.0973	6.2445	1.6456	0.0916	1.7371		8,417.1849	8,417.1849	0.4980		8,429.6339
<b>Total</b>	<b>9.7590</b>	<b>9.8800</b>	<b>29.6300</b>	<b>0.0886</b>	<b>6.1472</b>	<b>0.1683</b>	<b>6.3155</b>	<b>1.6456</b>	<b>0.1626</b>	<b>1.8081</b>		<b>9,534.8706</b>	<b>9,534.8706</b>	<b>0.5197</b>	<b>0.0205</b>	<b>9,553.9688</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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/14/2018	3/13/2018	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 14.31

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

#### 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
Demolition	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Demolition - 2018

#### Unmitigated Construction On-Site



**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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

**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	1.9169	8.9482	28.7922	0.0830	6.1472	0.0973	6.2445	1.6456	0.0916	1.7371		8,417.1849	8,417.1849	0.4980		8,429.6339
Unmitigated	1.9169	8.9482	28.7922	0.0830	6.1472	0.0973	6.2445	1.6456	0.0916	1.7371		8,417.1849	8,417.1849	0.4980		8,429.6339

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	676.78	230.04	93.35	2,261,865	2,261,865
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	676.78	230.04	93.35	2,261,865	2,261,865

## 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Other Non-Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Parking Lot	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Category	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	
Natural Gas Mitigated	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708			1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096

NaturalGas Unmitigated	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
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## 5.2 Energy by Land Use - NaturalGas Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High School	9499.33	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1024</b>	<b>0.9313</b>	<b>0.7823</b>	<b>5.5900e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>1,117.5684</b>	<b>1,117.5684</b>	<b>0.0214</b>	<b>0.0205</b>	<b>1,124.2096</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					
High School	9.49933	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1024</b>	<b>0.9313</b>	<b>0.7823</b>	<b>5.5900e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>1,117.5684</b>	<b>1,117.5684</b>	<b>0.0214</b>	<b>0.0205</b>	<b>1,124.2096</b>

## 6.0 Area Detail



## 6.1 Mitigation Measures Area

	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	7.7397	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004		0.1254
Unmitigated	7.7397	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004		0.1254

## 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	0.8975					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8370					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004		0.1254
<b>Total</b>	<b>7.7397</b>	<b>5.2000e-004</b>	<b>0.0555</b>	<b>0.0000</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>0.1173</b>	<b>0.1173</b>	<b>3.2000e-004</b>		<b>0.1254</b>

### 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	0.8975					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8370					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004			0.1173	0.1173	3.2000e-004	0.1254
<b>Total</b>	<b>7.7397</b>	<b>5.2000e-004</b>	<b>0.0555</b>	<b>0.0000</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>			<b>0.1173</b>	<b>0.1173</b>	<b>3.2000e-004</b>	<b>0.1254</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

### Fire Pumps and Emergency Generators

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

Existing Compton HS - Los Angeles-South Coast County, Winter

**Existing Compton HS**  
**Los Angeles-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	190.00	Space	1.71	117,100.00	0
Other Non-Asphalt Surfaces	12.60	Acre	12.60	548,700.00	0
High School	333.39	1000sqft	7.65	333,390.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2018
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -

Land Use - High School includes Educational/Administrative Buildings including Eddie Thomas Gym and District Facilities

Construction Phase - Existing Conditions - No Construction

Off-road Equipment -

Vehicle Trips - Based on traffic study, with a capacity of 3,186 students, the High School generates 6,468 weekday daily trips

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00



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

## 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	7.7397	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004		0.1254
Energy	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
Mobile	1.8741	9.2724	27.2032	0.0790	6.1472	0.0978	6.2450	1.6456	0.0921	1.7376		8,007.5552	8,007.5552	0.4923		8,019.8622
<b>Total</b>	<b>9.7162</b>	<b>10.2043</b>	<b>28.0410</b>	<b>0.0845</b>	<b>6.1472</b>	<b>0.1688</b>	<b>6.3160</b>	<b>1.6456</b>	<b>0.1630</b>	<b>1.8086</b>		<b>9,125.2409</b>	<b>9,125.2409</b>	<b>0.5140</b>	<b>0.0205</b>	<b>9,144.1971</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	7.7397	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004		0.1254
Energy	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
Mobile	1.8741	9.2724	27.2032	0.0790	6.1472	0.0978	6.2450	1.6456	0.0921	1.7376		8,007.5552	8,007.5552	0.4923		8,019.8622
<b>Total</b>	<b>9.7162</b>	<b>10.2043</b>	<b>28.0410</b>	<b>0.0845</b>	<b>6.1472</b>	<b>0.1688</b>	<b>6.3160</b>	<b>1.6456</b>	<b>0.1630</b>	<b>1.8086</b>		<b>9,125.2409</b>	<b>9,125.2409</b>	<b>0.5140</b>	<b>0.0205</b>	<b>9,144.1971</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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/14/2018	3/13/2018	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 14.31

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

#### 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
Demolition	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Demolition - 2018

#### Unmitigated Construction On-Site



**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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

**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	1.8741	9.2724	27.2032	0.0790	6.1472	0.0978	6.2450	1.6456	0.0921	1.7376		8,007.555 2	8,007.555 2	0.4923		8,019.862 2
Unmitigated	1.8741	9.2724	27.2032	0.0790	6.1472	0.0978	6.2450	1.6456	0.0921	1.7376		8,007.555 2	8,007.555 2	0.4923		8,019.862 2



## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	676.78	230.04	93.35	2,261,865	2,261,865
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	676.78	230.04	93.35	2,261,865	2,261,865

## 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Other Non-Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Parking Lot	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Category	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	
Natural Gas Mitigated	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708			1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096

NaturalGas Unmitigated	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
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## 5.2 Energy by Land Use - NaturalGas Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High School	9499.33	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1024</b>	<b>0.9313</b>	<b>0.7823</b>	<b>5.5900e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>1,117.5684</b>	<b>1,117.5684</b>	<b>0.0214</b>	<b>0.0205</b>	<b>1,124.2096</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					
High School	9.49933	0.1024	0.9313	0.7823	5.5900e-003		0.0708	0.0708		0.0708	0.0708		1,117.5684	1,117.5684	0.0214	0.0205	1,124.2096
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1024</b>	<b>0.9313</b>	<b>0.7823</b>	<b>5.5900e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>1,117.5684</b>	<b>1,117.5684</b>	<b>0.0214</b>	<b>0.0205</b>	<b>1,124.2096</b>

## 6.0 Area Detail

## 6.1 Mitigation Measures Area

	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	7.7397	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004			0.1254
Unmitigated	7.7397	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004			0.1254

## 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	0.8975					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Consumer Products	6.8370					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Landscaping	5.3000e-003	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1173	0.1173	3.2000e-004			0.1254
<b>Total</b>	<b>7.7397</b>	<b>5.2000e-004</b>	<b>0.0555</b>	<b>0.0000</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>0.1173</b>	<b>0.1173</b>	<b>3.2000e-004</b>			<b>0.1254</b>

### 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	0.8975					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8370					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0555	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004			0.1173	0.1173	3.2000e-004	0.1254
<b>Total</b>	<b>7.7397</b>	<b>5.2000e-004</b>	<b>0.0555</b>	<b>0.0000</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>			<b>0.1173</b>	<b>0.1173</b>	<b>3.2000e-004</b>	<b>0.1254</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

### Fire Pumps and Emergency Generators

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

Existing Acquisition Parcels - Los Angeles-South Coast County, Annual

**Existing Acquisition Parcels  
Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	1.06	1000sqft	0.02	1,056.00	0
Place of Worship	2.75	1000sqft	0.06	2,752.00	0
Apartments Low Rise	26.00	Dwelling Unit	1.63	16,495.00	74

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2018
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -  
 Land Use - Land use of the acquisition parcels on the Project Site  
 Construction Phase - Existing Conditions - No Construction  
 Off-road Equipment -  
 Woodstoves - No woodstoves

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	4/10/2018	3/13/2018



Maximum	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
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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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

## 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	0.0892	7.7200e-003	0.2720	4.0000e-005		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	5.7451	5.7451	5.4000e-004	1.0000e-004	5.7875
Energy	2.6600e-003	0.0230	0.0112	1.5000e-004		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	74.9447	74.9447	2.5100e-003	9.0000e-004	75.2751
Mobile	0.0960	0.4606	1.2825	3.5600e-003	0.2638	4.3600e-003	0.2681	0.0707	4.1000e-003	0.0748	0.0000	327.3991	327.3991	0.0205	0.0000	327.9123
Waste						0.0000	0.0000		0.0000	0.0000	6.4328	0.0000	6.4328	0.3802	0.0000	15.9370
Water						0.0000	0.0000		0.0000	0.0000	0.5964	12.2720	12.8683	0.0618	1.5500e-003	14.8746
<b>Total</b>	<b>0.1878</b>	<b>0.4913</b>	<b>1.5657</b>	<b>3.7500e-003</b>	<b>0.2638</b>	<b>8.0400e-003</b>	<b>0.2718</b>	<b>0.0707</b>	<b>7.7800e-003</b>	<b>0.0785</b>	<b>7.0292</b>	<b>420.3608</b>	<b>427.3900</b>	<b>0.4655</b>	<b>2.5500e-003</b>	<b>439.7864</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
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Category	tons/yr										MT/yr					
Area	0.0892	7.7200e-003	0.2720	4.0000e-005		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	5.7451	5.7451	5.4000e-004	1.0000e-004	5.7875
Energy	2.6600e-003	0.0230	0.0112	1.5000e-004		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	74.9447	74.9447	2.5100e-003	9.0000e-004	75.2751
Mobile	0.0960	0.4606	1.2825	3.5600e-003	0.2638	4.3600e-003	0.2681	0.0707	4.1000e-003	0.0748	0.0000	327.3991	327.3991	0.0205	0.0000	327.9123
Waste						0.0000	0.0000		0.0000	0.0000	6.4328	0.0000	6.4328	0.3802	0.0000	15.9370
Water						0.0000	0.0000		0.0000	0.0000	0.5964	12.2720	12.8683	0.0618	1.5500e-003	14.8746
<b>Total</b>	<b>0.1878</b>	<b>0.4913</b>	<b>1.5657</b>	<b>3.7500e-003</b>	<b>0.2638</b>	<b>8.0400e-003</b>	<b>0.2718</b>	<b>0.0707</b>	<b>7.7800e-003</b>	<b>0.0785</b>	<b>7.0292</b>	<b>420.3608</b>	<b>427.3900</b>	<b>0.4655</b>	<b>2.5500e-003</b>	<b>439.7864</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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/14/2018	3/13/2018	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73





<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>
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**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</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	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

**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	0.0960	0.4606	1.2825	3.5600e-003	0.2638	4.3600e-003	0.2681	0.0707	4.1000e-003	0.0748	0.0000	327.3991	327.3991	0.0205	0.0000	327.9123
Unmitigated	0.0960	0.4606	1.2825	3.5600e-003	0.2638	4.3600e-003	0.2681	0.0707	4.1000e-003	0.0748	0.0000	327.3991	327.3991	0.0205	0.0000	327.9123

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	171.34	186.16	157.82	586,129	586,129
Automobile Care Center	25.05	25.05	12.55	31,161	31,161
Place of Worship	25.07	28.54	100.81	77,602	77,602
Total	221.46	239.75	271.17	694,893	694,893

#### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Automobile Care Center	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Place of Worship	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

#### 5.0 Energy Detail

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	48.5958	48.5958	2.0100e-003	4.2000e-004	48.7697
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	48.5958	48.5958	2.0100e-003	4.2000e-004	48.7697
NaturalGas Mitigated	2.6600e-003	0.0230	0.0112	1.5000e-004		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	26.3489	26.3489	5.1000e-004	4.8000e-004	26.5054
NaturalGas Unmitigated	2.6600e-003	0.0230	0.0112	1.5000e-004		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	26.3489	26.3489	5.1000e-004	4.8000e-004	26.5054

**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 Low Rise	424834	2.2900e-003	0.0196	8.3300e-003	1.2000e-004		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003	0.0000	22.6708	22.6708	4.3000e-004	4.2000e-004	22.8055
Automobile Care Center	19113.6	1.0000e-004	9.4000e-004	7.9000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0200	1.0200	2.0000e-005	2.0000e-005	1.0260
Place of Worship	49811.2	2.7000e-004	2.4400e-003	2.0500e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6581	2.6581	5.0000e-005	5.0000e-005	2.6739
<b>Total</b>		<b>2.6600e-003</b>	<b>0.0230</b>	<b>0.0112</b>	<b>1.4000e-004</b>		<b>1.8400e-003</b>	<b>1.8400e-003</b>		<b>1.8400e-003</b>	<b>1.8400e-003</b>	<b>0.0000</b>	<b>26.3489</b>	<b>26.3489</b>	<b>5.0000e-004</b>	<b>4.9000e-004</b>	<b>26.5054</b>

**Mitigated**

	Natural Gas 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 Low Rise	424834	2.2900e-003	0.0196	8.3300e-003	1.2000e-004		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003	0.0000	22.6708	22.6708	4.3000e-004	4.2000e-004	22.8055
Automobile Care Center	19113.6	1.0000e-004	9.4000e-004	7.9000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0200	1.0200	2.0000e-005	2.0000e-005	1.0260
Place of Worship	49811.2	2.7000e-004	2.4400e-003	2.0500e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6581	2.6581	5.0000e-005	5.0000e-005	2.6739
<b>Total</b>		<b>2.6600e-003</b>	<b>0.0230</b>	<b>0.0112</b>	<b>1.4000e-004</b>		<b>1.8400e-003</b>	<b>1.8400e-003</b>		<b>1.8400e-003</b>	<b>1.8400e-003</b>	<b>0.0000</b>	<b>26.3489</b>	<b>26.3489</b>	<b>5.0000e-004</b>	<b>4.9000e-004</b>	<b>26.5054</b>

### 5.3 Energy by Land Use - Electricity Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	110250	35.1281	1.4500e-003	3.0000e-004	35.2537
Automobile Care Center	11721.6	3.7348	1.5000e-004	3.0000e-005	3.7481
Place of Worship	30547.2	9.7330	4.0000e-004	8.0000e-005	9.7678
<b>Total</b>		<b>48.5958</b>	<b>2.0000e-003</b>	<b>4.1000e-004</b>	<b>48.7697</b>

### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			



Hearth	5.4000e-004	4.5800e-003	1.9500e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3070	5.3070	1.0000e-004	1.0000e-004	5.3386
Landscaping	8.3300e-003	3.1300e-003	0.2701	1.0000e-005		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	0.4381	0.4381	4.3000e-004	0.0000	0.4489
<b>Total</b>	<b>0.0892</b>	<b>7.7100e-003</b>	<b>0.2720</b>	<b>4.0000e-005</b>		<b>1.8400e-003</b>	<b>1.8400e-003</b>		<b>1.8400e-003</b>	<b>1.8400e-003</b>	<b>0.0000</b>	<b>5.7451</b>	<b>5.7451</b>	<b>5.3000e-004</b>	<b>1.0000e-004</b>	<b>5.7875</b>

## 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	6.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0734					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.4000e-004	4.5800e-003	1.9500e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3070	5.3070	1.0000e-004	1.0000e-004	5.3386	
Landscaping	8.3300e-003	3.1300e-003	0.2701	1.0000e-005		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	0.4381	0.4381	4.3000e-004	0.0000	0.4489	
<b>Total</b>	<b>0.0892</b>	<b>7.7100e-003</b>	<b>0.2720</b>	<b>4.0000e-005</b>		<b>1.8400e-003</b>	<b>1.8400e-003</b>		<b>1.8400e-003</b>	<b>1.8400e-003</b>	<b>0.0000</b>	<b>5.7451</b>	<b>5.7451</b>	<b>5.3000e-004</b>	<b>1.0000e-004</b>	<b>5.7875</b>	

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	12.8683	0.0618	1.5500e-003	14.8746
Unmitigated	12.8683	0.0618	1.5500e-003	14.8746

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.694 / 1.06796	11.3459	0.0557	1.4000e-003	13.1530
Automobile Care Center	0.099726 / 0.0611224	0.6617	3.2800e-003	8.0000e-005	0.7681
Place of Worship	0.0860445 / 0.134582	0.8607	2.8400e-003	7.0000e-005	0.9535
<b>Total</b>		<b>12.8683</b>	<b>0.0618</b>	<b>1.5500e-003</b>	<b>14.8746</b>

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.694 / 1.06796	11.3459	0.0557	1.4000e-003	13.1530
Automobile Care Center	0.099726 / 0.0611224	0.6617	3.2800e-003	8.0000e-005	0.7681
Place of Worship	0.0860445 / 0.134582	0.8607	2.8400e-003	7.0000e-005	0.9535
<b>Total</b>		<b>12.8683</b>	<b>0.0618</b>	<b>1.5500e-003</b>	<b>14.8746</b>

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste



**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.4328	0.3802	0.0000	15.9370
Unmitigated	6.4328	0.3802	0.0000	15.9370

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.96	2.4278	0.1435	0.0000	6.0147
Automobile Care Center	4.05	0.8221	0.0486	0.0000	2.0368
Place of Worship	15.68	3.1829	0.1881	0.0000	7.8855
<b>Total</b>		<b>6.4328</b>	<b>0.3802</b>	<b>0.0000</b>	<b>15.9370</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Low Rise	11.96	2.4278	0.1435	0.0000	6.0147
Automobile Care Center	4.05	0.8221	0.0486	0.0000	2.0368
Place of Worship	15.68	3.1829	0.1881	0.0000	7.8855
<b>Total</b>		<b>6.4328</b>	<b>0.3802</b>	<b>0.0000</b>	<b>15.9370</b>

## 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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### 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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Existing Acquisition Parcels - Los Angeles-South Coast County, Summer

**Existing Acquisition Parcels  
Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	1.06	1000sqft	0.02	1,056.00	0
Place of Worship	2.75	1000sqft	0.06	2,752.00	0
Apartments Low Rise	26.00	Dwelling Unit	1.63	16,495.00	74

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2018
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics -  
 Land Use - Land use of the acquisition parcels on the Project Site  
 Construction Phase - Existing Conditions - No Construction  
 Off-road Equipment -  
 Woodstoves - No woodstoves

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	4/10/2018	3/13/2018



Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.4368	0.0000	0.0000	1.3432	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 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	0.5495	0.3917	2.3166	2.4500e-003		0.0414	0.0414		0.0414	0.0414	0.0000	471.8632	471.8632	0.0128	8.5800e-003	474.7400
Energy	0.0146	0.1258	0.0612	8.0000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9200e-003	160.0944
Mobile	0.7292	3.1363	9.3449	0.0259	1.8815	0.0306	1.9121	0.5037	0.0288	0.5324		2,626.6310	2,626.6310	0.1610		2,630.6563
Total	1.2932	3.6538	11.7227	0.0292	1.8815	0.0821	1.9636	0.5037	0.0803	0.5839	0.0000	3,257.6429	3,257.6429	0.1769	0.0115	3,265.4908

## 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	0.5495	0.3917	2.3166	2.4500e-003		0.0414	0.0414		0.0414	0.0414	0.0000	471.8632	471.8632	0.0128	8.5800e-003	474.7400
Energy	0.0146	0.1258	0.0612	8.0000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9200e-003	160.0944
Mobile	0.7292	3.1363	9.3449	0.0259	1.8815	0.0306	1.9121	0.5037	0.0288	0.5324		2,626.6310	2,626.6310	0.1610		2,630.6563

Total	1.2932	3.6538	11.7227	0.0292	1.8815	0.0821	1.9636	0.5037	0.0803	0.5839	0.0000	3,257.6429	3,257.6429	0.1769	0.0115	3,265.4908
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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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/14/2018	3/13/2018	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

#### 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
Demolition	5	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Demolition - 2018

**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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.0000	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	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</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	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	0.0000
Worker	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	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

**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	0.7292	3.1363	9.3449	0.0259	1.8815	0.0306	1.9121	0.5037	0.0288	0.5324		2,626.631	2,626.631	0.1610		2,630.656
												0	0			3



Unmitigated	0.7292	3.1363	9.3449	0.0259	1.8815	0.0306	1.9121	0.5037	0.0288	0.5324		2,626.631	2,626.631	0.1610		2,630.656
												0	0			3

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	171.34	186.16	157.82	586,129	586,129
Automobile Care Center	25.05	25.05	12.55	31,161	31,161
Place of Worship	25.07	28.54	100.81	77,602	77,602
Total	221.46	239.75	271.17	694,893	694,893

## 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Automobile Care Center	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Place of Worship	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	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	0.0146	0.1258	0.0612	8.0000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9200e-003	160.0944
NaturalGas Unmitigated	0.0146	0.1258	0.0612	8.0000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9200e-003	160.0944

## 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 Low Rise	1163.93	0.0126	0.1073	0.0456	6.8000e-004		8.6700e-003	8.6700e-003		8.6700e-003	8.6700e-003		136.9328	136.9328	2.6200e-003	2.5100e-003	137.7465
Automobile Care Center	52.366	5.6000e-004	5.1300e-003	4.3100e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.1607	6.1607	1.2000e-004	1.1000e-004	6.1973
Place of Worship	136.469	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003		16.0552	16.0552	3.1000e-004	2.9000e-004	16.1506
<b>Total</b>		<b>0.0146</b>	<b>0.1258</b>	<b>0.0612</b>	<b>7.9000e-004</b>		<b>0.0101</b>	<b>0.0101</b>		<b>0.0101</b>	<b>0.0101</b>		<b>159.1487</b>	<b>159.1487</b>	<b>3.0500e-003</b>	<b>2.9100e-003</b>	<b>160.0944</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 Low Rise	1.16393	0.0126	0.1073	0.0456	6.8000e-004		8.6700e-003	8.6700e-003		8.6700e-003	8.6700e-003		136.9328	136.9328	2.6200e-003	2.5100e-003	137.7465
Automobile Care Center	0.052366	5.6000e-004	5.1300e-003	4.3100e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.1607	6.1607	1.2000e-004	1.1000e-004	6.1973
Place of Worship	0.136469	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003		16.0552	16.0552	3.1000e-004	2.9000e-004	16.1506

Total		0.0146	0.1258	0.0612	7.9000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9100e-003	160.0944
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## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	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	0.5495	0.3917	2.3166	2.4500e-003		0.0414	0.0414		0.0414	0.0414	0.0000	471.8632	471.8632	0.0128	8.5800e-003	474.7400
Unmitigated	0.5495	0.3917	2.3166	2.4500e-003		0.0414	0.0414		0.0414	0.0414	0.0000	471.8632	471.8632	0.0128	8.5800e-003	474.7400

### 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	0.0380					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0429	0.3666	0.1560	2.3400e-003		0.0296	0.0296		0.0296	0.0296	0.0000	468.0000	468.0000	8.9700e-003	8.5800e-003	470.7811
Landscaping	0.0666	0.0251	2.1606	1.1000e-004		0.0118	0.0118		0.0118	0.0118		3.8632	3.8632	3.8300e-003		3.9589
<b>Total</b>	<b>0.5495</b>	<b>0.3917</b>	<b>2.3166</b>	<b>2.4500e-003</b>		<b>0.0414</b>	<b>0.0414</b>		<b>0.0414</b>	<b>0.0414</b>	<b>0.0000</b>	<b>471.8632</b>	<b>471.8632</b>	<b>0.0128</b>	<b>8.5800e-003</b>	<b>474.7400</b>

**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	0.0380					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0429	0.3666	0.1560	2.3400e-003		0.0296	0.0296		0.0296	0.0296	0.0000	468.0000	468.0000	8.9700e-003	8.5800e-003	470.7811
Landscaping	0.0666	0.0251	2.1606	1.1000e-004		0.0118	0.0118		0.0118	0.0118		3.8632	3.8632	3.8300e-003		3.9589
<b>Total</b>	<b>0.5495</b>	<b>0.3917</b>	<b>2.3166</b>	<b>2.4500e-003</b>		<b>0.0414</b>	<b>0.0414</b>		<b>0.0414</b>	<b>0.0414</b>	<b>0.0000</b>	<b>471.8632</b>	<b>471.8632</b>	<b>0.0128</b>	<b>8.5800e-003</b>	<b>474.7400</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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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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Existing Acquisition Parcels - Los Angeles-South Coast County, Winter

**Existing Acquisition Parcels  
Los Angeles-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	1.06	1000sqft	0.02	1,056.00	0
Place of Worship	2.75	1000sqft	0.06	2,752.00	0
Apartments Low Rise	26.00	Dwelling Unit	1.63	16,495.00	74

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2018
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics -  
 Land Use - Land use of the acquisition parcels on the Project Site  
 Construction Phase - Existing Conditions - No Construction  
 Off-road Equipment -  
 Woodstoves - No woodstoves

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	4/10/2018	3/13/2018



Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.4368	0.0000	0.0000	1.3432	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 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	0.5495	0.3917	2.3166	2.4500e-003		0.0414	0.0414		0.0414	0.0414	0.0000	471.8632	471.8632	0.0128	8.5800e-003	474.7400
Energy	0.0146	0.1258	0.0612	8.0000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9200e-003	160.0944
Mobile	0.7130	3.2269	8.9660	0.0246	1.8815	0.0308	1.9123	0.5037	0.0290	0.5326		2,496.9024	2,496.9024	0.1604		2,500.9121
Total	1.2770	3.7444	11.3438	0.0279	1.8815	0.0823	1.9638	0.5037	0.0805	0.5842	0.0000	3,127.9143	3,127.9143	0.1762	0.0115	3,135.7466

## 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	0.5495	0.3917	2.3166	2.4500e-003		0.0414	0.0414		0.0414	0.0414	0.0000	471.8632	471.8632	0.0128	8.5800e-003	474.7400
Energy	0.0146	0.1258	0.0612	8.0000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9200e-003	160.0944
Mobile	0.7130	3.2269	8.9660	0.0246	1.8815	0.0308	1.9123	0.5037	0.0290	0.5326		2,496.9024	2,496.9024	0.1604		2,500.9121



Total	1.2770	3.7444	11.3438	0.0279	1.8815	0.0823	1.9638	0.5037	0.0805	0.5842	0.0000	3,127.914 3	3,127.914 3	0.1762	0.0115	3,135.746 6
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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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/14/2018	3/13/2018	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

#### 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
Demolition	5	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Demolition - 2018

**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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.0000	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	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

**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	0.7130	3.2269	8.9660	0.0246	1.8815	0.0308	1.9123	0.5037	0.0290	0.5326		2,496.9024	2,496.9024	0.1604		2,500.9121

Unmitigated	0.7130	3.2269	8.9660	0.0246	1.8815	0.0308	1.9123	0.5037	0.0290	0.5326		2,496.902	2,496.902	0.1604		2,500.912
												4	4			1

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	171.34	186.16	157.82	586,129	586,129
Automobile Care Center	25.05	25.05	12.55	31,161	31,161
Place of Worship	25.07	28.54	100.81	77,602	77,602
Total	221.46	239.75	271.17	694,893	694,893

## 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Automobile Care Center	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Place of Worship	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	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	0.0146	0.1258	0.0612	8.0000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9200e-003	160.0944
NaturalGas Unmitigated	0.0146	0.1258	0.0612	8.0000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9200e-003	160.0944

## 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 Low Rise	1163.93	0.0126	0.1073	0.0456	6.8000e-004		8.6700e-003	8.6700e-003		8.6700e-003	8.6700e-003		136.9328	136.9328	2.6200e-003	2.5100e-003	137.7465
Automobile Care Center	52.366	5.6000e-004	5.1300e-003	4.3100e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.1607	6.1607	1.2000e-004	1.1000e-004	6.1973
Place of Worship	136.469	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003		16.0552	16.0552	3.1000e-004	2.9000e-004	16.1506
<b>Total</b>		<b>0.0146</b>	<b>0.1258</b>	<b>0.0612</b>	<b>7.9000e-004</b>		<b>0.0101</b>	<b>0.0101</b>		<b>0.0101</b>	<b>0.0101</b>		<b>159.1487</b>	<b>159.1487</b>	<b>3.0500e-003</b>	<b>2.9100e-003</b>	<b>160.0944</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 Low Rise	1.16393	0.0126	0.1073	0.0456	6.8000e-004		8.6700e-003	8.6700e-003		8.6700e-003	8.6700e-003		136.9328	136.9328	2.6200e-003	2.5100e-003	137.7465
Automobile Care Center	0.052366	5.6000e-004	5.1300e-003	4.3100e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.1607	6.1607	1.2000e-004	1.1000e-004	6.1973
Place of Worship	0.136469	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003		16.0552	16.0552	3.1000e-004	2.9000e-004	16.1506

Total		0.0146	0.1258	0.0612	7.9000e-004		0.0101	0.0101		0.0101	0.0101		159.1487	159.1487	3.0500e-003	2.9100e-003	160.0944
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## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	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	0.5495	0.3917	2.3166	2.4500e-003		0.0414	0.0414		0.0414	0.0414	0.0000	471.8632	471.8632	0.0128	8.5800e-003	474.7400
Unmitigated	0.5495	0.3917	2.3166	2.4500e-003		0.0414	0.0414		0.0414	0.0414	0.0000	471.8632	471.8632	0.0128	8.5800e-003	474.7400

### 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	0.0380					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0429	0.3666	0.1560	2.3400e-003		0.0296	0.0296		0.0296	0.0296	0.0000	468.0000	468.0000	8.9700e-003	8.5800e-003	470.7811
Landscaping	0.0666	0.0251	2.1606	1.1000e-004		0.0118	0.0118		0.0118	0.0118		3.8632	3.8632	3.8300e-003		3.9589
<b>Total</b>	<b>0.5495</b>	<b>0.3917</b>	<b>2.3166</b>	<b>2.4500e-003</b>		<b>0.0414</b>	<b>0.0414</b>		<b>0.0414</b>	<b>0.0414</b>	<b>0.0000</b>	<b>471.8632</b>	<b>471.8632</b>	<b>0.0128</b>	<b>8.5800e-003</b>	<b>474.7400</b>

**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	0.0380					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0429	0.3666	0.1560	2.3400e-003		0.0296	0.0296		0.0296	0.0296	0.0000	468.0000	468.0000	8.9700e-003	8.5800e-003	470.7811
Landscaping	0.0666	0.0251	2.1606	1.1000e-004		0.0118	0.0118		0.0118	0.0118		3.8632	3.8632	3.8300e-003		3.9589
<b>Total</b>	<b>0.5495</b>	<b>0.3917</b>	<b>2.3166</b>	<b>2.4500e-003</b>		<b>0.0414</b>	<b>0.0414</b>		<b>0.0414</b>	<b>0.0414</b>	<b>0.0000</b>	<b>471.8632</b>	<b>471.8632</b>	<b>0.0128</b>	<b>8.5800e-003</b>	<b>474.7400</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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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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Compton HS Reconstruction (Proposed) - Los Angeles-South Coast County, Annual

**Compton HS Reconstruction (Proposed)**  
**Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	363.00	Space	3.27	293,130.00	0
Other Non-Asphalt Surfaces	1,266.80	1000sqft	29.08	1,266,800.00	0
High School	267.90	1000sqft	6.15	267,900.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9	<b>Operational Year</b>		2024	
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -

Land Use - Other non-asphalt surfaces include outdoor facilities

High school includes educational/administrative facilities and gymnasium and aquatic center

Construction Phase - Construction to last approximately 2 years, with a start period of Summer 2021

Grading -

Demolition - Includes total existing building area, CHS Campus Building Area, Other Building Area, and Non-Structural Area

Vehicle Trips - Based on 2,500 student capacity generating 5,074 daily trips



tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	55.00	106.00
tblConstructionPhase	NumDays	740.00	442.00
tblConstructionPhase	NumDays	50.00	59.00
tblConstructionPhase	NumDays	75.00	36.00
tblConstructionPhase	NumDays	55.00	106.00
tblConstructionPhase	NumDays	30.00	36.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	4/25/2025	6/21/2023
tblConstructionPhase	PhaseEndDate	11/22/2024	4/19/2023
tblConstructionPhase	PhaseEndDate	1/21/2022	11/19/2021
tblConstructionPhase	PhaseEndDate	2/7/2025	7/20/2023
tblConstructionPhase	PhaseStartDate	2/8/2025	2/18/2023
tblConstructionPhase	PhaseStartDate	1/22/2022	11/20/2021
tblConstructionPhase	PhaseStartDate	11/23/2024	3/19/2023
tblLandUse	LandUseSquareFeet	145,200.00	293,130.00
tblVehicleTrips	ST_TR	4.37	0.69
tblVehicleTrips	SU_TR	1.79	0.28
tblVehicleTrips	WD_TR	12.89	2.03

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Baseline 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					
2021	0.3736	4.0303	2.7306	8.2300e-003	1.2208	0.1399	1.3607	0.3837	0.1296	0.5133	0.0000	757.9669	757.9669	0.1143	0.0000	760.8234
2022	0.8888	7.2096	7.9373	0.0287	1.6128	0.1454	1.7582	0.4352	0.1367	0.5719	0.0000	2,656.6043	2,656.6043	0.1870	0.0000	2,661.2788
2023	1.8006	2.3886	3.3724	0.0106	0.5774	0.0683	0.6456	0.1554	0.0639	0.2192	0.0000	968.2509	968.2509	0.0893	0.0000	970.4845
<b>Maximum</b>	<b>1.8006</b>	<b>7.2096</b>	<b>7.9373</b>	<b>0.0287</b>	<b>1.6128</b>	<b>0.1454</b>	<b>1.7582</b>	<b>0.4352</b>	<b>0.1367</b>	<b>0.5719</b>	<b>0.0000</b>	<b>2,656.6043</b>	<b>2,656.6043</b>	<b>0.1870</b>	<b>0.0000</b>	<b>2,661.2788</b>

### Regulatory Compliance 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					
2021	0.2117	4.1417	2.9834	8.2300e-003	0.6211	0.0886	0.7097	0.1889	0.0884	0.2772	0.0000	757.9665	757.9665	0.1143	0.0000	760.8231
2022	0.7910	8.4520	8.1737	0.0287	1.6128	0.1602	1.7730	0.4352	0.1590	0.5942	0.0000	2,656.6038	2,656.6038	0.1870	0.0000	2,661.2784
2023	1.7682	3.3965	3.5930	0.0106	0.5774	0.0874	0.6647	0.1554	0.0870	0.2424	0.0000	968.2507	968.2507	0.0893	0.0000	970.4842
<b>Maximum</b>	<b>1.7682</b>	<b>8.4520</b>	<b>8.1737</b>	<b>0.0287</b>	<b>1.6128</b>	<b>0.1602</b>	<b>1.7730</b>	<b>0.4352</b>	<b>0.1590</b>	<b>0.5942</b>	<b>0.0000</b>	<b>2,656.6038</b>	<b>2,656.6038</b>	<b>0.1870</b>	<b>0.0000</b>	<b>2,661.2784</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
<b>Percent Reduction</b>	<b>9.54</b>	<b>-17.33</b>	<b>-5.06</b>	<b>0.00</b>	<b>17.58</b>	<b>4.94</b>	<b>16.39</b>	<b>20.00</b>	<b>-1.27</b>	<b>14.62</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Baseline ROG + NOX (tons/quarter)	Maximum Regulatory Compliance ROG + NOX (tons/quarter)
1	6-21-2021	9-20-2021	2.1030	1.9860
2	9-21-2021	12-20-2021	1.9947	2.0364
3	12-21-2021	3-20-2022	2.0069	2.2796

4	3-21-2022	6-20-2022	2.0136	2.3019
5	6-21-2022	9-20-2022	2.0110	2.2994
6	9-21-2022	12-20-2022	2.0080	2.2932
7	12-21-2022	3-20-2023	2.1026	2.4522
8	3-21-2023	6-20-2023	2.1784	2.7155
9	6-21-2023	9-20-2023	0.1594	0.2861
		Highest	2.1784	2.7155

**2.2 Overall Operational**  
**Baseline Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2170	2.2000e-004	0.0242	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0471	0.0471	1.2000e-004	0.0000	0.0502
Energy	0.0150	0.1366	0.1147	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	686.6926	686.6926	0.0251	7.3200e-003	689.5009
Mobile	0.1284	0.6101	1.9251	7.7900e-003	0.6898	5.8900e-003	0.6957	0.1849	5.4700e-003	0.1904	0.0000	720.6683	720.6683	0.0336	0.0000	721.5087
Waste						0.0000	0.0000		0.0000	0.0000	70.6957	0.0000	70.6957	4.1780	0.0000	175.1455
Water						0.0000	0.0000		0.0000	0.0000	2.8221	117.8775	120.6996	0.2947	7.8500e-003	130.4075
<b>Total</b>	<b>1.3604</b>	<b>0.7469</b>	<b>2.0640</b>	<b>8.6100e-003</b>	<b>0.6898</b>	<b>0.0164</b>	<b>0.7061</b>	<b>0.1849</b>	<b>0.0159</b>	<b>0.2008</b>	<b>73.5178</b>	<b>1,525.2855</b>	<b>1,598.8033</b>	<b>4.5315</b>	<b>0.0152</b>	<b>1,716.6127</b>

**Regulatory Compliance Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2170	2.2000e-004	0.0242	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0471	0.0471	1.2000e-004	0.0000	0.0502

Energy	0.0150	0.1366	0.1147	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	686.6926	686.6926	0.0251	7.3200e-003	689.5009
Mobile	0.1284	0.6101	1.9251	7.7900e-003	0.6898	5.8900e-003	0.6957	0.1849	5.4700e-003	0.1904	0.0000	720.6683	720.6683	0.0336	0.0000	721.5087
Waste						0.0000	0.0000		0.0000	0.0000	70.6957	0.0000	70.6957	4.1780	0.0000	175.1455
Water						0.0000	0.0000		0.0000	0.0000	2.2577	105.5571	107.8148	0.2363	6.3800e-003	115.6213
<b>Total</b>	<b>1.3604</b>	<b>0.7469</b>	<b>2.0640</b>	<b>8.6100e-003</b>	<b>0.6898</b>	<b>0.0164</b>	<b>0.7061</b>	<b>0.1849</b>	<b>0.0159</b>	<b>0.2008</b>	<b>72.9534</b>	<b>1,512.9651</b>	<b>1,585.9185</b>	<b>4.4730</b>	<b>0.0137</b>	<b>1,701.8266</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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.81	0.81	1.29	9.69	0.86

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/21/2021	8/27/2021	6	59	
2	Site Preparation	Site Preparation	8/28/2021	10/8/2021	6	36	
3	Grading	Grading	10/9/2021	11/19/2021	6	36	
4	Building Construction	Building Construction	11/20/2021	4/19/2023	6	442	
5	Paving	Paving	3/19/2023	7/20/2023	6	106	
6	Architectural Coating	Architectural Coating	2/18/2023	6/21/2023	6	106	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 32.35

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 401,850; Non-Residential Outdoor: 133,950; Striped Parking

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	150	0.38

Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	156	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	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
Demolition	6	15.00	0.00	4,637.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	768.00	300.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	154.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Demolition - 2021**

**Baseline Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5018	0.0000	0.5018	0.0760	0.0000	0.0760	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0934	0.9275	0.6362	1.1500e-003		0.0458	0.0458		0.0425	0.0425	0.0000	100.3023	100.3023	0.0282	0.0000	101.0081
<b>Total</b>	<b>0.0934</b>	<b>0.9275</b>	<b>0.6362</b>	<b>1.1500e-003</b>	<b>0.5018</b>	<b>0.0458</b>	<b>0.5475</b>	<b>0.0760</b>	<b>0.0425</b>	<b>0.1185</b>	<b>0.0000</b>	<b>100.3023</b>	<b>100.3023</b>	<b>0.0282</b>	<b>0.0000</b>	<b>101.0081</b>

**Baseline 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	0.0195	0.6418	0.1497	1.8000e-003	0.0399	1.9200e-003	0.0418	0.0109	1.8400e-003	0.0128	0.0000	176.7384	176.7384	0.0123	0.0000	177.0451
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	1.9000e-003	1.4800e-003	0.0167	5.0000e-005	4.8500e-003	4.0000e-005	4.8900e-003	1.2900e-003	4.0000e-005	1.3200e-003	0.0000	4.3760	4.3760	1.3000e-004	0.0000	4.3792
<b>Total</b>	<b>0.0214</b>	<b>0.6433</b>	<b>0.1664</b>	<b>1.8500e-003</b>	<b>0.0447</b>	<b>1.9600e-003</b>	<b>0.0467</b>	<b>0.0122</b>	<b>1.8800e-003</b>	<b>0.0141</b>	<b>0.0000</b>	<b>181.1143</b>	<b>181.1143</b>	<b>0.0124</b>	<b>0.0000</b>	<b>181.4242</b>

**Regulatory Compliance Construction On-Site**



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1957	0.0000	0.1957	0.0296	0.0000	0.0296	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0372	0.9636	0.7279	1.1500e-003		0.0270	0.0270		0.0270	0.0270	0.0000	100.3022	100.3022	0.0282	0.0000	101.0080
<b>Total</b>	<b>0.0372</b>	<b>0.9636</b>	<b>0.7279</b>	<b>1.1500e-003</b>	<b>0.1957</b>	<b>0.0270</b>	<b>0.2226</b>	<b>0.0296</b>	<b>0.0270</b>	<b>0.0566</b>	<b>0.0000</b>	<b>100.3022</b>	<b>100.3022</b>	<b>0.0282</b>	<b>0.0000</b>	<b>101.0080</b>

### Regulatory Compliance 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	0.0195	0.6418	0.1497	1.8000e-003	0.0399	1.9200e-003	0.0418	0.0109	1.8400e-003	0.0128	0.0000	176.7384	176.7384	0.0123	0.0000	177.0451
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	1.9000e-003	1.4800e-003	0.0167	5.0000e-005	4.8500e-003	4.0000e-005	4.8900e-003	1.2900e-003	4.0000e-005	1.3200e-003	0.0000	4.3760	4.3760	1.3000e-004	0.0000	4.3792
<b>Total</b>	<b>0.0214</b>	<b>0.6433</b>	<b>0.1664</b>	<b>1.8500e-003</b>	<b>0.0447</b>	<b>1.9600e-003</b>	<b>0.0467</b>	<b>0.0122</b>	<b>1.8800e-003</b>	<b>0.0141</b>	<b>0.0000</b>	<b>181.1143</b>	<b>181.1143</b>	<b>0.0124</b>	<b>0.0000</b>	<b>181.4242</b>

### **3.3 Site Preparation - 2021**

#### Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3252	0.0000	0.3252	0.1788	0.0000	0.1788	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0700	0.7290	0.3808	6.8000e-004		0.0368	0.0368		0.0339	0.0339	0.0000	60.1843	60.1843	0.0195	0.0000	60.6709

<b>Total</b>	<b>0.0700</b>	<b>0.7290</b>	<b>0.3808</b>	<b>6.8000e-004</b>	<b>0.3252</b>	<b>0.0368</b>	<b>0.3620</b>	<b>0.1788</b>	<b>0.0339</b>	<b>0.2126</b>	<b>0.0000</b>	<b>60.1843</b>	<b>60.1843</b>	<b>0.0195</b>	<b>0.0000</b>	<b>60.6709</b>
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**Baseline 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	1.3900e-003	1.0900e-003	0.0123	4.0000e-005	3.5500e-003	3.0000e-005	3.5800e-003	9.4000e-004	3.0000e-005	9.7000e-004	0.0000	3.2041	3.2041	9.0000e-005	0.0000	3.2065
<b>Total</b>	<b>1.3900e-003</b>	<b>1.0900e-003</b>	<b>0.0123</b>	<b>4.0000e-005</b>	<b>3.5500e-003</b>	<b>3.0000e-005</b>	<b>3.5800e-003</b>	<b>9.4000e-004</b>	<b>3.0000e-005</b>	<b>9.7000e-004</b>	<b>0.0000</b>	<b>3.2041</b>	<b>3.2041</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>3.2065</b>

**Regulatory Compliance Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1268	0.0000	0.1268	0.0697	0.0000	0.0697	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0218	0.6070	0.4133	6.8000e-004		0.0170	0.0170		0.0170	0.0170	0.0000	60.1842	60.1842	0.0195	0.0000	60.6708
<b>Total</b>	<b>0.0218</b>	<b>0.6070</b>	<b>0.4133</b>	<b>6.8000e-004</b>	<b>0.1268</b>	<b>0.0170</b>	<b>0.1439</b>	<b>0.0697</b>	<b>0.0170</b>	<b>0.0867</b>	<b>0.0000</b>	<b>60.1842</b>	<b>60.1842</b>	<b>0.0195</b>	<b>0.0000</b>	<b>60.6708</b>

**Regulatory Compliance Construction Off-Site**



Worker	1.5500e-003	1.2100e-003	0.0136	4.0000e-005	3.9400e-003	3.0000e-005	3.9800e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.5601	3.5601	1.0000e-004	0.0000	3.5627
<b>Total</b>	<b>1.5500e-003</b>	<b>1.2100e-003</b>	<b>0.0136</b>	<b>4.0000e-005</b>	<b>3.9400e-003</b>	<b>3.0000e-005</b>	<b>3.9800e-003</b>	<b>1.0500e-003</b>	<b>3.0000e-005</b>	<b>1.0800e-003</b>	<b>0.0000</b>	<b>3.5601</b>	<b>3.5601</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>3.5627</b>

**Regulatory Compliance Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0609	0.0000	0.0609	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.9223	0.6610	1.1200e-003		0.0240	0.0240		0.0240	0.0240	0.0000	98.0909	98.0909	0.0317	0.0000	98.8840
<b>Total</b>	<b>0.0326</b>	<b>0.9223</b>	<b>0.6610</b>	<b>1.1200e-003</b>	<b>0.0609</b>	<b>0.0240</b>	<b>0.0849</b>	<b>0.0253</b>	<b>0.0240</b>	<b>0.0493</b>	<b>0.0000</b>	<b>98.0909</b>	<b>98.0909</b>	<b>0.0317</b>	<b>0.0000</b>	<b>98.8840</b>

**Regulatory Compliance 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	1.5500e-003	1.2100e-003	0.0136	4.0000e-005	3.9400e-003	3.0000e-005	3.9800e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.5601	3.5601	1.0000e-004	0.0000	3.5627
<b>Total</b>	<b>1.5500e-003</b>	<b>1.2100e-003</b>	<b>0.0136</b>	<b>4.0000e-005</b>	<b>3.9400e-003</b>	<b>3.0000e-005</b>	<b>3.9800e-003</b>	<b>1.0500e-003</b>	<b>3.0000e-005</b>	<b>1.0800e-003</b>	<b>0.0000</b>	<b>3.5601</b>	<b>3.5601</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>3.5627</b>

**3.5 Building Construction - 2021**

**Baseline 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	0.0342	0.3138	0.2984	4.8000e-004		0.0173	0.0173		0.0162	0.0162	0.0000	41.6947	41.6947	0.0101	0.0000	41.9462
<b>Total</b>	<b>0.0342</b>	<b>0.3138</b>	<b>0.2984</b>	<b>4.8000e-004</b>		<b>0.0173</b>	<b>0.0173</b>		<b>0.0162</b>	<b>0.0162</b>	<b>0.0000</b>	<b>41.6947</b>	<b>41.6947</b>	<b>0.0101</b>	<b>0.0000</b>	<b>41.9462</b>

**Baseline 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	0.0168	0.5329	0.1445	1.3700e-003	0.0340	1.0900e-003	0.0351	9.8200e-003	1.0400e-003	0.0109	0.0000	133.1082	133.1082	8.1600e-003	0.0000	133.3123
Worker	0.0595	0.0463	0.5228	1.5100e-003	0.1515	1.2500e-003	0.1527	0.0402	1.1500e-003	0.0414	0.0000	136.7079	136.7079	4.0200e-003	0.0000	136.8085
<b>Total</b>	<b>0.0763</b>	<b>0.5792</b>	<b>0.6673</b>	<b>2.8800e-003</b>	<b>0.1855</b>	<b>2.3400e-003</b>	<b>0.1878</b>	<b>0.0501</b>	<b>2.1900e-003</b>	<b>0.0522</b>	<b>0.0000</b>	<b>269.8160</b>	<b>269.8160</b>	<b>0.0122</b>	<b>0.0000</b>	<b>270.1207</b>

**Regulatory Compliance 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	0.0195	0.4240	0.3217	4.8000e-004		0.0163	0.0163		0.0163	0.0163	0.0000	41.6947	41.6947	0.0101	0.0000	41.9461

Total	0.0195	0.4240	0.3217	4.8000e-004		0.0163	0.0163		0.0163	0.0163	0.0000	41.6947	41.6947	0.0101	0.0000	41.9461
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**Regulatory Compliance 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	0.0168	0.5329	0.1445	1.3700e-003	0.0340	1.0900e-003	0.0351	9.8200e-003	1.0400e-003	0.0109	0.0000	133.1082	133.1082	8.1600e-003	0.0000	133.3123
Worker	0.0595	0.0463	0.5228	1.5100e-003	0.1515	1.2500e-003	0.1527	0.0402	1.1500e-003	0.0414	0.0000	136.7079	136.7079	4.0200e-003	0.0000	136.8085
<b>Total</b>	<b>0.0763</b>	<b>0.5792</b>	<b>0.6673</b>	<b>2.8800e-003</b>	<b>0.1855</b>	<b>2.3400e-003</b>	<b>0.1878</b>	<b>0.0501</b>	<b>2.1900e-003</b>	<b>0.0522</b>	<b>0.0000</b>	<b>269.8160</b>	<b>269.8160</b>	<b>0.0122</b>	<b>0.0000</b>	<b>270.1207</b>

**3.5 Building Construction - 2022**

**Baseline 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	0.2670	2.4439	2.5609	4.2200e-003		0.1266	0.1266		0.1191	0.1191	0.0000	362.6500	362.6500	0.0869	0.0000	364.8220
<b>Total</b>	<b>0.2670</b>	<b>2.4439</b>	<b>2.5609</b>	<b>4.2200e-003</b>		<b>0.1266</b>	<b>0.1266</b>		<b>0.1191</b>	<b>0.1191</b>	<b>0.0000</b>	<b>362.6500</b>	<b>362.6500</b>	<b>0.0869</b>	<b>0.0000</b>	<b>364.8220</b>

**Baseline Construction Off-Site**



Vendor	0.1368	4.4021	1.1886	0.0118	0.2958	8.2600e-003	0.3040	0.0854	7.9000e-003	0.0933	0.0000	1,147.1365	1,147.1365	0.0685	0.0000	1,148.8495
Worker	0.4850	0.3637	4.1879	0.0127	1.3171	0.0105	1.3276	0.3498	9.6900e-003	0.3595	0.0000	1,146.8177	1,146.8177	0.0316	0.0000	1,147.6073
<b>Total</b>	<b>0.6218</b>	<b>4.7658</b>	<b>5.3765</b>	<b>0.0245</b>	<b>1.6128</b>	<b>0.0188</b>	<b>1.6316</b>	<b>0.4352</b>	<b>0.0176</b>	<b>0.4528</b>	<b>0.0000</b>	<b>2,293.9543</b>	<b>2,293.9543</b>	<b>0.1001</b>	<b>0.0000</b>	<b>2,296.4568</b>

### 3.5 Building Construction - 2023

#### Baseline 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	0.0731	0.6689	0.7554	1.2500e-003		0.0325	0.0325		0.0306	0.0306	0.0000	107.7892	107.7892	0.0256	0.0000	108.4302
<b>Total</b>	<b>0.0731</b>	<b>0.6689</b>	<b>0.7554</b>	<b>1.2500e-003</b>		<b>0.0325</b>	<b>0.0325</b>		<b>0.0306</b>	<b>0.0306</b>	<b>0.0000</b>	<b>107.7892</b>	<b>107.7892</b>	<b>0.0256</b>	<b>0.0000</b>	<b>108.4302</b>

#### Baseline 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	0.0302	0.9882	0.3169	3.4000e-003	0.0879	1.1500e-003	0.0890	0.0254	1.1000e-003	0.0265	0.0000	330.1720	330.1720	0.0180	0.0000	330.6218
Worker	0.1355	0.0977	1.1442	3.6300e-003	0.3913	3.0400e-003	0.3944	0.1039	2.8000e-003	0.1067	0.0000	328.2788	328.2788	8.4500e-003	0.0000	328.4901
<b>Total</b>	<b>0.1657</b>	<b>1.0860</b>	<b>1.4611</b>	<b>7.0300e-003</b>	<b>0.4792</b>	<b>4.1900e-003</b>	<b>0.4834</b>	<b>0.1293</b>	<b>3.9000e-003</b>	<b>0.1332</b>	<b>0.0000</b>	<b>658.4508</b>	<b>658.4508</b>	<b>0.0264</b>	<b>0.0000</b>	<b>659.1119</b>

#### Regulatory Compliance 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	0.0503	1.0953	0.8311	1.2500e-003		0.0420	0.0420		0.0420	0.0420	0.0000	107.7891	107.7891	0.0256	0.0000	108.4301
<b>Total</b>	<b>0.0503</b>	<b>1.0953</b>	<b>0.8311</b>	<b>1.2500e-003</b>		<b>0.0420</b>	<b>0.0420</b>		<b>0.0420</b>	<b>0.0420</b>	<b>0.0000</b>	<b>107.7891</b>	<b>107.7891</b>	<b>0.0256</b>	<b>0.0000</b>	<b>108.4301</b>

### Regulatory Compliance 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	0.0302	0.9882	0.3169	3.4000e-003	0.0879	1.1500e-003	0.0890	0.0254	1.1000e-003	0.0265	0.0000	330.1720	330.1720	0.0180	0.0000	330.6218
Worker	0.1355	0.0977	1.1442	3.6300e-003	0.3913	3.0400e-003	0.3944	0.1039	2.8000e-003	0.1067	0.0000	328.2788	328.2788	8.4500e-003	0.0000	328.4901
<b>Total</b>	<b>0.1657</b>	<b>1.0860</b>	<b>1.4611</b>	<b>7.0300e-003</b>	<b>0.4792</b>	<b>4.1900e-003</b>	<b>0.4834</b>	<b>0.1293</b>	<b>3.9000e-003</b>	<b>0.1332</b>	<b>0.0000</b>	<b>658.4508</b>	<b>658.4508</b>	<b>0.0264</b>	<b>0.0000</b>	<b>659.1119</b>

### **3.6 Paving - 2023**

#### Baseline 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	0.0547	0.5402	0.7730	1.2100e-003		0.0270	0.0270		0.0249	0.0249	0.0000	106.1424	106.1424	0.0343	0.0000	107.0006

Paving	4.2800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0590</b>	<b>0.5402</b>	<b>0.7730</b>	<b>1.2100e-003</b>		<b>0.0270</b>	<b>0.0270</b>		<b>0.0249</b>	<b>0.0249</b>	<b>0.0000</b>	<b>106.1424</b>	<b>106.1424</b>	<b>0.0343</b>	<b>0.0000</b>	<b>107.0006</b>

**Baseline 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	3.0200e-003	2.1800e-003	0.0255	8.0000e-005	8.7100e-003	7.0000e-005	8.7800e-003	2.3100e-003	6.0000e-005	2.3800e-003	0.0000	7.3080	7.3080	1.9000e-004	0.0000	7.3127
<b>Total</b>	<b>3.0200e-003</b>	<b>2.1800e-003</b>	<b>0.0255</b>	<b>8.0000e-005</b>	<b>8.7100e-003</b>	<b>7.0000e-005</b>	<b>8.7800e-003</b>	<b>2.3100e-003</b>	<b>6.0000e-005</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>7.3080</b>	<b>7.3080</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>7.3127</b>

**Regulatory Compliance 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	0.0494	1.0661	0.9167	1.2100e-003		0.0354	0.0354		0.0354	0.0354	0.0000	106.1423	106.1423	0.0343	0.0000	107.0005
Paving	4.2800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0536</b>	<b>1.0661</b>	<b>0.9167</b>	<b>1.2100e-003</b>		<b>0.0354</b>	<b>0.0354</b>		<b>0.0354</b>	<b>0.0354</b>	<b>0.0000</b>	<b>106.1423</b>	<b>106.1423</b>	<b>0.0343</b>	<b>0.0000</b>	<b>107.0005</b>

**Regulatory Compliance Construction Off-Site**



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	0.0310	0.0223	0.2615	8.3000e-004	0.0894	6.9000e-004	0.0901	0.0238	6.4000e-004	0.0244	0.0000	75.0283	75.0283	1.9300e-003	0.0000	75.0766
<b>Total</b>	<b>0.0310</b>	<b>0.0223</b>	<b>0.2615</b>	<b>8.3000e-004</b>	<b>0.0894</b>	<b>6.9000e-004</b>	<b>0.0901</b>	<b>0.0238</b>	<b>6.4000e-004</b>	<b>0.0244</b>	<b>0.0000</b>	<b>75.0283</b>	<b>75.0283</b>	<b>1.9300e-003</b>	<b>0.0000</b>	<b>75.0766</b>

**Regulatory Compliance Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4586					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0400e-003	0.1247	0.0971	1.6000e-004		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	13.5322	13.5322	8.1000e-004	0.0000	13.5525
<b>Total</b>	<b>1.4647</b>	<b>0.1247</b>	<b>0.0971</b>	<b>1.6000e-004</b>		<b>5.0400e-003</b>	<b>5.0400e-003</b>		<b>5.0400e-003</b>	<b>5.0400e-003</b>	<b>0.0000</b>	<b>13.5322</b>	<b>13.5322</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>13.5525</b>

**Regulatory Compliance 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	0.0310	0.0223	0.2615	8.3000e-004	0.0894	6.9000e-004	0.0901	0.0238	6.4000e-004	0.0244	0.0000	75.0283	75.0283	1.9300e-003	0.0000	75.0766
<b>Total</b>	<b>0.0310</b>	<b>0.0223</b>	<b>0.2615</b>	<b>8.3000e-004</b>	<b>0.0894</b>	<b>6.9000e-004</b>	<b>0.0901</b>	<b>0.0238</b>	<b>6.4000e-004</b>	<b>0.0244</b>	<b>0.0000</b>	<b>75.0283</b>	<b>75.0283</b>	<b>1.9300e-003</b>	<b>0.0000</b>	<b>75.0766</b>

**4.0 Operational Detail - Mobile**

## 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					
Regulatory Compliance	0.1284	0.6101	1.9251	7.7900e-003	0.6898	5.8900e-003	0.6957	0.1849	5.4700e-003	0.1904	0.0000	720.6683	720.6683	0.0336	0.0000	721.5087
Baseline	0.1284	0.6101	1.9251	7.7900e-003	0.6898	5.8900e-003	0.6957	0.1849	5.4700e-003	0.1904	0.0000	720.6683	720.6683	0.0336	0.0000	721.5087

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Baseline	Regulatory Compliance
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	543.84	184.85	75.01	1,817,552	1,817,552
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	543.84	184.85	75.01	1,817,552	1,817,552

## 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Non-Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850



Total		0.0150	0.1366	0.1147	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.6801	148.6801	2.8500e-003	2.7300e-003	149.5636
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**Regulatory Compliance**

	Natural Gas 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					
High School	2.78616e+006	0.0150	0.1366	0.1147	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.6801	148.6801	2.8500e-003	2.7300e-003	149.5636
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0150</b>	<b>0.1366</b>	<b>0.1147</b>	<b>8.2000e-004</b>		<b>0.0104</b>	<b>0.0104</b>		<b>0.0104</b>	<b>0.0104</b>	<b>0.0000</b>	<b>148.6801</b>	<b>148.6801</b>	<b>2.8500e-003</b>	<b>2.7300e-003</b>	<b>149.5636</b>

**5.3 Energy by Land Use - Electricity**

**Baseline**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	1.58597e+006	505.3234	0.0209	4.3200e-003	507.1312
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	102596	32.6891	1.3500e-003	2.8000e-004	32.8061
<b>Total</b>		<b>538.0125</b>	<b>0.0222</b>	<b>4.6000e-003</b>	<b>539.9373</b>

**Regulatory Compliance**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	1.58597e+006	505.3234	0.0209	4.3200e-003	507.1312
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	102596	32.6891	1.3500e-003	2.8000e-004	32.8061
<b>Total</b>		<b>538.0125</b>	<b>0.0222</b>	<b>4.6000e-003</b>	<b>539.9373</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	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					
Regulatory Compliance	1.2170	2.2000e-004	0.0242	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0471	0.0471	1.2000e-004	0.0000	0.0502
Baseline	1.2170	2.2000e-004	0.0242	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0471	0.0471	1.2000e-004	0.0000	0.0502



## 6.2 Area by SubCategory

### Baseline

	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	0.1459					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0689					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2300e-003	2.2000e-004	0.0242	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0471	0.0471	1.2000e-004	0.0000	0.0502
<b>Total</b>	<b>1.2170</b>	<b>2.2000e-004</b>	<b>0.0242</b>	<b>0.0000</b>		<b>9.0000e-005</b>	<b>9.0000e-005</b>		<b>9.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.0471</b>	<b>0.0471</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.0502</b>

### Regulatory Compliance

	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	0.1459					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0689					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2300e-003	2.2000e-004	0.0242	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.0471	0.0471	1.2000e-004	0.0000	0.0502
<b>Total</b>	<b>1.2170</b>	<b>2.2000e-004</b>	<b>0.0242</b>	<b>0.0000</b>		<b>9.0000e-005</b>	<b>9.0000e-005</b>		<b>9.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.0471</b>	<b>0.0471</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.0502</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Regulatory Compliance	107.8148	0.2363	6.3800e-003	115.6213
Baseline	120.6996	0.2947	7.8500e-003	130.4075

## 7.2 Water by Land Use

### Baseline

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	8.89552 / 22.8742	120.6996	0.2947	7.8500e-003	130.4075
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>120.6996</b>	<b>0.2947</b>	<b>7.8500e-003</b>	<b>130.4075</b>

### Regulatory Compliance

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	7.11642 / 21.4789	107.8148	0.2363	6.3800e-003	115.6213
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>107.8148</b>	<b>0.2363</b>	<b>6.3800e-003</b>	<b>115.6213</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Regulatory Compliance	70.6957	4.1780	0.0000	175.1455
Baseline	70.6957	4.1780	0.0000	175.1455

### 8.2 Waste by Land Use

#### Baseline

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

High School	348.27	70.6957	4.1780	0.0000	175.1455
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>70.6957</b>	<b>4.1780</b>	<b>0.0000</b>	<b>175.1455</b>

**Regulatory Compliance**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	348.27	70.6957	4.1780	0.0000	175.1455
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>70.6957</b>	<b>4.1780</b>	<b>0.0000</b>	<b>175.1455</b>

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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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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Compton HS Reconstruction (Proposed) - Los Angeles-South Coast County, Summer

**Compton HS Reconstruction (Proposed)**  
**Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	363.00	Space	3.27	293,130.00	0
Other Non-Asphalt Surfaces	1,266.80	1000sqft	29.08	1,266,800.00	0
High School	267.90	1000sqft	6.15	267,900.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2024
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -

Land Use - Other non-asphalt surfaces include outdoor facilities

High school includes educational/administrative facilities and gymnasium and aquatic center

Construction Phase - Construction to last approximately 2 years, with a start period of Summer 2021

Grading -

Demolition - Includes total existing building area, CHS Campus Building Area, Other Building Area, and Non-Structural Area

Vehicle Trips - Based on 2,500 student capacity generating 5,074 daily trips

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For conservative analysis, equipment set to Tier 2.



tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	55.00	106.00
tblConstructionPhase	NumDays	740.00	442.00
tblConstructionPhase	NumDays	50.00	59.00
tblConstructionPhase	NumDays	75.00	36.00
tblConstructionPhase	NumDays	55.00	106.00
tblConstructionPhase	NumDays	30.00	36.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	4/25/2025	6/21/2023
tblConstructionPhase	PhaseEndDate	11/22/2024	4/19/2023
tblConstructionPhase	PhaseEndDate	1/21/2022	11/19/2021
tblConstructionPhase	PhaseEndDate	2/7/2025	7/20/2023
tblConstructionPhase	PhaseStartDate	2/8/2025	2/18/2023
tblConstructionPhase	PhaseStartDate	1/22/2022	11/20/2021
tblConstructionPhase	PhaseStartDate	11/23/2024	3/19/2023
tblLandUse	LandUseSquareFeet	145,200.00	293,130.00
tblVehicleTrips	ST_TR	4.37	0.69
tblVehicleTrips	SU_TR	1.79	0.28
tblVehicleTrips	WD_TR	12.89	2.03

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Baseline 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					
2021	6.1049	52.5670	55.1228	0.1919	18.5511	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	19,545.5353	19,545.5353	1.9495	0.0000	19,579.5235
2022	5.6458	45.3587	52.1070	0.1880	10.5051	0.9283	11.4334	2.8296	0.8728	3.7025	0.0000	19,167.0208	19,167.0208	1.3140	0.0000	19,199.8695
2023	34.5672	49.1528	71.2112	0.2261	12.3942	1.3847	13.7789	3.3306	1.2952	4.6258	0.0000	22,879.4412	22,879.4412	2.0106	0.0000	22,929.7052
<b>Maximum</b>	<b>34.5672</b>	<b>52.5670</b>	<b>71.2112</b>	<b>0.2261</b>	<b>18.5511</b>	<b>2.0461</b>	<b>20.3135</b>	<b>9.9840</b>	<b>1.8824</b>	<b>11.8664</b>	<b>0.0000</b>	<b>22,879.4412</b>	<b>22,879.4412</b>	<b>2.0106</b>	<b>0.0000</b>	<b>22,929.7052</b>

### Regulatory Compliance 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					
2021	5.2848	54.9441	56.4213	0.1919	10.5051	1.3351	11.5375	3.9263	1.3350	4.8740	0.0000	19,545.5353	19,545.5353	1.9495	0.0000	19,579.5235
2022	5.0204	53.2974	53.6173	0.1880	10.5051	1.0228	11.5279	2.8296	1.0152	3.8449	0.0000	19,167.0208	19,167.0208	1.3140	0.0000	19,199.8695
2023	33.8959	69.2947	75.5738	0.2261	12.3942	1.7695	14.1637	3.3306	1.7622	5.0928	0.0000	22,879.4412	22,879.4412	2.0106	0.0000	22,929.7052
<b>Maximum</b>	<b>33.8959</b>	<b>69.2947</b>	<b>75.5738</b>	<b>0.2261</b>	<b>12.3942</b>	<b>1.7695</b>	<b>14.1637</b>	<b>3.9263</b>	<b>1.7622</b>	<b>5.0928</b>	<b>0.0000</b>	<b>22,879.4412</b>	<b>22,879.4412</b>	<b>2.0106</b>	<b>0.0000</b>	<b>22,929.7052</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
<b>Percent Reduction</b>	<b>4.57</b>	<b>-20.71</b>	<b>-4.02</b>	<b>0.00</b>	<b>19.41</b>	<b>5.31</b>	<b>18.22</b>	<b>37.52</b>	<b>-1.53</b>	<b>31.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### 2.2 Overall Operational Baseline 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
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Category	lb/day										lb/day					
Area	6.6741	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
Energy	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
Mobile	0.9482	4.0921	14.1571	0.0567	4.9385	0.0413	4.9798	1.3215	0.0384	1.3599		5,775.6350	5,775.6350	0.2627		5,782.2013
<b>Total</b>	<b>7.7045</b>	<b>4.8422</b>	<b>14.9791</b>	<b>0.0612</b>	<b>4.9385</b>	<b>0.0989</b>	<b>5.0374</b>	<b>1.3215</b>	<b>0.0960</b>	<b>1.4175</b>		<b>6,674.0874</b>	<b>6,674.0874</b>	<b>0.2809</b>	<b>0.0165</b>	<b>6,686.0174</b>

### Regulatory Compliance 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	6.6741	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
Energy	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
Mobile	0.9482	4.0921	14.1571	0.0567	4.9385	0.0413	4.9798	1.3215	0.0384	1.3599		5,775.6350	5,775.6350	0.2627		5,782.2013
<b>Total</b>	<b>7.7045</b>	<b>4.8422</b>	<b>14.9791</b>	<b>0.0612</b>	<b>4.9385</b>	<b>0.0989</b>	<b>5.0374</b>	<b>1.3215</b>	<b>0.0960</b>	<b>1.4175</b>		<b>6,674.0874</b>	<b>6,674.0874</b>	<b>0.2809</b>	<b>0.0165</b>	<b>6,686.0174</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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/21/2021	8/27/2021	6	59	
2	Site Preparation	Site Preparation	8/28/2021	10/8/2021	6	36	
3	Grading	Grading	10/9/2021	11/19/2021	6	36	

4	Building Construction	Building Construction	11/20/2021	4/19/2023	6	442
5	Paving	Paving	3/19/2023	7/20/2023	6	106
6	Architectural Coating	Architectural Coating	2/18/2023	6/21/2023	6	106

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

**Acres of Grading (Grading Phase): 90**

**Acres of Paving: 32.35**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 401,850; Non-Residential Outdoor: 133,950; Striped Parking**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	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	
Demolition		6	15.00	0.00	4,637.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation		7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading		8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction		9	768.00	300.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving		6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating		1	154.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Demolition - 2021

#### Baseline 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					17.0092	0.0000	17.0092	2.5753	0.0000	2.5753			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>	<b>17.0092</b>	<b>1.5513</b>	<b>18.5605</b>	<b>2.5753</b>	<b>1.4411</b>	<b>4.0164</b>		<b>3,747.9449</b>	<b>3,747.9449</b>	<b>1.0549</b>		<b>3,774.3174</b>

#### Baseline 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
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Category	lb/day										lb/day					
Hauling	0.6553	21.0821	4.9432	0.0613	1.3742	0.0647	1.4389	0.3767	0.0619	0.4386		6,652.4938	6,652.4938	0.4515		6,663.7804
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	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
<b>Total</b>	<b>0.7196</b>	<b>21.1263</b>	<b>5.5473</b>	<b>0.0630</b>	<b>1.5419</b>	<b>0.0661</b>	<b>1.6080</b>	<b>0.4212</b>	<b>0.0632</b>	<b>0.4843</b>		<b>6,823.3093</b>	<b>6,823.3093</b>	<b>0.4565</b>		<b>6,834.7217</b>

**Regulatory Compliance 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					6.6336	0.0000	6.6336	1.0044	0.0000	1.0044			0.0000			0.0000
Off-Road	1.2617	32.6638	24.6739	0.0388		0.9135	0.9135		0.9135	0.9135	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
<b>Total</b>	<b>1.2617</b>	<b>32.6638</b>	<b>24.6739</b>	<b>0.0388</b>	<b>6.6336</b>	<b>0.9135</b>	<b>7.5471</b>	<b>1.0044</b>	<b>0.9135</b>	<b>1.9179</b>	<b>0.0000</b>	<b>3,747.9449</b>	<b>3,747.9449</b>	<b>1.0549</b>		<b>3,774.3174</b>

**Regulatory Compliance 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	0.6553	21.0821	4.9432	0.0613	1.3742	0.0647	1.4389	0.3767	0.0619	0.4386		6,652.4938	6,652.4938	0.4515		6,663.7804
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	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413

Total	0.7196	21.1263	5.5473	0.0630	1.5419	0.0661	1.6080	0.4212	0.0632	0.4843		6,823.309 3	6,823.309 3	0.4565		6,834.721 7
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### 3.3 Site Preparation - 2021

#### Baseline 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.656 9	3,685.656 9	1.1920		3,715.457 3
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.0445</b>	<b>20.1107</b>	<b>9.9307</b>	<b>1.8809</b>	<b>11.8116</b>		<b>3,685.656 9</b>	<b>3,685.656 9</b>	<b>1.1920</b>		<b>3,715.457 3</b>

#### Baseline 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	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
<b>Total</b>	<b>0.0772</b>	<b>0.0530</b>	<b>0.7250</b>	<b>2.0600e-003</b>	<b>0.2012</b>	<b>1.6300e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.5000e-003</b>	<b>0.0549</b>		<b>204.9786</b>	<b>204.9786</b>	<b>6.0400e-003</b>		<b>205.1296</b>

#### Regulatory Compliance 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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0380		0.9462	0.9462		0.9462	0.9462	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>1.2097</b>	<b>33.7214</b>	<b>22.9600</b>	<b>0.0380</b>	<b>7.0458</b>	<b>0.9462</b>	<b>7.9920</b>	<b>3.8730</b>	<b>0.9462</b>	<b>4.8191</b>	<b>0.0000</b>	<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</b>

### Regulatory Compliance 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	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
<b>Total</b>	<b>0.0772</b>	<b>0.0530</b>	<b>0.7250</b>	<b>2.0600e-003</b>	<b>0.2012</b>	<b>1.6300e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.5000e-003</b>	<b>0.0549</b>		<b>204.9786</b>	<b>204.9786</b>	<b>6.0400e-003</b>		<b>205.1296</b>

### **3.4 Grading - 2021**

#### Baseline 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134

<b>Total</b>	<b>4.1912</b>	<b>46.3998</b>	<b>30.8785</b>	<b>0.0620</b>	<b>8.6733</b>	<b>1.9853</b>	<b>10.6587</b>	<b>3.5965</b>	<b>1.8265</b>	<b>5.4230</b>		<b>6,007.043</b>	<b>6,007.043</b>	<b>1.9428</b>		<b>6,055.613</b>
												<b>4</b>	<b>4</b>			<b>4</b>

**Baseline 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
<b>Category</b>	<b>lb/day</b>										<b>lb/day</b>					
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	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
<b>Total</b>	<b>0.0857</b>	<b>0.0589</b>	<b>0.8056</b>	<b>2.2900e-003</b>	<b>0.2236</b>	<b>1.8100e-003</b>	<b>0.2254</b>	<b>0.0593</b>	<b>1.6600e-003</b>	<b>0.0610</b>		<b>227.7540</b>	<b>227.7540</b>	<b>6.7100e-003</b>		<b>227.9217</b>

**Regulatory Compliance 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
<b>Category</b>	<b>lb/day</b>										<b>lb/day</b>					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.8106	51.2386	36.7226	0.0620		1.3333	1.3333		1.3333	1.3333	0.0000	6,007.043	6,007.043	1.9428		6,055.613
												<b>4</b>	<b>4</b>			<b>4</b>
<b>Total</b>	<b>1.8106</b>	<b>51.2386</b>	<b>36.7226</b>	<b>0.0620</b>	<b>3.3826</b>	<b>1.3333</b>	<b>4.7159</b>	<b>1.4026</b>	<b>1.3333</b>	<b>2.7360</b>	<b>0.0000</b>	<b>6,007.043</b>	<b>6,007.043</b>	<b>1.9428</b>		<b>6,055.613</b>
												<b>4</b>	<b>4</b>			<b>4</b>

**Regulatory Compliance 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	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
<b>Total</b>	<b>0.0857</b>	<b>0.0589</b>	<b>0.8056</b>	<b>2.2900e-003</b>	<b>0.2236</b>	<b>1.8100e-003</b>	<b>0.2254</b>	<b>0.0593</b>	<b>1.6600e-003</b>	<b>0.0610</b>		<b>227.7540</b>	<b>227.7540</b>	<b>6.7100e-003</b>		<b>227.9217</b>

### 3.5 Building Construction - 2021

#### Baseline 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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>		<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

#### Baseline 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	0.9119	29.1268	7.6145	0.0772	1.9206	0.0596	1.9802	0.5530	0.0570	0.6100		8,246.4189	8,246.4189	0.4858		8,258.5644

Worker	3.2921	2.2628	30.9330	0.0878	8.5844	0.0694	8.6538	2.2766	0.0639	2.3405		8,745.7525	8,745.7525	0.2577		8,752.1948
<b>Total</b>	<b>4.2040</b>	<b>31.3897</b>	<b>38.5476</b>	<b>0.1650</b>	<b>10.5051</b>	<b>0.1289</b>	<b>10.6340</b>	<b>2.8296</b>	<b>0.1209</b>	<b>2.9505</b>		<b>16,992.1714</b>	<b>16,992.1714</b>	<b>0.7435</b>		<b>17,010.7592</b>

**Regulatory Compliance 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	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.0809</b>	<b>23.5544</b>	<b>17.8738</b>	<b>0.0269</b>		<b>0.9036</b>	<b>0.9036</b>		<b>0.9036</b>	<b>0.9036</b>	<b>0.0000</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

**Regulatory Compliance 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	0.9119	29.1268	7.6145	0.0772	1.9206	0.0596	1.9802	0.5530	0.0570	0.6100		8,246.4189	8,246.4189	0.4858		8,258.5644
Worker	3.2921	2.2628	30.9330	0.0878	8.5844	0.0694	8.6538	2.2766	0.0639	2.3405		8,745.7525	8,745.7525	0.2577		8,752.1948
<b>Total</b>	<b>4.2040</b>	<b>31.3897</b>	<b>38.5476</b>	<b>0.1650</b>	<b>10.5051</b>	<b>0.1289</b>	<b>10.6340</b>	<b>2.8296</b>	<b>0.1209</b>	<b>2.9505</b>		<b>16,992.1714</b>	<b>16,992.1714</b>	<b>0.7435</b>		<b>17,010.7592</b>

**3.5 Building Construction - 2022**

**Baseline 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Baseline 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	0.8558	27.6991	7.2045	0.0764	1.9207	0.0521	1.9728	0.5530	0.0498	0.6028		8,174.5766	8,174.5766	0.4691		8,186.3043
Worker	3.0837	2.0440	28.5391	0.0847	8.5844	0.0672	8.6516	2.2766	0.0619	2.3385		8,438.1106	8,438.1106	0.2329		8,443.9330
<b>Total</b>	<b>3.9395</b>	<b>29.7430</b>	<b>35.7436</b>	<b>0.1611</b>	<b>10.5051</b>	<b>0.1193</b>	<b>10.6244</b>	<b>2.8296</b>	<b>0.1117</b>	<b>2.9413</b>		<b>16,612.6872</b>	<b>16,612.6872</b>	<b>0.7020</b>		<b>16,630.2373</b>

**Regulatory Compliance 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	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Total	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
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**Regulatory Compliance 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	0.8558	27.6991	7.2045	0.0764	1.9207	0.0521	1.9728	0.5530	0.0498	0.6028		8,174.5766	8,174.5766	0.4691		8,186.3043
Worker	3.0837	2.0440	28.5391	0.0847	8.5844	0.0672	8.6516	2.2766	0.0619	2.3385		8,438.1106	8,438.1106	0.2329		8,443.9330
<b>Total</b>	<b>3.9395</b>	<b>29.7430</b>	<b>35.7436</b>	<b>0.1611</b>	<b>10.5051</b>	<b>0.1193</b>	<b>10.6244</b>	<b>2.8296</b>	<b>0.1117</b>	<b>2.9413</b>		<b>16,612.6872</b>	<b>16,612.6872</b>	<b>0.7020</b>		<b>16,630.2373</b>

**3.5 Building Construction - 2023**

**Baseline 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>		<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Baseline 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	0.6349	21.0170	6.5065	0.0739	1.9207	0.0243	1.9450	0.5530	0.0232	0.5762		7,917.2228	7,917.2228	0.4157		7,927.6155
Worker	2.8958	1.8493	26.2820	0.0816	8.5844	0.0653	8.6497	2.2766	0.0601	2.3368		8,129.1417	8,129.1417	0.2100		8,134.3913
<b>Total</b>	<b>3.5308</b>	<b>22.8663</b>	<b>32.7885</b>	<b>0.1555</b>	<b>10.5052</b>	<b>0.0896</b>	<b>10.5947</b>	<b>2.8297</b>	<b>0.0833</b>	<b>2.9130</b>		<b>16,046.3645</b>	<b>16,046.3645</b>	<b>0.6257</b>		<b>16,062.0068</b>

**Regulatory Compliance 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	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.0809</b>	<b>23.5544</b>	<b>17.8738</b>	<b>0.0269</b>		<b>0.9036</b>	<b>0.9036</b>		<b>0.9036</b>	<b>0.9036</b>	<b>0.0000</b>	<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Regulatory Compliance 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	0.6349	21.0170	6.5065	0.0739	1.9207	0.0243	1.9450	0.5530	0.0232	0.5762		7,917.222	7,917.222	0.4157		7,927.615
												8	8			5
Worker	2.8958	1.8493	26.2820	0.0816	8.5844	0.0653	8.6497	2.2766	0.0601	2.3368		8,129.141	8,129.141	0.2100		8,134.391
												7	7			3
<b>Total</b>	<b>3.5308</b>	<b>22.8663</b>	<b>32.7885</b>	<b>0.1555</b>	<b>10.5052</b>	<b>0.0896</b>	<b>10.5947</b>	<b>2.8297</b>	<b>0.0833</b>	<b>2.9130</b>		<b>16,046.36</b>	<b>16,046.36</b>	<b>0.6257</b>		<b>16,062.00</b>
												45	45			68

### 3.6 Paving - 2023

#### Baseline 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.584	2,207.584	0.7140		2,225.433
												1	1			6
Paving	0.0808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1136</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.584</b>	<b>2,207.584</b>	<b>0.7140</b>		<b>2,225.433</b>
												1	1			6

#### Baseline 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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
<b>Total</b>	<b>0.0566</b>	<b>0.0361</b>	<b>0.5133</b>	<b>1.5900e-003</b>	<b>0.1677</b>	<b>1.2800e-003</b>	<b>0.1689</b>	<b>0.0445</b>	<b>1.1700e-003</b>	<b>0.0456</b>		<b>158.7723</b>	<b>158.7723</b>	<b>4.1000e-003</b>		<b>158.8748</b>

#### Regulatory Compliance 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	0.9311	20.1146	17.2957	0.0228		0.6670	0.6670		0.6670	0.6670	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.0808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0119</b>	<b>20.1146</b>	<b>17.2957</b>	<b>0.0228</b>		<b>0.6670</b>	<b>0.6670</b>		<b>0.6670</b>	<b>0.6670</b>	<b>0.0000</b>	<b>2,207.584 1</b>	<b>2,207.584 1</b>	<b>0.7140</b>		<b>2,225.433 6</b>

**Regulatory Compliance 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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
<b>Total</b>	<b>0.0566</b>	<b>0.0361</b>	<b>0.5133</b>	<b>1.5900e-003</b>	<b>0.1677</b>	<b>1.2800e-003</b>	<b>0.1689</b>	<b>0.0445</b>	<b>1.1700e-003</b>	<b>0.0456</b>		<b>158.7723</b>	<b>158.7723</b>	<b>4.1000e-003</b>		<b>158.8748</b>

**3.7 Architectural Coating - 2023**

**Baseline 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	27.5212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>27.7129</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Baseline 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	0.5807	0.3708	5.2701	0.0164	1.7214	0.0131	1.7345	0.4565	0.0121	0.4686		1,630.0623	1,630.0623	0.0421		1,631.1149
<b>Total</b>	<b>0.5807</b>	<b>0.3708</b>	<b>5.2701</b>	<b>0.0164</b>	<b>1.7214</b>	<b>0.0131</b>	<b>1.7345</b>	<b>0.4565</b>	<b>0.0121</b>	<b>0.4686</b>		<b>1,630.0623</b>	<b>1,630.0623</b>	<b>0.0421</b>		<b>1,631.1149</b>

**Regulatory Compliance 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	27.5212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>27.6351</b>	<b>2.3524</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Regulatory Compliance 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	0.5807	0.3708	5.2701	0.0164	1.7214	0.0131	1.7345	0.4565	0.0121	0.4686		1,630.0623	1,630.0623	0.0421		1,631.1149
<b>Total</b>	<b>0.5807</b>	<b>0.3708</b>	<b>5.2701</b>	<b>0.0164</b>	<b>1.7214</b>	<b>0.0131</b>	<b>1.7345</b>	<b>0.4565</b>	<b>0.0121</b>	<b>0.4686</b>		<b>1,630.0623</b>	<b>1,630.0623</b>	<b>0.0421</b>		<b>1,631.1149</b>

#### 4.0 Operational Detail - Mobile

#### 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					
Regulatory Compliance	0.9482	4.0921	14.1571	0.0567	4.9385	0.0413	4.9798	1.3215	0.0384	1.3599		5,775.6350	5,775.6350	0.2627		5,782.2013
Baseline	0.9482	4.0921	14.1571	0.0567	4.9385	0.0413	4.9798	1.3215	0.0384	1.3599		5,775.6350	5,775.6350	0.2627		5,782.2013

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Baseline	Regulatory Compliance
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	543.84	184.85	75.01	1,817,552	1,817,552
Other Non-Asphalt Surfaces	0.00	0.00	0.00		

Parking Lot	0.00	0.00	0.00		
Total	543.84	184.85	75.01	1,817,552	1,817,552

### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Non-Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Parking Lot	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

### 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Category	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
NaturalGas Regulatory	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
NaturalGas Baseline	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737

### 5.2 Energy by Land Use - NaturalGas

**Baseline**

	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					
High School	7633.32	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0823</b>	<b>0.7484</b>	<b>0.6286</b>	<b>4.4900e-003</b>		<b>0.0569</b>	<b>0.0569</b>		<b>0.0569</b>	<b>0.0569</b>		<b>898.0371</b>	<b>898.0371</b>	<b>0.0172</b>	<b>0.0165</b>	<b>903.3737</b>

**Regulatory Compliance**

	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					
High School	7.63332	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0823</b>	<b>0.7484</b>	<b>0.6286</b>	<b>4.4900e-003</b>		<b>0.0569</b>	<b>0.0569</b>		<b>0.0569</b>	<b>0.0569</b>		<b>898.0371</b>	<b>898.0371</b>	<b>0.0172</b>	<b>0.0165</b>	<b>903.3737</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	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					
Regulatory Compliance	6.6741	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
Baseline	6.6741	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424

## 6.2 Area by SubCategory

### Baseline

	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	0.7993					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0179	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
<b>Total</b>	<b>6.6741</b>	<b>1.7600e-003</b>	<b>0.1935</b>	<b>1.0000e-005</b>		<b>6.9000e-004</b>	<b>6.9000e-004</b>		<b>6.9000e-004</b>	<b>6.9000e-004</b>		<b>0.4153</b>	<b>0.4153</b>	<b>1.0800e-003</b>		<b>0.4424</b>

### Regulatory Compliance

	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	0.7993					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0179	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
<b>Total</b>	<b>6.6741</b>	<b>1.7600e-003</b>	<b>0.1935</b>	<b>1.0000e-005</b>		<b>6.9000e-004</b>	<b>6.9000e-004</b>		<b>6.9000e-004</b>	<b>6.9000e-004</b>		<b>0.4153</b>	<b>0.4153</b>	<b>1.0800e-003</b>		<b>0.4424</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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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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Compton HS Reconstruction (Proposed) - Los Angeles-South Coast County, Winter

**Compton HS Reconstruction (Proposed)**  
**Los Angeles-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	363.00	Space	3.27	293,130.00	0
Other Non-Asphalt Surfaces	1,266.80	1000sqft	29.08	1,266,800.00	0
High School	267.90	1000sqft	6.15	267,900.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9	<b>Operational Year</b>	2024		
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -

Land Use - Other non-asphalt surfaces include outdoor facilities

High school includes educational/administrative facilities and gymnasium and aquatic center

Construction Phase - Construction to last approximately 2 years, with a start period of Summer 2021

Grading -

Demolition - Includes total existing building area, CHS Campus Building Area, Other Building Area, and Non-Structural Area

Vehicle Trips - Based on 2,500 student capacity generating 5,074 daily trips

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For conservative analysis, equipment set to Tier 2.





tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	55.00	106.00
tblConstructionPhase	NumDays	740.00	442.00
tblConstructionPhase	NumDays	50.00	59.00
tblConstructionPhase	NumDays	75.00	36.00
tblConstructionPhase	NumDays	55.00	106.00
tblConstructionPhase	NumDays	30.00	36.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	4/25/2025	6/21/2023
tblConstructionPhase	PhaseEndDate	11/22/2024	4/19/2023
tblConstructionPhase	PhaseEndDate	1/21/2022	11/19/2021
tblConstructionPhase	PhaseEndDate	2/7/2025	7/20/2023
tblConstructionPhase	PhaseStartDate	2/8/2025	2/18/2023
tblConstructionPhase	PhaseStartDate	1/22/2022	11/20/2021
tblConstructionPhase	PhaseStartDate	11/23/2024	3/19/2023
tblLandUse	LandUseSquareFeet	145,200.00	293,130.00
tblVehicleTrips	ST_TR	4.37	0.69
tblVehicleTrips	SU_TR	1.79	0.28
tblVehicleTrips	WD_TR	12.89	2.03

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Baseline 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					
2021	6.5202	52.8300	53.2803	0.1846	18.5511	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	18,808.6180	18,808.6180	1.9491	0.0000	18,843.0207
2022	6.0443	45.5015	50.3852	0.1810	10.5051	0.9300	11.4351	2.8296	0.8745	3.7041	0.0000	18,448.9354	18,448.9354	1.3303	0.0000	18,482.1929
2023	35.0202	49.2973	68.9367	0.2183	12.3942	1.3659	13.7801	3.3306	1.2964	4.6270	0.0000	22,085.7531	22,085.7531	2.0188	0.0000	22,136.2232
<b>Maximum</b>	<b>35.0202</b>	<b>52.8300</b>	<b>68.9367</b>	<b>0.2183</b>	<b>18.5511</b>	<b>2.0461</b>	<b>20.3135</b>	<b>9.9840</b>	<b>1.8824</b>	<b>11.8664</b>	<b>0.0000</b>	<b>22,085.7531</b>	<b>22,085.7531</b>	<b>2.0188</b>	<b>0.0000</b>	<b>22,136.2232</b>

### Regulatory Compliance 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					
2021	5.7002	55.1258	54.5789	0.1846	10.5051	1.3351	11.5395	3.9263	1.3350	4.8740	0.0000	18,808.6180	18,808.6180	1.9491	0.0000	18,843.0206
2022	5.4190	53.4403	51.8956	0.1810	10.5051	1.0245	11.5296	2.8296	1.0169	3.8465	0.0000	18,448.9354	18,448.9354	1.3303	0.0000	18,482.1929
2023	34.3489	69.4392	73.2992	0.2183	12.3942	1.7708	14.1650	3.3306	1.7634	5.0940	0.0000	22,085.7531	22,085.7531	2.0188	0.0000	22,136.2232
<b>Maximum</b>	<b>34.3489</b>	<b>69.4392</b>	<b>73.2992</b>	<b>0.2183</b>	<b>12.3942</b>	<b>1.7708</b>	<b>14.1650</b>	<b>3.9263</b>	<b>1.7634</b>	<b>5.0940</b>	<b>0.0000</b>	<b>22,085.7531</b>	<b>22,085.7531</b>	<b>2.0188</b>	<b>0.0000</b>	<b>22,136.2232</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
<b>Percent Reduction</b>	<b>4.45</b>	<b>-20.58</b>	<b>-4.15</b>	<b>0.00</b>	<b>19.41</b>	<b>5.31</b>	<b>18.22</b>	<b>37.52</b>	<b>-1.53</b>	<b>31.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### **2.2 Overall Operational Baseline 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
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Category	lb/day										lb/day					
Area	6.6741	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
Energy	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
Mobile	0.9192	4.2093	13.2844	0.0540	4.9385	0.0415	4.9799	1.3215	0.0386	1.3600		5,503.8685	5,503.8685	0.2607		5,510.3855
<b>Total</b>	<b>7.6756</b>	<b>4.9595</b>	<b>14.1065</b>	<b>0.0585</b>	<b>4.9385</b>	<b>0.0990</b>	<b>5.0375</b>	<b>1.3215</b>	<b>0.0961</b>	<b>1.4176</b>		<b>6,402.3209</b>	<b>6,402.3209</b>	<b>0.2790</b>	<b>0.0165</b>	<b>6,414.2016</b>

### Regulatory Compliance 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	6.6741	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
Energy	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
Mobile	0.9192	4.2093	13.2844	0.0540	4.9385	0.0415	4.9799	1.3215	0.0386	1.3600		5,503.8685	5,503.8685	0.2607		5,510.3855
<b>Total</b>	<b>7.6756</b>	<b>4.9595</b>	<b>14.1065</b>	<b>0.0585</b>	<b>4.9385</b>	<b>0.0990</b>	<b>5.0375</b>	<b>1.3215</b>	<b>0.0961</b>	<b>1.4176</b>		<b>6,402.3209</b>	<b>6,402.3209</b>	<b>0.2790</b>	<b>0.0165</b>	<b>6,414.2016</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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/21/2021	8/27/2021	6	59	
2	Site Preparation	Site Preparation	8/28/2021	10/8/2021	6	36	
3	Grading	Grading	10/9/2021	11/19/2021	6	36	

4	Building Construction	Building Construction	11/20/2021	4/19/2023	6	442
5	Paving	Paving	3/19/2023	7/20/2023	6	106
6	Architectural Coating	Architectural Coating	2/18/2023	6/21/2023	6	106

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

**Acres of Grading (Grading Phase): 90**

**Acres of Paving: 32.35**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 401,850; Non-Residential Outdoor: 133,950; Striped Parking**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	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	
Demolition		6	15.00	0.00	4,637.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation		7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading		8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction		9	768.00	300.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving		6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating		1	154.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Demolition - 2021

#### Baseline 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					17.0092	0.0000	17.0092	2.5753	0.0000	2.5753			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	3.1651	31.4407	21.5650	0.0388	17.0092	1.5513	18.5605	2.5753	1.4411	4.0164		3,747.9449	3,747.9449	1.0549		3,774.3174

#### Baseline 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
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Category	lb/day										lb/day					
Hauling	0.6711	21.3404	5.2416	0.0603	1.3742	0.0657	1.4399	0.3767	0.0629	0.4396		6,537.2512	6,537.2512	0.4674		6,548.9357
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	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
<b>Total</b>	<b>0.7426</b>	<b>21.3893</b>	<b>5.7940</b>	<b>0.0619</b>	<b>1.5419</b>	<b>0.0670</b>	<b>1.6089</b>	<b>0.4212</b>	<b>0.0641</b>	<b>0.4853</b>		<b>6,698.0889</b>	<b>6,698.0889</b>	<b>0.4721</b>		<b>6,709.8917</b>

**Regulatory Compliance 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					6.6336	0.0000	6.6336	1.0044	0.0000	1.0044			0.0000			0.0000
Off-Road	1.2617	32.6638	24.6739	0.0388		0.9135	0.9135		0.9135	0.9135	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
<b>Total</b>	<b>1.2617</b>	<b>32.6638</b>	<b>24.6739</b>	<b>0.0388</b>	<b>6.6336</b>	<b>0.9135</b>	<b>7.5471</b>	<b>1.0044</b>	<b>0.9135</b>	<b>1.9179</b>	<b>0.0000</b>	<b>3,747.9449</b>	<b>3,747.9449</b>	<b>1.0549</b>		<b>3,774.3174</b>

**Regulatory Compliance 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	0.6711	21.3404	5.2416	0.0603	1.3742	0.0657	1.4399	0.3767	0.0629	0.4396		6,537.2512	6,537.2512	0.4674		6,548.9357
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	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560

Total	0.7426	21.3893	5.7940	0.0619	1.5419	0.0670	1.6089	0.4212	0.0641	0.4853		6,698.0889	6,698.0889	0.4721		6,709.8917
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### 3.3 Site Preparation - 2021

#### Baseline 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.0445</b>	<b>20.1107</b>	<b>9.9307</b>	<b>1.8809</b>	<b>11.8116</b>		<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</b>

#### Baseline 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	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
<b>Total</b>	<b>0.0858</b>	<b>0.0587</b>	<b>0.6629</b>	<b>1.9400e-003</b>	<b>0.2012</b>	<b>1.6300e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.5000e-003</b>	<b>0.0549</b>		<b>193.0052</b>	<b>193.0052</b>	<b>5.6800e-003</b>		<b>193.1472</b>

#### Regulatory Compliance 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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0380		0.9462	0.9462		0.9462	0.9462	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>1.2097</b>	<b>33.7214</b>	<b>22.9600</b>	<b>0.0380</b>	<b>7.0458</b>	<b>0.9462</b>	<b>7.9920</b>	<b>3.8730</b>	<b>0.9462</b>	<b>4.8191</b>	<b>0.0000</b>	<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</b>

### Regulatory Compliance 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	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
<b>Total</b>	<b>0.0858</b>	<b>0.0587</b>	<b>0.6629</b>	<b>1.9400e-003</b>	<b>0.2012</b>	<b>1.6300e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.5000e-003</b>	<b>0.0549</b>		<b>193.0052</b>	<b>193.0052</b>	<b>5.6800e-003</b>		<b>193.1472</b>

### **3.4 Grading - 2021**

#### Baseline 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134



<b>Total</b>	<b>4.1912</b>	<b>46.3998</b>	<b>30.8785</b>	<b>0.0620</b>	<b>8.6733</b>	<b>1.9853</b>	<b>10.6587</b>	<b>3.5965</b>	<b>1.8265</b>	<b>5.4230</b>		<b>6,007.043</b>	<b>6,007.043</b>	<b>1.9428</b>		<b>6,055.613</b>
												<b>4</b>	<b>4</b>			<b>4</b>

**Baseline 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
<b>Category</b>	<b>lb/day</b>										<b>lb/day</b>					
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	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
<b>Total</b>	<b>0.0954</b>	<b>0.0652</b>	<b>0.7365</b>	<b>2.1500e-003</b>	<b>0.2236</b>	<b>1.8100e-003</b>	<b>0.2254</b>	<b>0.0593</b>	<b>1.6600e-003</b>	<b>0.0610</b>		<b>214.4502</b>	<b>214.4502</b>	<b>6.3100e-003</b>		<b>214.6080</b>

**Regulatory Compliance 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
<b>Category</b>	<b>lb/day</b>										<b>lb/day</b>					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	1.8106	51.2386	36.7226	0.0620		1.3333	1.3333		1.3333	1.3333	0.0000	6,007.043	6,007.043	1.9428		6,055.613
												<b>4</b>	<b>4</b>			<b>4</b>
<b>Total</b>	<b>1.8106</b>	<b>51.2386</b>	<b>36.7226</b>	<b>0.0620</b>	<b>3.3826</b>	<b>1.3333</b>	<b>4.7159</b>	<b>1.4026</b>	<b>1.3333</b>	<b>2.7360</b>	<b>0.0000</b>	<b>6,007.043</b>	<b>6,007.043</b>	<b>1.9428</b>		<b>6,055.613</b>
												<b>4</b>	<b>4</b>			<b>4</b>

**Regulatory Compliance 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	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
<b>Total</b>	<b>0.0954</b>	<b>0.0652</b>	<b>0.7365</b>	<b>2.1500e-003</b>	<b>0.2236</b>	<b>1.8100e-003</b>	<b>0.2254</b>	<b>0.0593</b>	<b>1.6600e-003</b>	<b>0.0610</b>		<b>214.4502</b>	<b>214.4502</b>	<b>6.3100e-003</b>		<b>214.6080</b>

### 3.5 Building Construction - 2021

#### Baseline 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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>		<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

#### Baseline 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	0.9573	29.0666	8.4231	0.0751	1.9206	0.0615	1.9821	0.5530	0.0588	0.6118		8,020.3658	8,020.3658	0.5178		8,033.3100

Worker	3.6620	2.5048	28.2820	0.0827	8.5844	0.0694	8.6538	2.2766	0.0639	2.3405		8,234.888	8,234.888	0.2423		8,240.946
												4	4			4
<b>Total</b>	<b>4.6193</b>	<b>31.5714</b>	<b>36.7051</b>	<b>0.1577</b>	<b>10.5051</b>	<b>0.1308</b>	<b>10.6359</b>	<b>2.8296</b>	<b>0.1227</b>	<b>2.9523</b>		<b>16,255.25</b>	<b>16,255.25</b>	<b>0.7601</b>		<b>16,274.25</b>
												<b>41</b>	<b>41</b>			<b>64</b>

**Regulatory Compliance 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	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,553.363	2,553.363	0.6160		2,568.764
												9	9			3
<b>Total</b>	<b>1.0809</b>	<b>23.5544</b>	<b>17.8738</b>	<b>0.0269</b>		<b>0.9036</b>	<b>0.9036</b>		<b>0.9036</b>	<b>0.9036</b>	<b>0.0000</b>	<b>2,553.363</b>	<b>2,553.363</b>	<b>0.6160</b>		<b>2,568.764</b>
												<b>9</b>	<b>9</b>			<b>3</b>

**Regulatory Compliance 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	0.9573	29.0666	8.4231	0.0751	1.9206	0.0615	1.9821	0.5530	0.0588	0.6118		8,020.365	8,020.365	0.5178		8,033.310
												8	8			0
Worker	3.6620	2.5048	28.2820	0.0827	8.5844	0.0694	8.6538	2.2766	0.0639	2.3405		8,234.888	8,234.888	0.2423		8,240.946
												4	4			4
<b>Total</b>	<b>4.6193</b>	<b>31.5714</b>	<b>36.7051</b>	<b>0.1577</b>	<b>10.5051</b>	<b>0.1308</b>	<b>10.6359</b>	<b>2.8296</b>	<b>0.1227</b>	<b>2.9523</b>		<b>16,255.25</b>	<b>16,255.25</b>	<b>0.7601</b>		<b>16,274.25</b>
												<b>41</b>	<b>41</b>			<b>64</b>

**3.5 Building Construction - 2022**

**Baseline 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Baseline 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	0.8987	27.6238	7.9731	0.0743	1.9207	0.0538	1.9745	0.5530	0.0514	0.6044		7,949.1084	7,949.1084	0.4996		7,961.5979
Worker	3.4394	2.2621	26.0487	0.0797	8.5844	0.0672	8.6516	2.2766	0.0619	2.3385		7,945.4934	7,945.4934	0.2188		7,950.9629
<b>Total</b>	<b>4.3381</b>	<b>29.8859</b>	<b>34.0218</b>	<b>0.1541</b>	<b>10.5051</b>	<b>0.1210</b>	<b>10.6261</b>	<b>2.8296</b>	<b>0.1133</b>	<b>2.9430</b>		<b>15,894.6018</b>	<b>15,894.6018</b>	<b>0.7184</b>		<b>15,912.5607</b>

**Regulatory Compliance 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	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Total	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
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**Regulatory Compliance 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	0.8987	27.6238	7.9731	0.0743	1.9207	0.0538	1.9745	0.5530	0.0514	0.6044		7,949.1084	7,949.1084	0.4996		7,961.5979
Worker	3.4394	2.2621	26.0487	0.0797	8.5844	0.0672	8.6516	2.2766	0.0619	2.3385		7,945.4934	7,945.4934	0.2188		7,950.9629
Total	4.3381	29.8859	34.0218	0.1541	10.5051	0.1210	10.6261	2.8296	0.1133	2.9430		15,894.6018	15,894.6018	0.7184		15,912.5607

**3.5 Building Construction - 2023**

**Baseline 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

**Baseline 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	0.6677	20.9216	7.0848	0.0719	1.9207	0.0255	1.9463	0.5530	0.0244	0.5774		7,702.2393	7,702.2393	0.4398		7,713.2342
Worker	3.2403	2.0459	23.9437	0.0768	8.5844	0.0653	8.6497	2.2766	0.0601	2.3368		7,654.8140	7,654.8140	0.1970		7,659.7389
<b>Total</b>	<b>3.9080</b>	<b>22.9675</b>	<b>31.0285</b>	<b>0.1487</b>	<b>10.5052</b>	<b>0.0908</b>	<b>10.5960</b>	<b>2.8297</b>	<b>0.0845</b>	<b>2.9142</b>		<b>15,357.0533</b>	<b>15,357.0533</b>	<b>0.6368</b>		<b>15,372.9731</b>

**Regulatory Compliance 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	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.0809</b>	<b>23.5544</b>	<b>17.8738</b>	<b>0.0269</b>		<b>0.9036</b>	<b>0.9036</b>		<b>0.9036</b>	<b>0.9036</b>	<b>0.0000</b>	<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Regulatory Compliance 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	0.6677	20.9216	7.0848	0.0719	1.9207	0.0255	1.9463	0.5530	0.0244	0.5774		7,702.239	7,702.239	0.4398		7,713.234
												3	3			2
Worker	3.2403	2.0459	23.9437	0.0768	8.5844	0.0653	8.6497	2.2766	0.0601	2.3368		7,654.814	7,654.814	0.1970		7,659.738
												0	0			9
<b>Total</b>	<b>3.9080</b>	<b>22.9675</b>	<b>31.0285</b>	<b>0.1487</b>	<b>10.5052</b>	<b>0.0908</b>	<b>10.5960</b>	<b>2.8297</b>	<b>0.0845</b>	<b>2.9142</b>		<b>15,357.05</b>	<b>15,357.05</b>	<b>0.6368</b>		<b>15,372.97</b>
												<b>33</b>	<b>33</b>			<b>31</b>

### 3.6 Paving - 2023

#### Baseline 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.584	2,207.584	0.7140		2,225.433
												1	1			6
Paving	0.0808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1136</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.584</b>	<b>2,207.584</b>	<b>0.7140</b>		<b>2,225.433</b>
												<b>1</b>	<b>1</b>			<b>6</b>

#### Baseline 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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
<b>Total</b>	<b>0.0633</b>	<b>0.0400</b>	<b>0.4677</b>	<b>1.5000e-003</b>	<b>0.1677</b>	<b>1.2800e-003</b>	<b>0.1689</b>	<b>0.0445</b>	<b>1.1700e-003</b>	<b>0.0456</b>		<b>149.5081</b>	<b>149.5081</b>	<b>3.8500e-003</b>		<b>149.6043</b>

#### Regulatory Compliance 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	0.9311	20.1146	17.2957	0.0228		0.6670	0.6670		0.6670	0.6670	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.0808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0119</b>	<b>20.1146</b>	<b>17.2957</b>	<b>0.0228</b>		<b>0.6670</b>	<b>0.6670</b>		<b>0.6670</b>	<b>0.6670</b>	<b>0.0000</b>	<b>2,207.584 1</b>	<b>2,207.584 1</b>	<b>0.7140</b>		<b>2,225.433 6</b>

**Regulatory Compliance 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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
<b>Total</b>	<b>0.0633</b>	<b>0.0400</b>	<b>0.4677</b>	<b>1.5000e-003</b>	<b>0.1677</b>	<b>1.2800e-003</b>	<b>0.1689</b>	<b>0.0445</b>	<b>1.1700e-003</b>	<b>0.0456</b>		<b>149.5081</b>	<b>149.5081</b>	<b>3.8500e-003</b>		<b>149.6043</b>

**3.7 Architectural Coating - 2023**

**Baseline 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	27.5212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000



Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>27.7129</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Baseline 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	0.6498	0.4103	4.8012	0.0154	1.7214	0.0131	1.7345	0.4565	0.0121	0.4686		1,534.9497	1,534.9497	0.0395		1,535.9372
<b>Total</b>	<b>0.6498</b>	<b>0.4103</b>	<b>4.8012</b>	<b>0.0154</b>	<b>1.7214</b>	<b>0.0131</b>	<b>1.7345</b>	<b>0.4565</b>	<b>0.0121</b>	<b>0.4686</b>		<b>1,534.9497</b>	<b>1,534.9497</b>	<b>0.0395</b>		<b>1,535.9372</b>

**Regulatory Compliance 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	27.5212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>27.6351</b>	<b>2.3524</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Regulatory Compliance 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	0.6498	0.4103	4.8012	0.0154	1.7214	0.0131	1.7345	0.4565	0.0121	0.4686		1,534.9497	1,534.9497	0.0395		1,535.9372
<b>Total</b>	<b>0.6498</b>	<b>0.4103</b>	<b>4.8012</b>	<b>0.0154</b>	<b>1.7214</b>	<b>0.0131</b>	<b>1.7345</b>	<b>0.4565</b>	<b>0.0121</b>	<b>0.4686</b>		<b>1,534.9497</b>	<b>1,534.9497</b>	<b>0.0395</b>		<b>1,535.9372</b>

#### 4.0 Operational Detail - Mobile

#### 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					
Regulatory Compliance	0.9192	4.2093	13.2844	0.0540	4.9385	0.0415	4.9799	1.3215	0.0386	1.3600		5,503.8685	5,503.8685	0.2607		5,510.3855
Baseline	0.9192	4.2093	13.2844	0.0540	4.9385	0.0415	4.9799	1.3215	0.0386	1.3600		5,503.8685	5,503.8685	0.2607		5,510.3855

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Baseline	Regulatory Compliance
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	543.84	184.85	75.01	1,817,552	1,817,552
Other Non-Asphalt Surfaces	0.00	0.00	0.00		

Parking Lot	0.00	0.00	0.00		
Total	543.84	184.85	75.01	1,817,552	1,817,552

### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Non-Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Parking Lot	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

### 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Category	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
NaturalGas Regulatory	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
NaturalGas Baseline	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737

### 5.2 Energy by Land Use - NaturalGas

**Baseline**

	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					
High School	7633.32	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0823</b>	<b>0.7484</b>	<b>0.6286</b>	<b>4.4900e-003</b>		<b>0.0569</b>	<b>0.0569</b>		<b>0.0569</b>	<b>0.0569</b>		<b>898.0371</b>	<b>898.0371</b>	<b>0.0172</b>	<b>0.0165</b>	<b>903.3737</b>

**Regulatory Compliance**

	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					
High School	7.63332	0.0823	0.7484	0.6286	4.4900e-003		0.0569	0.0569		0.0569	0.0569		898.0371	898.0371	0.0172	0.0165	903.3737
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0823</b>	<b>0.7484</b>	<b>0.6286</b>	<b>4.4900e-003</b>		<b>0.0569</b>	<b>0.0569</b>		<b>0.0569</b>	<b>0.0569</b>		<b>898.0371</b>	<b>898.0371</b>	<b>0.0172</b>	<b>0.0165</b>	<b>903.3737</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	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					
Regulatory Compliance	6.6741	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
Baseline	6.6741	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424

## 6.2 Area by SubCategory

### Baseline

	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	0.7993					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0179	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
<b>Total</b>	<b>6.6741</b>	<b>1.7600e-003</b>	<b>0.1935</b>	<b>1.0000e-005</b>		<b>6.9000e-004</b>	<b>6.9000e-004</b>		<b>6.9000e-004</b>	<b>6.9000e-004</b>		<b>0.4153</b>	<b>0.4153</b>	<b>1.0800e-003</b>		<b>0.4424</b>

### Regulatory Compliance

	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	0.7993					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0179	1.7600e-003	0.1935	1.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004		0.4153	0.4153	1.0800e-003		0.4424
<b>Total</b>	<b>6.6741</b>	<b>1.7600e-003</b>	<b>0.1935</b>	<b>1.0000e-005</b>		<b>6.9000e-004</b>	<b>6.9000e-004</b>		<b>6.9000e-004</b>	<b>6.9000e-004</b>		<b>0.4153</b>	<b>0.4153</b>	<b>1.0800e-003</b>		<b>0.4424</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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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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**AERMOD View - Source Parameters**  
**MS Excel - Lakes Format - Version 3.0**  
 Supported Source Types: Point, Rectangular Area, Circular Area, Volume, Open PL, Line Volume, Line Area

Parameters	Units	Description
Type		POINT AREA AREA_CIRC AREA_POLY VOLUME OPEN PLY LINE LINE_VOLUME LINE_AREA BUOYLINE
ID		Source ID up to 12 characters
Desc		Optional description
SourceID_Prefix		Text prefix up to 4 characters long for generated LINE_VOLUME and LINE_AREA sources
Base_Elev	(m)	Source base elevation above mean sea level
Height	(m)	Release height above ground
Dia	(m)	Three stack diameter (POINT) or circular area radius (AREA_CIRC)
Ext_Vel	(m/s)	Exit velocity (POINT only)
Ext_Temp	(K)	Exit temperature (POINT only)
Release_Type		VERTICAL, HORIZONTAL, CAPPED (POINT only), HORIZONTAL and CAPPED are non-default beta options
SigmaY	(m)	Initial sigma Y (VOLUME only)
SigmaZ	(m)	Initial sigma Z (AREA, AREA_CIRC, AREA_POLY, VOLUME, LINE, and LINE_AREA only; optional for AREA, AREA_CIRC, AREA_POLY, and LINE)
Length_X	(m)	X side length (AREA, VOLUME, OPEN PLY, and LINE_AREA only; optional for VOLUME; will be used to calculate SigmaY)
Length_Y	(m)	Y side length (AREA and OPEN PLY only; width for LINE sources)
Rotation_Angle	(degrees)	Clockwise rotation from North of Y side (AREA and OPEN PLY only)
Pt_Volume	(m <sup>3</sup> )	Volume of the open PL (OPEN PLY only)
Emission_Rate	(g/s or g/s/m <sup>2</sup> )	Emission rate (g/s for POINT, VOLUME, and LINE_VOLUME; g/s/m <sup>2</sup> for AREA, AREA_CIRC, AREA_POLY, OPEN PLY, LINE, and LINE_AREA)
Configuration		LINE_VOLUME configuration: Separated, Adjacent, or Staggered
LineVolumeHeight	(m)	Plume Height or Building Height for LINE_VOLUME source
LineVolumeType	(m)	Plume width for LINE_VOLUME source
LineVolumeType	(m)	LINE_VOLUME type: None, Surface-Based, Elevated, Elevated Building
LineAreaRatio		Ratio 1 for LINE_AREA source
Line_PFRMEL	(m <sup>2</sup> /s <sup>2</sup> )	Average buoyancy parameter (BUOYLINE source only)
Line_L	(m)	Building Length (BUOYLINE source only)
Line_HB	(m)	Building Height (BUOYLINE source only)
Line_WB	(m)	Building Width (BUOYLINE source only)
Line_WL	(m)	Line Source Width (BUOYLINE source only)
Line_DX	(m)	Separation between buildings (BUOYLINE source only)
Line_Coords		Number of coordinate pairs (POINT, AREA, AREA_CIRC, VOLUME, OPEN PLY = 1; AREA, POLY = 3; LINE = 2; LINE_AREA, LINE_VOLUME = 2)
X1	(m)	X coordinate of source location (1)
Y1	(m)	Y coordinate of source location (1)
X2	(m)	Secondary X coordinate of source location (AREA, POLY, LINE, LINE_VOLUME, LINE_AREA, BUOYLINE sources only)
Y2	(m)	Secondary Y coordinate of source location (AREA, POLY, LINE, LINE_VOLUME, LINE_AREA, BUOYLINE sources only)
X3	(m)	Additional X coordinate of source location (AREA, POLY, LINE, VOLUME, LINE_AREA only)
Y3	(m)	Additional Y coordinate of source location (AREA, POLY, LINE, VOLUME, LINE_AREA only)
X4	(m)	Additional X coordinate of source location (AREA, POLY, LINE, VOLUME, LINE_AREA only)
Y4	(m)	Additional Y coordinate of source location (AREA, POLY, LINE, VOLUME, LINE_AREA only)
Base_Elev_m	(m)	Base Elevation for LINE_VOLUME, LINE_AREA nodes
Rel_Height_m	(m)	Release height for LINE_VOLUME, LINE_AREA nodes

NOTE: you may keep adding additional coordinate pairs for an AREA\_POLY or LINE\_VOLUME sources, be sure to add the headers as well (eg. X5, Y5, etc)

Type	ID	Desc	SourceID_Prefix	Base_Elev	Height	Dia	Ext_Vel	Ext_Temp	Release_Type	SigmaY	SigmaZ	Length_X	Length_Y	Rotation_Angle	Pt_Volume	Emission_Rate	Configuration	LineVolumeHeight	PlumeWidth	LineVolumeType	LineArea_Ratio1	Line_PFRMEL	Line_L	Line_HB	Line_WB	Line_WM	Line_DX	Line_Coords	X1	Y1	X2	Y2	X3	Y3	X4	Y4	
VOLUME	VOL1			28	5					11.6279	1.4	50				0.0001												1	38618.88	375026.80							
VOLUME	VOL2			28	5					11.6279	1.4	50				0.0001													1	38618.89	375026.79						
VOLUME	VOL3			28	5					11.6279	1.4	50				0.0001													1	38620.73	375026.47						
VOLUME	VOL4			28	5					11.6279	1.4	50				0.0001													1	38634.51	375026.99						
VOLUME	VOL5			28	5					11.6279	1.4	50				0.0001													1	38638.51	375026.73						
VOLUME	VOL6			28	5					11.6279	1.4	50				0.0001													1	38643.23	375026.73						
VOLUME	VOL7			28	5					11.6279	1.4	50				0.0001													1	38643.24	375026.21						
VOLUME	VOL8			28	5					11.6279	1.4	50				0.0001													1	38643.50	375026.21						
VOLUME	VOL9			28	5					11.6279	1.4	50				0.0001													1	38643.45	375076.56						
VOLUME	VOL10			28	5					11.6279	1.4	50				0.0001													1	38643.74	375076.56						
VOLUME	VOL11			28	5					11.6279	1.4	50				0.0001													1	38643.14	375076.26						
VOLUME	VOL12			28	5					11.6279	1.4	50				0.0001													1	38643.72	375076.87						
VOLUME	VOL13			28	5					11.6279	1.4	50				0.0001													1	38643.40	375076.56						
VOLUME	VOL14			28	5					11.6279	1.4	50				0.0001													1	38643.76	375076.48						
VOLUME	VOL15			28	5					11.6279	1.4	50				0.0001													1	38643.33	375076.74						
VOLUME	VOL16			28	5					11.6279	1.4	50				0.0001													1	38643.62	375076.74						
VOLUME	VOL17			28	5					11.6279	1.4	50				0.0001													1	38643.90	375076.64						
VOLUME	VOL18			28	5					11.6279	1.4	50				0.0001													1	38623.30	375076.64						
VOLUME	VOL19			28	5					11.6279	1.4	50				0.0001													1	38643.50	375076.33						
VOLUME	VOL20			28	5					11.6279	1.4	50				0.0001													1	38638.59	375076.33						
VOLUME	VOL21			28	5					11.6279	1.4	50				0.0001													1	38643.56	375076.94						
VOLUME	VOL22			28	5					11.6279	1.4	50				0.0001													1	38643.56	375076.33						
VOLUME	VOL23			28	5					11.6279	1.4	50				0.0001													1	38643.56	375076.33						
VOLUME	VOL24			28	5					11.6279	1.4	50				0.0001													1	38623.47	375076.65						
VOLUME	VOL25			28	5					11.6279	1.4	50				0.0001													1	38623.16	375076.65						
VOLUME	VOL26			28	5					11.6279	1.4	50				0.0001													1	38643.15	375076.65						
VOLUME	VOL27			28	5					11.6279	1.4	50				0.0001													1	38638.05	375076.34						
VOLUME	VOL28			28	5					11.6279	1.4	50				0.0001													1	38643.15	375076.04						
VOLUME	VOL29			28	5					11.6279	1.4	50				0.0001													1	38643.43	375076.34						
VOLUME	VOL30			28	5					11.6279	1.4	50				0.0001													1	38643.58	375076.64						
VOLUME	VOL31			28	5					11.6279	1.4	50				0.0001													1	38643.40	375026.87						
VOLUME	VOL32			28	5					11.6279	1.4	50				0.0001													1	38643.52	375026.60						
VOLUME	VOL33			28	5					11.6279	1.4	50				0.0001													1	38638.30	375026.60						
VOLUME	VOL34			28	5					11.6279	1.4	50				0.0001													1	38643.51	375026.60						
VOLUME	VOL35			28	5					11.6279	1.4	50				0.0001													1	38643.29	375026.38						
VOLUME	VOL36			28	5					11.6279	1.4	50				0.0001													1	38643.29	375026.38						
VOLUME	VOL37			28	5					11.6279	1.4	50				0.0001													1	38643.21	375026.66						
VOLUME	VOL38			28	5					11.6279	1.4	50				0.0001													1	38632.71	375026.30						
VOLUME	VOL39			28	5					11.6279	1.4	50				0.0001													1	38642.97	375026.30						
VOLUME	VOL40			28	5					11.6279	1.4	50				0.0001													1	38642.86	375026.52						
VOLUME	VOL41			28	5					11.6279	1.4	50				0.0001													1	38643.23	375026.71						
VOLUME	VOL42			28	5					11.6279	1.4	50				0.0001													1	38643.37	375026.50						
VOLUME	VOL43			28	5					11.6279	1.4	50				0.0001													1	38643.16	375026.28						
VOLUME	VOL44			28	5					11.6279	1.4	50				0.0001													1	38643.38	375026.50						
VOLUME	VOL45			28	5					11.6279	1.4	50				0.0001													1	38643.61	375026.72						
VOLUME	VOL46			28	5					11.6279	1.4	50				0.0001													1	38642.95	375026.94						



**Table**  
**Quantification of Carcinogenic Risks and Noncarcinogenic Hazards**  
**1 Year Exposure Scenario / Maximum Residential Receptor**

Source (a)	Mass GLC		Weight Fraction (d)	Contaminant (e)	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints*											
	(ug/m <sup>3</sup> ) (b)	(mg/m <sup>3</sup> ) (c)			URF (ug/m <sup>3</sup> ) <sup>-1</sup> (f)	CPF (mg/kg/day) <sup>-1</sup> (g)	DOSE (mg/kg-day) (h)	RISK (i)	REL (ug/m <sup>3</sup> ) (j)	RfD (mg/kg/day) <sup>-1</sup> (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)		
	Construction	0.06733			6.73E-05	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	5.9E-05	8.8E-06	5.0E+00	1.4E-03	1.3E-02						
<b>TOTAL</b>					8.8E-06				1.3E-02		0.0E+00		0.0E+00		0.0E+00		0.0E+00		0.0E+00	

\* Key to Toxicological Endpoints

RESP      Respiratory System  
CNS/PNS    Central/Peripheral Nervous System  
CV/BL      Cardiovascular/Blood System  
IMMUN      Immune System  
KIDN        Kidney  
GI/LV        Gastrointestinal System/Liver  
REPRO      Reproductive System (e.g. teratogenic and developmental effects)  
EYES        Eye irritation and/or other effects

Note:      Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	1
inhalation rate (L/kg-day)	908
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	1
age sensitivity factor (third trimester to 2 years)	10
breathing rate third trimester	361
breathing rate 0-2	1090
weighted breathing rate	908

## Emission Rate Summary Worksheet

CalEEMod Mitigated Construction / Annual	tons/yr	lbs/yr	lbs/day (260 days)	annualized
				lbs/day (365 days)
Exhaust DPM (PM10)	0.2221	444.2	1.7085	1.2170
Fugitive PM2.5	0.1005	201	0.7731	0.5507
Exhaust PM2.5	0.2044	408.8	1.5723	1.1200

DPM	Phase	Exhaust mass	Exhaust g/s/source
	All	0.82997	3.6513E-05
	Combustion Sources	358	

PM2.5	Phase	Fugitive mass	Exhaust mass	Fugitive g/s/m2	Exhaust g/s/source
	All	0.5447	0.8016	8.4095E-08	3.0061E-04
	Fugitive Source Area	102006 m2			
	Combustion Sources	42			

Dispersion Model Input Summary Table

Area Fugitive	ID	X	Y	ZS	V	SZ	Q PM2.5
	F1	550563.92	4173193.78	105.25	19	1	3.0062E-07
		550563.69	4173194.01				
		550542.16	4173182.72				
		550505.83	4173235.21				
		550537.42	4173330.35				
		550556.28	4173324.02				
		550567.84	4173348.98				
		550578.69	4173356.14				
		550587.21	4173380.83				
		550604.69	4173375.22				
		550631.87	4173456.35				
		550713.92	4173429.59				
		550706.73	4173383.38				
		550684.33	4173315.11				
		550655.32	4173285.70				
		550646.66	4173260.92				
		550629.27	4173266.59				
		550612.59	4173217.67				
		550588.18	4173186.00				

Volume Exhaust	ID	X	Y	ZS	RH	SY	SZ	Q DPM	Q PM2.5
	M1	550547.00	4173191.00	110.45	5	4.65	1.4	4.5699E-05	4.4931E-05
	M2	550577.00	4173191.00	102.23	5	4.65	1.4	4.5699E-05	4.4931E-05
	M3	550587.00	4173191.00	99.96	5	4.65	1.4	4.5699E-05	4.4931E-05
	M4	550537.00	4173201.00	112.24	5	4.65	1.4	4.5699E-05	4.4931E-05
	M5	550547.00	4173201.00	109.55	5	4.65	1.4	4.5699E-05	4.4931E-05
	M6	550557.00	4173201.00	106.8	5	4.65	1.4	4.5699E-05	4.4931E-05
	M7	550567.00	4173201.00	104.09	5	4.65	1.4	4.5699E-05	4.4931E-05
	M8	550577.00	4173201.00	101.9	5	4.65	1.4	4.5699E-05	4.4931E-05
	M9	550587.00	4173201.00	99.72	5	4.65	1.4	4.5699E-05	4.4931E-05
	M10	550597.00	4173201.00	97.38	5	4.65	1.4	4.5699E-05	4.4931E-05
	M11	550527.00	4173211.00	113.55	5	4.65	1.4	4.5699E-05	4.4931E-05
	M12	550537.00	4173211.00	111.12	5	4.65	1.4	4.5699E-05	4.4931E-05
	M13	550547.00	4173211.00	108.66	5	4.65	1.4	4.5699E-05	4.4931E-05
	M14	550557.00	4173211.00	106.16	5	4.65	1.4	4.5699E-05	4.4931E-05
	M15	550567.00	4173211.00	103.69	5	4.65	1.4	4.5699E-05	4.4931E-05
	M16	550577.00	4173211.00	101.58	5	4.65	1.4	4.5699E-05	4.4931E-05
	M17	550587.00	4173211.00	99.47	5	4.65	1.4	4.5699E-05	4.4931E-05
	M18	550597.00	4173211.00	97.31	5	4.65	1.4	4.5699E-05	4.4931E-05
	M19	550517.00	4173221.00	115.38	5	4.65	1.4	4.5699E-05	4.4931E-05
	M20	550527.00	4173221.00	112.92	5	4.65	1.4	4.5699E-05	4.4931E-05
	M21	550537.00	4173221.00	110.48	5	4.65	1.4	4.5699E-05	4.4931E-05
	M22	550547.00	4173221.00	108.07	5	4.65	1.4	4.5699E-05	4.4931E-05
	M23	550557.00	4173221.00	105.68	5	4.65	1.4	4.5699E-05	4.4931E-05
	M24	550567.00	4173221.00	103.31	5	4.65	1.4	4.5699E-05	4.4931E-05
	M25	550577.00	4173221.00	101.35	5	4.65	1.4	4.5699E-05	4.4931E-05
	M26	550587.00	4173221.00	99.38	5	4.65	1.4	4.5699E-05	4.4931E-05
	M27	550597.00	4173221.00	97.38	5	4.65	1.4	4.5699E-05	4.4931E-05
	M28	550607.00	4173221.00	95.35	5	4.65	1.4	4.5699E-05	4.4931E-05
	M29	550517.00	4173231.00	114.92	5	4.65	1.4	4.5699E-05	4.4931E-05

M30	550527.00	4173231.00	112.42	5	4.65	1.4	4.5699E-05	4.4931E-05
M31	550537.00	4173231.00	109.93	5	4.65	1.4	4.5699E-05	4.4931E-05
M32	550547.00	4173231.00	107.54	5	4.65	1.4	4.5699E-05	4.4931E-05
M33	550557.00	4173231.00	105.22	5	4.65	1.4	4.5699E-05	4.4931E-05
M34	550567.00	4173231.00	102.95	5	4.65	1.4	4.5699E-05	4.4931E-05
M35	550577.00	4173231.00	101.14	5	4.65	1.4	4.5699E-05	4.4931E-05
M36	550587.00	4173231.00	99.33	5	4.65	1.4	4.5699E-05	4.4931E-05
M37	550597.00	4173231.00	97.47	5	4.65	1.4	4.5699E-05	4.4931E-05
M38	550607.00	4173231.00	95.6	5	4.65	1.4	4.5699E-05	4.4931E-05
M39	550617.00	4173231.00	93.61	5	4.65	1.4	4.5699E-05	4.4931E-05
M40	550517.00	4173241.00	114.46	5	4.65	1.4	4.5699E-05	4.4931E-05
M41	550527.00	4173241.00	111.92	5	4.65	1.4	4.5699E-05	4.4931E-05
M42	550537.00	4173241.00	109.38	5	4.65	1.4	4.5699E-05	4.4931E-05
M43	550547.00	4173241.00	107.01	5	4.65	1.4	4.5699E-05	4.4931E-05
M44	550557.00	4173241.00	104.77	5	4.65	1.4	4.5699E-05	4.4931E-05
M45	550567.00	4173241.00	102.59	5	4.65	1.4	4.5699E-05	4.4931E-05
M46	550577.00	4173241.00	100.93	5	4.65	1.4	4.5699E-05	4.4931E-05
M47	550587.00	4173241.00	99.27	5	4.65	1.4	4.5699E-05	4.4931E-05
M48	550597.00	4173241.00	97.57	5	4.65	1.4	4.5699E-05	4.4931E-05
M49	550607.00	4173241.00	95.85	5	4.65	1.4	4.5699E-05	4.4931E-05
M50	550617.00	4173241.00	93.96	5	4.65	1.4	4.5699E-05	4.4931E-05
M51	550517.00	4173251.00	114.9	5	4.65	1.4	4.5699E-05	4.4931E-05
M52	550527.00	4173251.00	112.23	5	4.65	1.4	4.5699E-05	4.4931E-05
M53	550537.00	4173251.00	109.56	5	4.65	1.4	4.5699E-05	4.4931E-05
M54	550547.00	4173251.00	107.08	5	4.65	1.4	4.5699E-05	4.4931E-05
M55	550557.00	4173251.00	104.75	5	4.65	1.4	4.5699E-05	4.4931E-05
M56	550567.00	4173251.00	102.5	5	4.65	1.4	4.5699E-05	4.4931E-05
M57	550577.00	4173251.00	100.88	5	4.65	1.4	4.5699E-05	4.4931E-05
M58	550587.00	4173251.00	99.26	5	4.65	1.4	4.5699E-05	4.4931E-05
M59	550597.00	4173251.00	97.61	5	4.65	1.4	4.5699E-05	4.4931E-05
M60	550607.00	4173251.00	95.93	5	4.65	1.4	4.5699E-05	4.4931E-05
M61	550617.00	4173251.00	94.13	5	4.65	1.4	4.5699E-05	4.4931E-05
M62	550517.00	4173261.00	115.61	5	4.65	1.4	4.5699E-05	4.4931E-05
M63	550527.00	4173261.00	112.79	5	4.65	1.4	4.5699E-05	4.4931E-05
M64	550537.00	4173261.00	109.97	5	4.65	1.4	4.5699E-05	4.4931E-05
M65	550547.00	4173261.00	107.34	5	4.65	1.4	4.5699E-05	4.4931E-05
M66	550557.00	4173261.00	104.88	5	4.65	1.4	4.5699E-05	4.4931E-05
M67	550567.00	4173261.00	102.5	5	4.65	1.4	4.5699E-05	4.4931E-05
M68	550577.00	4173261.00	100.89	5	4.65	1.4	4.5699E-05	4.4931E-05
M69	550587.00	4173261.00	99.27	5	4.65	1.4	4.5699E-05	4.4931E-05
M70	550597.00	4173261.00	97.62	5	4.65	1.4	4.5699E-05	4.4931E-05
M71	550607.00	4173261.00	95.96	5	4.65	1.4	4.5699E-05	4.4931E-05
M72	550617.00	4173261.00	94.22	5	4.65	1.4	4.5699E-05	4.4931E-05
M73	550527.00	4173271.00	113.35	5	4.65	1.4	4.5699E-05	4.4931E-05
M74	550537.00	4173271.00	110.37	5	4.65	1.4	4.5699E-05	4.4931E-05
M75	550547.00	4173271.00	107.61	5	4.65	1.4	4.5699E-05	4.4931E-05
M76	550557.00	4173271.00	105	5	4.65	1.4	4.5699E-05	4.4931E-05
M77	550567.00	4173271.00	102.5	5	4.65	1.4	4.5699E-05	4.4931E-05
M78	550577.00	4173271.00	100.89	5	4.65	1.4	4.5699E-05	4.4931E-05
M79	550587.00	4173271.00	99.28	5	4.65	1.4	4.5699E-05	4.4931E-05
M80	550597.00	4173271.00	97.64	5	4.65	1.4	4.5699E-05	4.4931E-05
M81	550607.00	4173271.00	95.99	5	4.65	1.4	4.5699E-05	4.4931E-05
M82	550617.00	4173271.00	94.32	5	4.65	1.4	4.5699E-05	4.4931E-05
M83	550627.00	4173271.00	92.63	5	4.65	1.4	4.5699E-05	4.4931E-05
M84	550637.00	4173271.00	90.93	5	4.65	1.4	4.5699E-05	4.4931E-05
M85	550647.00	4173271.00	88.8	5	4.65	1.4	4.5699E-05	4.4931E-05
M86	550527.00	4173281.00	114.49	5	4.65	1.4	4.5699E-05	4.4931E-05
M87	550537.00	4173281.00	111.53	5	4.65	1.4	4.5699E-05	4.4931E-05
M88	550547.00	4173281.00	108.82	5	4.65	1.4	4.5699E-05	4.4931E-05
M89	550557.00	4173281.00	106.29	5	4.65	1.4	4.5699E-05	4.4931E-05
M90	550567.00	4173281.00	103.86	5	4.65	1.4	4.5699E-05	4.4931E-05

M91	550577.00	4173281.00	102.21	5	4.65	1.4	4.5699E-05	4.4931E-05
M92	550587.00	4173281.00	100.55	5	4.65	1.4	4.5699E-05	4.4931E-05
M93	550597.00	4173281.00	98.9	5	4.65	1.4	4.5699E-05	4.4931E-05
M94	550607.00	4173281.00	97.23	5	4.65	1.4	4.5699E-05	4.4931E-05
M95	550617.00	4173281.00	95.57	5	4.65	1.4	4.5699E-05	4.4931E-05
M96	550627.00	4173281.00	93.89	5	4.65	1.4	4.5699E-05	4.4931E-05
M97	550637.00	4173281.00	92.22	5	4.65	1.4	4.5699E-05	4.4931E-05
M98	550647.00	4173281.00	90.05	5	4.65	1.4	4.5699E-05	4.4931E-05
M99	550527.00	4173291.00	115.92	5	4.65	1.4	4.5699E-05	4.4931E-05
M100	550537.00	4173291.00	113.06	5	4.65	1.4	4.5699E-05	4.4931E-05
M101	550547.00	4173291.00	110.5	5	4.65	1.4	4.5699E-05	4.4931E-05
M102	550557.00	4173291.00	108.18	5	4.65	1.4	4.5699E-05	4.4931E-05
M103	550567.00	4173291.00	105.92	5	4.65	1.4	4.5699E-05	4.4931E-05
M104	550577.00	4173291.00	104.23	5	4.65	1.4	4.5699E-05	4.4931E-05
M105	550587.00	4173291.00	102.54	5	4.65	1.4	4.5699E-05	4.4931E-05
M106	550597.00	4173291.00	100.87	5	4.65	1.4	4.5699E-05	4.4931E-05
M107	550607.00	4173291.00	99.2	5	4.65	1.4	4.5699E-05	4.4931E-05
M108	550617.00	4173291.00	97.5	5	4.65	1.4	4.5699E-05	4.4931E-05
M109	550627.00	4173291.00	95.65	5	4.65	1.4	4.5699E-05	4.4931E-05
M110	550637.00	4173291.00	93.81	5	4.65	1.4	4.5699E-05	4.4931E-05
M111	550647.00	4173291.00	91.45	5	4.65	1.4	4.5699E-05	4.4931E-05
M112	550657.00	4173291.00	88.94	5	4.65	1.4	4.5699E-05	4.4931E-05
M113	550537.00	4173301.00	114.59	5	4.65	1.4	4.5699E-05	4.4931E-05
M114	550547.00	4173301.00	112.19	5	4.65	1.4	4.5699E-05	4.4931E-05
M115	550557.00	4173301.00	110.07	5	4.65	1.4	4.5699E-05	4.4931E-05
M116	550567.00	4173301.00	107.99	5	4.65	1.4	4.5699E-05	4.4931E-05
M117	550577.00	4173301.00	106.26	5	4.65	1.4	4.5699E-05	4.4931E-05
M118	550587.00	4173301.00	104.53	5	4.65	1.4	4.5699E-05	4.4931E-05
M119	550597.00	4173301.00	102.84	5	4.65	1.4	4.5699E-05	4.4931E-05
M120	550607.00	4173301.00	101.17	5	4.65	1.4	4.5699E-05	4.4931E-05
M121	550617.00	4173301.00	99.43	5	4.65	1.4	4.5699E-05	4.4931E-05
M122	550627.00	4173301.00	97.41	5	4.65	1.4	4.5699E-05	4.4931E-05
M123	550637.00	4173301.00	95.39	5	4.65	1.4	4.5699E-05	4.4931E-05
M124	550647.00	4173301.00	92.85	5	4.65	1.4	4.5699E-05	4.4931E-05
M125	550657.00	4173301.00	90.15	5	4.65	1.4	4.5699E-05	4.4931E-05
M126	550667.00	4173301.00	87.42	5	4.65	1.4	4.5699E-05	4.4931E-05
M127	550537.00	4173311.00	117.02	5	4.65	1.4	4.5699E-05	4.4931E-05
M128	550547.00	4173311.00	114.58	5	4.65	1.4	4.5699E-05	4.4931E-05
M129	550557.00	4173311.00	112.38	5	4.65	1.4	4.5699E-05	4.4931E-05
M130	550567.00	4173311.00	110.21	5	4.65	1.4	4.5699E-05	4.4931E-05
M131	550577.00	4173311.00	108.26	5	4.65	1.4	4.5699E-05	4.4931E-05
M132	550587.00	4173311.00	106.32	5	4.65	1.4	4.5699E-05	4.4931E-05
M133	550597.00	4173311.00	104.46	5	4.65	1.4	4.5699E-05	4.4931E-05
M134	550607.00	4173311.00	102.64	5	4.65	1.4	4.5699E-05	4.4931E-05
M135	550617.00	4173311.00	100.73	5	4.65	1.4	4.5699E-05	4.4931E-05
M136	550627.00	4173311.00	98.49	5	4.65	1.4	4.5699E-05	4.4931E-05
M137	550637.00	4173311.00	96.26	5	4.65	1.4	4.5699E-05	4.4931E-05
M138	550647.00	4173311.00	93.62	5	4.65	1.4	4.5699E-05	4.4931E-05
M139	550657.00	4173311.00	90.86	5	4.65	1.4	4.5699E-05	4.4931E-05
M140	550667.00	4173311.00	88.14	5	4.65	1.4	4.5699E-05	4.4931E-05
M141	550677.00	4173311.00	85.5	5	4.65	1.4	4.5699E-05	4.4931E-05
M142	550537.00	4173321.00	120.11	5	4.65	1.4	4.5699E-05	4.4931E-05
M143	550547.00	4173321.00	117.47	5	4.65	1.4	4.5699E-05	4.4931E-05
M144	550557.00	4173321.00	114.99	5	4.65	1.4	4.5699E-05	4.4931E-05
M145	550567.00	4173321.00	112.55	5	4.65	1.4	4.5699E-05	4.4931E-05
M146	550577.00	4173321.00	110.25	5	4.65	1.4	4.5699E-05	4.4931E-05
M147	550587.00	4173321.00	107.96	5	4.65	1.4	4.5699E-05	4.4931E-05
M148	550597.00	4173321.00	105.79	5	4.65	1.4	4.5699E-05	4.4931E-05
M149	550607.00	4173321.00	103.69	5	4.65	1.4	4.5699E-05	4.4931E-05
M150	550617.00	4173321.00	101.49	5	4.65	1.4	4.5699E-05	4.4931E-05
M151	550627.00	4173321.00	98.97	5	4.65	1.4	4.5699E-05	4.4931E-05

M152	550637.00	4173321.00	96.46	5	4.65	1.4	4.5699E-05	4.4931E-05
M153	550647.00	4173321.00	93.8	5	4.65	1.4	4.5699E-05	4.4931E-05
M154	550657.00	4173321.00	91.09	5	4.65	1.4	4.5699E-05	4.4931E-05
M155	550667.00	4173321.00	88.42	5	4.65	1.4	4.5699E-05	4.4931E-05
M156	550677.00	4173321.00	85.81	5	4.65	1.4	4.5699E-05	4.4931E-05
M157	550567.00	4173331.00	114.88	5	4.65	1.4	4.5699E-05	4.4931E-05
M158	550577.00	4173331.00	112.23	5	4.65	1.4	4.5699E-05	4.4931E-05
M159	550587.00	4173331.00	109.59	5	4.65	1.4	4.5699E-05	4.4931E-05
M160	550597.00	4173331.00	107.12	5	4.65	1.4	4.5699E-05	4.4931E-05
M161	550607.00	4173331.00	104.73	5	4.65	1.4	4.5699E-05	4.4931E-05
M162	550617.00	4173331.00	102.24	5	4.65	1.4	4.5699E-05	4.4931E-05
M163	550627.00	4173331.00	99.45	5	4.65	1.4	4.5699E-05	4.4931E-05
M164	550637.00	4173331.00	96.66	5	4.65	1.4	4.5699E-05	4.4931E-05
M165	550647.00	4173331.00	93.98	5	4.65	1.4	4.5699E-05	4.4931E-05
M166	550657.00	4173331.00	91.33	5	4.65	1.4	4.5699E-05	4.4931E-05
M167	550667.00	4173331.00	88.7	5	4.65	1.4	4.5699E-05	4.4931E-05
M168	550677.00	4173331.00	86.13	5	4.65	1.4	4.5699E-05	4.4931E-05
M169	550687.00	4173331.00	83.55	5	4.65	1.4	4.5699E-05	4.4931E-05
M170	550567.00	4173341.00	115.91	5	4.65	1.4	4.5699E-05	4.4931E-05
M171	550577.00	4173341.00	113.07	5	4.65	1.4	4.5699E-05	4.4931E-05
M172	550587.00	4173341.00	110.23	5	4.65	1.4	4.5699E-05	4.4931E-05
M173	550597.00	4173341.00	107.59	5	4.65	1.4	4.5699E-05	4.4931E-05
M174	550607.00	4173341.00	105.03	5	4.65	1.4	4.5699E-05	4.4931E-05
M175	550617.00	4173341.00	102.38	5	4.65	1.4	4.5699E-05	4.4931E-05
M176	550627.00	4173341.00	99.42	5	4.65	1.4	4.5699E-05	4.4931E-05
M177	550637.00	4173341.00	96.47	5	4.65	1.4	4.5699E-05	4.4931E-05
M178	550647.00	4173341.00	93.82	5	4.65	1.4	4.5699E-05	4.4931E-05
M179	550657.00	4173341.00	91.25	5	4.65	1.4	4.5699E-05	4.4931E-05
M180	550667.00	4173341.00	88.69	5	4.65	1.4	4.5699E-05	4.4931E-05
M181	550677.00	4173341.00	86.17	5	4.65	1.4	4.5699E-05	4.4931E-05
M182	550687.00	4173341.00	83.65	5	4.65	1.4	4.5699E-05	4.4931E-05
M183	550577.00	4173351.00	112.62	5	4.65	1.4	4.5699E-05	4.4931E-05
M184	550587.00	4173351.00	109.72	5	4.65	1.4	4.5699E-05	4.4931E-05
M185	550597.00	4173351.00	107.04	5	4.65	1.4	4.5699E-05	4.4931E-05
M186	550607.00	4173351.00	104.44	5	4.65	1.4	4.5699E-05	4.4931E-05
M187	550617.00	4173351.00	101.75	5	4.65	1.4	4.5699E-05	4.4931E-05
M188	550627.00	4173351.00	98.76	5	4.65	1.4	4.5699E-05	4.4931E-05
M189	550637.00	4173351.00	95.77	5	4.65	1.4	4.5699E-05	4.4931E-05
M190	550647.00	4173351.00	93.2	5	4.65	1.4	4.5699E-05	4.4931E-05
M191	550657.00	4173351.00	90.73	5	4.65	1.4	4.5699E-05	4.4931E-05
M192	550667.00	4173351.00	88.27	5	4.65	1.4	4.5699E-05	4.4931E-05
M193	550677.00	4173351.00	85.83	5	4.65	1.4	4.5699E-05	4.4931E-05
M194	550687.00	4173351.00	83.39	5	4.65	1.4	4.5699E-05	4.4931E-05
M195	550587.00	4173361.00	109.22	5	4.65	1.4	4.5699E-05	4.4931E-05
M196	550597.00	4173361.00	106.49	5	4.65	1.4	4.5699E-05	4.4931E-05
M197	550607.00	4173361.00	103.85	5	4.65	1.4	4.5699E-05	4.4931E-05
M198	550617.00	4173361.00	101.11	5	4.65	1.4	4.5699E-05	4.4931E-05
M199	550627.00	4173361.00	98.09	5	4.65	1.4	4.5699E-05	4.4931E-05
M200	550637.00	4173361.00	95.08	5	4.65	1.4	4.5699E-05	4.4931E-05
M201	550647.00	4173361.00	92.58	5	4.65	1.4	4.5699E-05	4.4931E-05
M202	550657.00	4173361.00	90.22	5	4.65	1.4	4.5699E-05	4.4931E-05
M203	550667.00	4173361.00	87.86	5	4.65	1.4	4.5699E-05	4.4931E-05
M204	550677.00	4173361.00	85.49	5	4.65	1.4	4.5699E-05	4.4931E-05
M205	550687.00	4173361.00	83.13	5	4.65	1.4	4.5699E-05	4.4931E-05
M206	550697.00	4173361.00	80.63	5	4.65	1.4	4.5699E-05	4.4931E-05
M207	550587.00	4173371.00	108.13	5	4.65	1.4	4.5699E-05	4.4931E-05
M208	550597.00	4173371.00	105.41	5	4.65	1.4	4.5699E-05	4.4931E-05
M209	550607.00	4173371.00	102.83	5	4.65	1.4	4.5699E-05	4.4931E-05
M210	550617.00	4173371.00	100.21	5	4.65	1.4	4.5699E-05	4.4931E-05
M211	550627.00	4173371.00	97.43	5	4.65	1.4	4.5699E-05	4.4931E-05
M212	550637.00	4173371.00	94.65	5	4.65	1.4	4.5699E-05	4.4931E-05

M213	550647.00	4173371.00	92.2	5	4.65	1.4	4.5699E-05	4.4931E-05
M214	550657.00	4173371.00	89.84	5	4.65	1.4	4.5699E-05	4.4931E-05
M215	550667.00	4173371.00	87.49	5	4.65	1.4	4.5699E-05	4.4931E-05
M216	550677.00	4173371.00	85.16	5	4.65	1.4	4.5699E-05	4.4931E-05
M217	550687.00	4173371.00	82.83	5	4.65	1.4	4.5699E-05	4.4931E-05
M218	550697.00	4173371.00	80.27	5	4.65	1.4	4.5699E-05	4.4931E-05
M219	550617.00	4173381.00	98.83	5	4.65	1.4	4.5699E-05	4.4931E-05
M220	550627.00	4173381.00	96.79	5	4.65	1.4	4.5699E-05	4.4931E-05
M221	550637.00	4173381.00	94.75	5	4.65	1.4	4.5699E-05	4.4931E-05
M222	550647.00	4173381.00	92.28	5	4.65	1.4	4.5699E-05	4.4931E-05
M223	550657.00	4173381.00	89.72	5	4.65	1.4	4.5699E-05	4.4931E-05
M224	550667.00	4173381.00	87.22	5	4.65	1.4	4.5699E-05	4.4931E-05
M225	550677.00	4173381.00	84.84	5	4.65	1.4	4.5699E-05	4.4931E-05
M226	550687.00	4173381.00	82.45	5	4.65	1.4	4.5699E-05	4.4931E-05
M227	550697.00	4173381.00	79.8	5	4.65	1.4	4.5699E-05	4.4931E-05
M228	550617.00	4173391.00	97.46	5	4.65	1.4	4.5699E-05	4.4931E-05
M229	550627.00	4173391.00	96.16	5	4.65	1.4	4.5699E-05	4.4931E-05
M230	550637.00	4173391.00	94.86	5	4.65	1.4	4.5699E-05	4.4931E-05
M231	550647.00	4173391.00	92.36	5	4.65	1.4	4.5699E-05	4.4931E-05
M232	550657.00	4173391.00	89.6	5	4.65	1.4	4.5699E-05	4.4931E-05
M233	550667.00	4173391.00	86.96	5	4.65	1.4	4.5699E-05	4.4931E-05
M234	550677.00	4173391.00	84.52	5	4.65	1.4	4.5699E-05	4.4931E-05
M235	550687.00	4173391.00	82.07	5	4.65	1.4	4.5699E-05	4.4931E-05
M236	550697.00	4173391.00	79.33	5	4.65	1.4	4.5699E-05	4.4931E-05
M237	550617.00	4173401.00	96.4	5	4.65	1.4	4.5699E-05	4.4931E-05
M238	550627.00	4173401.00	95.59	5	4.65	1.4	4.5699E-05	4.4931E-05
M239	550637.00	4173401.00	94.78	5	4.65	1.4	4.5699E-05	4.4931E-05
M240	550647.00	4173401.00	92.32	5	4.65	1.4	4.5699E-05	4.4931E-05
M241	550657.00	4173401.00	89.49	5	4.65	1.4	4.5699E-05	4.4931E-05
M242	550667.00	4173401.00	86.78	5	4.65	1.4	4.5699E-05	4.4931E-05
M243	550677.00	4173401.00	84.27	5	4.65	1.4	4.5699E-05	4.4931E-05
M244	550687.00	4173401.00	81.75	5	4.65	1.4	4.5699E-05	4.4931E-05
M245	550697.00	4173401.00	78.88	5	4.65	1.4	4.5699E-05	4.4931E-05
M246	550707.00	4173401.00	75.97	5	4.65	1.4	4.5699E-05	4.4931E-05
M247	550627.00	4173411.00	95.15	5	4.65	1.4	4.5699E-05	4.4931E-05
M248	550637.00	4173411.00	94.15	5	4.65	1.4	4.5699E-05	4.4931E-05
M249	550647.00	4173411.00	91.91	5	4.65	1.4	4.5699E-05	4.4931E-05
M250	550657.00	4173411.00	89.41	5	4.65	1.4	4.5699E-05	4.4931E-05
M251	550667.00	4173411.00	86.87	5	4.65	1.4	4.5699E-05	4.4931E-05
M252	550677.00	4173411.00	84.25	5	4.65	1.4	4.5699E-05	4.4931E-05
M253	550687.00	4173411.00	81.63	5	4.65	1.4	4.5699E-05	4.4931E-05
M254	550697.00	4173411.00	78.51	5	4.65	1.4	4.5699E-05	4.4931E-05
M255	550707.00	4173411.00	75.34	5	4.65	1.4	4.5699E-05	4.4931E-05
M256	550627.00	4173421.00	94.71	5	4.65	1.4	4.5699E-05	4.4931E-05
M257	550637.00	4173421.00	93.51	5	4.65	1.4	4.5699E-05	4.4931E-05
M258	550647.00	4173421.00	91.5	5	4.65	1.4	4.5699E-05	4.4931E-05
M259	550657.00	4173421.00	89.34	5	4.65	1.4	4.5699E-05	4.4931E-05
M260	550667.00	4173421.00	86.96	5	4.65	1.4	4.5699E-05	4.4931E-05
M261	550677.00	4173421.00	84.23	5	4.65	1.4	4.5699E-05	4.4931E-05
M262	550687.00	4173421.00	81.51	5	4.65	1.4	4.5699E-05	4.4931E-05
M263	550697.00	4173421.00	78.13	5	4.65	1.4	4.5699E-05	4.4931E-05
M264	550707.00	4173421.00	74.7	5	4.65	1.4	4.5699E-05	4.4931E-05
M265	550627.00	4173431.00	93.99	5	4.65	1.4	4.5699E-05	4.4931E-05
M266	550637.00	4173431.00	92.58	5	4.65	1.4	4.5699E-05	4.4931E-05
M267	550647.00	4173431.00	90.82	5	4.65	1.4	4.5699E-05	4.4931E-05
M268	550657.00	4173431.00	88.98	5	4.65	1.4	4.5699E-05	4.4931E-05
M269	550667.00	4173431.00	86.77	5	4.65	1.4	4.5699E-05	4.4931E-05
M270	550677.00	4173431.00	83.97	5	4.65	1.4	4.5699E-05	4.4931E-05
M271	550687.00	4173431.00	81.17	5	4.65	1.4	4.5699E-05	4.4931E-05

M272	550697.00	4173431.00	77.68	5	4.65	1.4	4.5699E-05	4.4931E-05
M273	550707.00	4173431.00	74.14	5	4.65	1.4	4.5699E-05	4.4931E-05
M274	550628.00	4173441.00	91.79	5	4.65	1.4	4.5699E-05	4.4931E-05
M275	550637.00	4173441.00	90.24	5	4.65	1.4	4.5699E-05	4.4931E-05
M276	550647.00	4173441.00	88.62	5	4.65	1.4	4.5699E-05	4.4931E-05
M277	550657.00	4173441.00	87.02	5	4.65	1.4	4.5699E-05	4.4931E-05
M278	550667.00	4173441.00	84.97	5	4.65	1.4	4.5699E-05	4.4931E-05
M279	550677.00	4173440.49	82.31	5	4.65	1.4	4.5699E-05	4.4931E-05
M280	550637.00	4173451.00	87.88	5	4.65	1.4	4.5699E-05	4.4931E-05
M281	550647.00	4173449.45	86.77	5	4.65	1.4	4.5699E-05	4.4931E-05





# **Compton High School Reconstruction Project**

## **Air Toxics Health Risk Assessment**

**Prepared for:**

Compton Unified School District  
429 South Oleander Avenue  
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## EXECUTIVE SUMMARY

The Compton Unified School District (District) is proposing to reconstruct the Compton High School (CHS) campus (proposed Project), which would consist of (1) the demolition of all existing buildings, facilities, and athletic fields; (2) the construction of new, modern buildings, facilities, and athletic fields with a design that supports a free-flowing campus; and (3) relocation of the District's Facilities Department and Pupil Services, Enrollment Center, and Special Education offices.

While the District has maintained and renovated the buildings and facilities throughout the years, none of the buildings meets current requirements as set forth by the California Department of Education (CDE) for high school campuses, and some of the buildings are in need of structural and seismic upgrades. Implementation of the proposed Project would provide the District with updated and modern school facilities to meet both current standards and the immediate and long-term educational needs of the community.

As part of the environmental review, an Air Toxics Health Risk Assessment (HRA) has been prepared to satisfy the specific requirements of both CDE and the California Environmental Quality Act (CEQA) to evaluate whether facilities have the potential for generating hazardous and acutely hazardous air emissions within a quarter-mile (1,320-foot) radius of the Project site.

An area reconnaissance was conducted within a quarter-mile radius of the proposed site to identify facilities/process operations, as well as mobile and stationary sources, that have the potential to emit air contaminants. The site is not located within 500 feet of a freeway or busy traffic corridor (fewer than 100,000 Average Annual Daily Traffic). Therefore, an assessment of both short- and long-term exposures from on-road mobile source activity was not performed.

A total of 42 sites were identified within one-quarter mile. Facility information provided by business owners/operators and data collected from the US Environmental Protection Agency (USEPA), California Environmental Protection Agency (CalEPA), and South Coast Air Quality Management District (SCAQMD) were reviewed to assist in the identification of potential emitters. An on-site reconnaissance was then conducted to verify both active and inactive facilities. Based on the site survey and records review, the following seven active sources, all of which are located in the City of Compton, were verified as having the potential to emit hazardous air emissions:

- Sr. Cliff's Texas Style Burritos, 408 W. Alondra Boulevard
- Mom's Burgers, 336 W. Alondra Boulevard
- Rush Burger, 107. E. Alondra Boulevard

- Alondra Oil Inc., 220 W. Alondra Boulevard
- Galindo's Cleaners, 526 W. Alondra Boulevard
- Ace Fuels Inc., 390 W. Compton Boulevard
- Los Angeles County Sheriff's Dept. Facilities Services Bureau, 301 S. Willowbrook Avenue

A 40-year exposure scenario was assessed to identify lifetime health risk values for future staff from each of the sites with respect to the proposed Project. A 4-year exposure scenario was also assessed to identify the health risk values associated with the average student attending the high school in grades 9 through 12. Both scenarios assess potential cancer (carcinogenic) and noncancer (noncarcinogenic) effects from contaminant exposures.

For carcinogenic exposures, the summation of risk totals 1.1 in 100,000 (1.1E-05) for adults (faculty and staff); this exceeds the established threshold of 1 in 100,000 (1.0E-05) for long-term exposure (40 years) for faculty and staff. The risk factor for students is calculated to be 8.4 in 10,000,000 (8.4E-07) for a 4-year exposure, which does not exceed the significance threshold of 1 in 100,000 (1.0E-05). To reduce the exposure of off-site emissions to faculty and staff who may be exposed to emissions that exceed the established threshold, it is recommended that high-efficiency filters (Minimum Efficiency Reporting Value [MERV] of 14 or higher) be installed. The implementation of MERV 14 filters will reduce risk to below the 1.0E-05 threshold.

For noncarcinogenic effects, the hazard index identified for respiratory, kidney, and eye target organs totaled less than 1 both for faculty and staff and for students (9.4E-01 for respiratory system; 5.6E-02 for kidneys; and 2.3E-01 for eye irritation and other effects). As such, the noncarcinogenic effects risk are considered to be within acceptable limits.

Available information collected during the source identification process (e.g., regulatory records review and on-site interviews with business owners/operators) did not reveal the presence of a regulated substance that may present an acute hazard from a process upset and/or accidental release.

Hazardous and/or acutely hazardous air emissions generated from the seven identified facilities within a quarter-mile radius are within the acceptable risk levels and will not pose an actual or potential endangerment to persons (faculty, staff, and students) who attend or work at the proposed school.

## INTRODUCTION

The District is proposing to reconstruct the Compton High School campus, which would consist of (1) the demolition of all existing buildings, facilities, and athletic fields; (2) the construction of new, modern buildings, facilities, and athletic fields with a design that supports a free-flowing campus (proposed Project); and (3) relocation of the District's Facilities Department and Pupil Services, Enrollment Center, and Special Education offices.

While the District has maintained and renovated the buildings and facilities throughout the years, none of the buildings meets current requirements as set forth by the CDE for high school campuses, and some of the buildings are in need of structural and seismic upgrades. Implementation of the proposed Project would provide the District with updated and modern school facilities to meet both current standards and the immediate and long-term educational needs of the community.

## PROJECT LOCATION AND SETTING

The proposed Project is located on an approximately 42-acre site within the City of Compton (City), consisting of the existing CHS campus, other District facilities, and acquisition area (Project Site). As shown in **Figure 1: Regional Location Map**, The Project Site is within the central portion of the City, approximately 1 mile north of State Route 91 (SR 91), 2 miles west of Interstate 710 (I-710), 3 miles east of Interstate 110 (I-110), and 2.5 miles south of Interstate 105 (I-105).

As shown in **Figure 2: Project Location Map**, the Project Site is generally bound by W. Myrrh Street to the north, S. Acacia Avenue to the east, W. Alondra Boulevard to the south, and Compton Creek to the west. The private street S. Oleander Avenue bisects the Project Site, connecting to W. Myrrh Street on the north and W. Alondra Boulevard on the south.

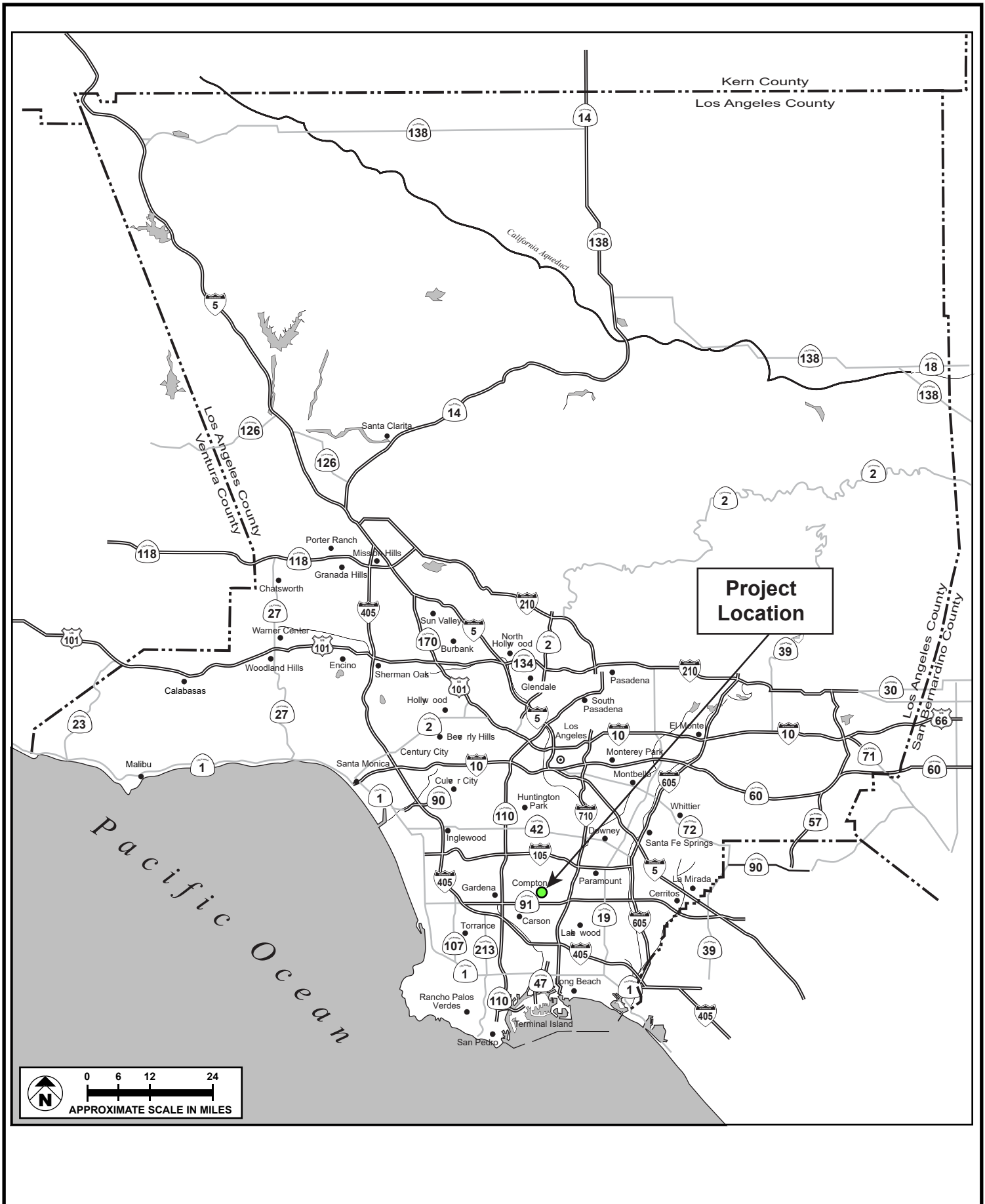


FIGURE 1



SOURCE: Google Earth - 2017

FIGURE 2



## REGULATORY REQUIREMENTS

CDE via the Education Code (EDC) and the Public Resources Code (PRC) have identified requirements that must be addressed regarding potential for health risks from nearby air emitting uses. These include EDC Section 17213(b); PRC Sections 21151.8 (a)(2) and (a)(3); and California Code of Regulations, Title 14, Sections 15186(c)(2) and (c)(3).

EDC Section 17213 (b) states:

*The school district, as the lead agency, as defined in Section 21067 of the Public Resources Code, in preparing the environmental impact report or negative declaration has consulted with the administering agency in which the proposed school site is located, pursuant to Section 2735.3 of Title 19 of the California Code of Regulations, and with any air pollution control district or air quality management district having jurisdiction in the area, to identify both permitted and nonpermitted facilities within that district's authority, including, but not limited to, freeways and other busy traffic corridors, large agricultural operations, and railyards, within one-fourth of a mile of the proposed school site, that might reasonably be anticipated to emit hazardous air emissions, or to handle hazardous or extremely hazardous materials, substances, or waste. The school district, as the lead agency, shall include a list of the locations for which information is sought.*

California Code of Regulations, Title 14, Section 15186(c)(2) requires the same as above.

PRC Section 21151.8 (a)(2) states:

*(a) An environmental impact report shall not be certified, or a negative declaration shall not be approved for a project involving the purchase of a school site or the construction of a new elementary or secondary school by a school district unless all of the following occur:...*

*(2) (A) The school district, as the lead agency, in preparing the environmental impact report or negative declaration has notified in writing and consulted with the administering agency in which the proposed school site is located, pursuant to Section 2735.3 of Title 19 of the California Code of Regulations, and with any air pollution control district or air quality management district having jurisdiction in the area, to identify both permitted and nonpermitted facilities within that district's authority, including, but not limited to, freeways and busy traffic corridors, large agricultural operations, and railyards, within one-fourth of a mile of the proposed school site, that might reasonably be anticipated to emit hazardous emissions or handle hazardous or extremely hazardous substances or waste. The notification by the school district, as the lead agency, shall include a list of the locations for which information is sought.*

*(B) Each administering agency, air pollution control district, or air quality management district receiving written notification from a lead agency to identify facilities pursuant to subparagraph (A) shall provide the requested information and provide a written response to the lead agency within 30 days of receiving the notification. The environmental impact*

*report or negative declaration shall be conclusively presumed to comply with subparagraph (A) as to the area of responsibility of an agency that does not respond within 30 days.*

*(C) If the school district, as a lead agency, has carried out the consultation required by subparagraph (A), the environmental impact report or the negative declaration shall be conclusively presumed to comply with subparagraph (A), notwithstanding any failure of the consultation to identify an existing facility or other pollution source specified in subparagraph (A).*

PRC Section 21151.8(a)(3) states, in part:

*The governing board of the school district makes one of the following written findings:*

*(A) Consultation identified no facilities of this type or other significant pollution sources specified in paragraph (2).*

*(B) The facilities or other pollution sources specified in paragraph (2) exist, but one of the following conditions applies:*

*(i) The health risks from the facilities or other pollution sources do not and will not constitute an actual or potential endangerment of public health to persons who would attend or be employed at the proposed school.*

California Code of Regulations, Title 14, Section 15186(c)(3) requires the same as above.

## **AIR TOXICS HEALTH RISK ASSESSMENT METHODOLOGY**

The Los Angeles Unified School District (LAUSD) Office of Environmental Health and Safety (OEHS) has developed methodology for the preparation of an Air Toxics HRA. This methodology is provided in the LAUSD CEQA Specification Manual dated December 2005 and revised June 2007 (refer to **Appendix A**).<sup>1</sup> This document includes guidance on HRA protocols for permitted, nonpermitted, and mobile sources that might reasonably be anticipated to emit hazardous air emissions and result in potential long-term and short-term health impacts to students and staff at a school site.

The methodology includes the following tasks:

### **Task 1: Identify and Screen Potential Emission Sources**

1. Conduct an area reconnaissance and identify facilities/process operations as well as mobile and stationary sources (e.g. agricultural areas, freeways, rail lines, transportation or distribution centers,

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<sup>1</sup> Los Angeles Unified School District, Office of Environmental Health and Safety, *California Environmental Quality Act Specification Manual*, Appendix J: Health Risk Assessment Protocol (December 2005; rev. June 2007).

delivery stations, etc.) that have a potential to emit air contaminants within a minimum one quarter mile radius of the proposed school site.

2. Obtain a list of permitted facilities located within one-quarter mile of the proposed school site from the South Coast Air Quality Management District (SCAQMD) at the beginning of the HRA process.
3. Obtain relevant public records from any of the necessary agencies, including but not limited to:
  - US Environmental Protection Agency
  - California Air Resources Board
  - California Department of Transportation
  - South Coast Air Quality Management District
  - Administering Agency (e.g., Certified Unified Program Agency)
  - Local Health Department
  - City or County Fire Department

## **Task 2: Characterize Sources**

The standard approach for characterizing sources of potentially hazardous air emissions is to:

1. Obtain information about a potential source (i.e. by interviewing a business operator) then,
2. Use that data to quantitatively calculate the emissions of regulated hazardous substances from that source.

A more thorough description of this process is presented below. In rare cases, a source may emit hazardous material that does not have any regulatory thresholds that have been quantifiably defined (e.g. ultrafine particles associated with major transportation corridors). These sources should be called out in the risk assessment as potentially hazardous, and a qualitative characterization of their emissions presented.

## **Task 3: Predict Air Contaminant Levels**

Information collected in Tasks 1 and 2 above shall be used to predict the ground level concentrations of each emitted compound at the proposed school site. This includes analysis for:

### ***Process Emissions***

Where feasible, the estimation of air concentrations shall be conducted using appropriate air dispersion modeling pursuant to Education Code Section 17213(c)(2)(C) and Health and Safety Code Section

44360(b)(2). Where these are silent, U.S. Environmental Protection Agency (EPA) Office of Air Quality Planning and Standards, or another relevant regulatory agency guidance shall be consulted. The following should be considered to ensure appropriate model selection:

- Terrain (simple, intermediate, complex, etc.)
- Downwash (stack tip, building, etc.)
- Emission source (point, area, volume, etc.)
- Distance from source to receptor and to site (most models are certified to some minimum distance from source to receptor)
- Averaging Period or term of exposure
- Level of accuracy, detail and refinement required (parsing emission rates or selecting hours for emissions to occur, post processing to get averages over specific time windows, etc.)
- Type (accidental, spill, stack, etc.) and duration (intermittent, explosive event, continuous, etc.) of release

Currently, in most cases the EPA's Industrial Source Complex Short-Term (ISCST3) model should be used. Some newer models (e.g., ISC-PRIME, AERMOD, AERMOD-PRIME) will be considered on a case-by-case basis as meteorological data becomes available.

### ***Accidental Release***

The risk and probable impact from worst-case and one alternative-case accidental release scenarios of a hazardous material will be evaluated at a minimum utilizing the guidance from the California Accidental Release Prevention (CalARP) Program and the EPA Risk Management Program Guidance for Offsite Consequence Analysis (OCA). Typically, information related to potential accidental releases is available through a facility's submittal of a Risk Management Plan based upon a significant likelihood of a regulated substance accidental risk pursuant to California Health and Safety Code, Section 25531-25543.3 and California Code of Regulations, Title 19, Division 2, Chapter 4.5 Sections 2735.3-2780.7.

Based on information collected in Tasks 1 and 2 above and other necessary data collected from the site or elsewhere, the assessment shall reference the results of the available offsite consequence analysis (OCA) and report the identified impacts, if any, on the school-based population. This analysis shall include a worst-case and alternative analysis as described in the guidance cited above.

Following discussions with OEHS staff, confirmation of the results of the OCA analysis may be optionally performed using the EPA RMP Comp software. Further analysis may also be requested utilizing more refined modeling software such as ALOHA or ISC. For more refined modeling of acute exposures other

than the RMP Comp method, both 1-hour levels and IDLH values should be evaluated. Appropriate peaking factors should be applied to estimate 30-minute concentrations for IDLH analysis should it not be exceeded for 1-hour concentrations.

## **Task 4: Assessment of Exposure**

### ***Exposure Assumptions***

The HRA report is designed to analyze the incremental health risk that a school occupant may experience by using the facility. As such, the exposure assumptions used in the report estimate the full exposure a school occupant will experience during their lifetime while using district facilities. For example, in each HRA staff is assumed to work at the school for 40 years. Although it is rare for an individual to work at a single facility for a 40-year period, it is not uncommon for an individual to work within the school district at several facilities for longer periods of time. If a 40-year exposure is assumed for staff at each facility, then staff may move from facility to facility without danger of exceeding established risk thresholds. Similarly, student exposure is assumed to last 4 years.

## **Task 5: Health Risk Assessment**

### ***General Risk Assessment Methodology***

Annual daily average GLC's for the worst receptor predicted in Task 3 and exposure assumptions from Task 4 shall be used to determine the cumulative and chronic health impacts to persons who may attend or work at the proposed project site. The assessment shall consider both carcinogenic and non-carcinogenic effects of modeled contaminants through the inhalation pathway.

The assessment procedure shall be based upon Office of Environmental Health Hazard Assessment Guidance Documents and approved methods and models. Where these guidance documents are silent, the methodologies presented in guidance documents from the U.S. Environmental Protection Agency, and the California Environmental Protection Agency, may also be consulted.

### ***Toxicity Criteria***

The chronic and acute toxicity levels are considered in the HRA.

## **LEVELS OF SIGNIFICANCE**

Whenever a project would require (1) the use of chemical compounds that have been identified in SCAQMD Rule 1401, (2) the use of chemical compounds placed on CARB's air toxics list pursuant to Assembly Bill (AB) 1807, the 1983 Air Contaminant Identification and Control Act (Tanner 1983), or (3) the use of chemical compounds placed on the US Environmental Protection Agency's (USEPA's) National Emissions Standards for Hazardous Air Pollutants, an HRA is required by the SCAQMD.

**Table 1: SCAQMD Toxic Air Contaminants Risk Thresholds** lists the SCAQMD’s toxic air contaminant (TAC) incremental risk thresholds for operation of a project. Residential, commercial, office, and institutional (e.g., schools, churches) uses do not utilize substantial quantities of TACs, and these thresholds are typically applicable for new industrial projects. Although not officially adopted by SCAQMD, these thresholds are also commonly used to determine air quality land use compatibility of a project with major sources of TACs.

**Table 1**  
**SCAQMD Toxic Air Contaminants Risk Thresholds**

<b>Risk</b>	<b>Threshold</b>
Maximum Incremental Cancer Risk	≥ 10 in 1,000,000 (1 in 100,000)
Chronic Hazard Index (project increment)	≥ 1.0
Acute Hazard Index (program increment)	≥ 1.0

*Source: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds (March 2015).  
<http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>*

## **TOXIC AIR CONTAMINANTS**

The public’s exposure to those air pollutants classified as TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code (HSC), Section 39655(a), defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code, Section 7412[b]) is considered a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it meets the criteria stated above.

California regulates TACs primarily through AB 1807 and AB 2588, the Air Toxics “Hot Spot” Information and Assessment Act (1987 Connelly). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” (ATCM) for sources that emit the designated TAC. If safe threshold for a substance exists (i.e., a point below which no toxic effect occurs), the control measure must reduce exposure to below that threshold. If no safe threshold exists, the ATCM must incorporate toxics best available control technology to minimize emissions. To date, CARB has established ATCMs for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under AB 2588, under which the air quality management district or air pollution control district quantifies and prioritizes TAC emissions from individual facilities. High-priority facilities are required to perform an HRA and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

As of the last update to the TAC list in December 1999, CARB has designated 244 compounds as TACs.<sup>2</sup> Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

In 1998, CARB identified diesel particulate matter as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

CARB has promulgated the following specific rules to limit TAC emissions:

- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate.

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective*<sup>3</sup> to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome -plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key

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2 California Air Resources Board, *Final Staff Report: Update to the Toxic Air Contaminant List* (December 1999).

3 California Environmental Protection Agency, *Air Quality and Land Use Handbook: A Community Health Perspective* (April 2005).

observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects.

## SOURCE IDENTIFICATION

An area reconnaissance was conducted within a quarter-mile (1,320 feet) radius of the proposed site to identify facilities/process operations as well as mobile and stationary sources that have the potential to emit air contaminants. The site is not located within 500 feet of a freeway or busy traffic corridor (fewer than 100,000 Average Annual Daily Traffic). Therefore, an assessment of both short- and long-term exposures from on-road mobile source activity was not performed. The reconnaissance included 42 sites within a quarter-mile radius which included both active and inactive facilities (refer to **Appendix B**). Facility information provided by business owners/operators and data collected from the USEPA, CalEPA, and SCAQMD were reviewed to assist in the identification of potential emitters. An on-site reconnaissance was then conducted verify both active and inactive facilities. Based on the site survey and records review, the following active sources were verified to potentially emit hazardous air emissions and are shown in **Table 2: Active Facility Locations** and **Figure 3: Active Facility Locations Map**.

**Table 2**  
**Active Facility Locations**

Permit ID	Legal Owner or Operator	Type of Use	Address
UP	Sr. Cliff's Texas Style Burritos	Fast-food restaurant	408 W. Alondra Blvd., Compton, CA
UP	Mom's Burger	Fast-food restaurant	336 W. Alondra Blvd., Compton, CA
71345 <sup>a</sup>	Rush Burger	Fast-food restaurant	107. E. Alondra Blvd., Compton, CA
185262 <sup>b</sup>	Alondra Oil Inc.	Gasoline storage	220 W. Alondra Blvd., Compton, CA
118665 <sup>c</sup>	Galindo's Cleaners	Dry cleaning	526 W. Alondra Blvd., Compton, CA
185608 <sup>d</sup>	Ace Fuels Inc.	Gasoline storage	390 W. Compton Blvd., Compton, CA
138071 <sup>e</sup>	Los Angeles County Sheriff's Dept. Facilities Services Bureau	Gasoline storage	301 S. Willowbrook Ave., Compton, CA

Note: UP = unpermitted use/np permit on file with SCAQMD.

<sup>a</sup> Permit ID 71345: No permit available or on file with SCAQMD.

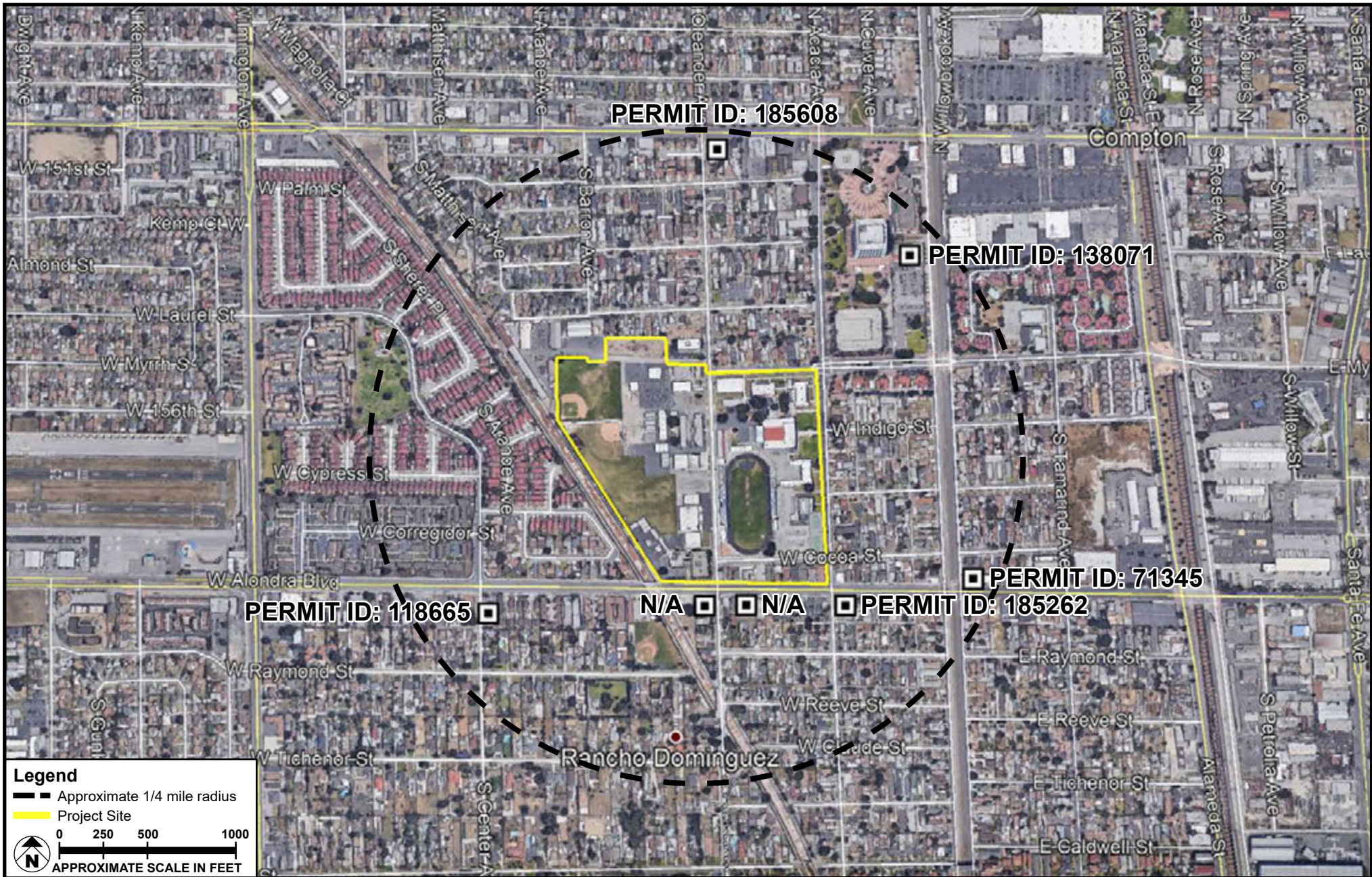
<sup>b</sup> Permit ID 185262: refer to **Appendix C1** for SCAQMD permit.

<sup>c</sup> Permit ID 118665: refer to **Appendix C2** for SCAQMD permit.

<sup>d</sup> Permit ID 185608: refer to **Appendix C3** for SCAQMD permit.

<sup>e</sup> Permit ID 138071: refer to **Appendix C4** for SCAQMD permit.





SOURCE: Google Earth - 2018

FIGURE 3

## SOURCE CHARACTERIZATION

Contaminant release information and associated chemical species were identified through a review of available documentation for each source referenced above.

To the degree practical, all contaminant emissions generated from each source location were considered in the analysis. The limiting factor for the inclusion of a compound was the availability of published exposure factors and other toxicity data enabling risks to be quantified and, where appropriate, target organs identified. A list of emitted compounds for each source is outlined in **Table 3: Air Emissions and Key Pollutants Emitted from Each Facility**.

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**Table 3**  
**Air Emissions and Key Pollutants Emitted from Each Facility**

Legal Owner or Operator (as listed in SCAQMD Database)	Key Pollutants
Sr. Cliff's Texas Style Burritos	Volatile organic compounds and air toxics
Mom's Burgers	Volatile organic compounds and air toxics
Rush Burger	Volatile organic compounds and air toxics
Alondra Oil Inc.	Gasoline Vapors
Galindo's Cleaners	Petroleum (transfer process) Perchloroethylene (transfer process)
Ace Fuels Inc.	Gasoline vapors
Los Angeles County Sheriff's Dept. Facilities Services Bureau	Gasoline vapors

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### Charbroilers

Restaurant units (Sr. Cliff's Texas Style Burritos, Mom's Burgers and Rush Burger) that require the use of a charbroiler are required to comply with all applicable SCAQMD rules and regulations. Specifically, SCAQMD Rule 1138 (Restaurant Operations) would result in substantially reduced potential impacts in reducing particulate matter (PM) and volatile organic compounds (VOC). Rule 1138 states operations of existing chain-driven charbroilers are prohibited, unless it is equipped and operated with a catalytic oxidizer control device, and the combination charbroiler/catalyst has been tested and certified by the Executive Officer.

### Gasoline Vapors

A major source of evaporative emissions is the filling of underground gasoline storage tanks at service and fueling stations (Alondra Oil Inc., Ace Fuels Inc., and Los Angeles County Sheriff's Dept. Facilities Services Bureau). Gasoline is usually delivered to service and fueling stations in 30,000-liter (8,000-gallon) tank

trucks or smaller account trucks. Emissions are generated when gasoline vapors in the underground storage tank are displaced to the atmosphere by the gasoline being loaded into the tank. As with other loading losses, the quantity of loss in service and fueling station tank filling depends on several variables that include the method and rate of filling; the tank configuration; and the gasoline temperature, vapor pressure and combustion. An average emission rate of submerged filling is 880 milligrams per liter (mg/l) of transferred gasoline, and the rate for splash filling is 1,380 mg/l transferred gasoline.<sup>4</sup>

Another source of vapor emissions from service and fueling stations is underground tank breathing. Breathing losses occur daily and are attributable to gasoline evaporation and barometric pressure changes. The frequency with which gasoline is withdrawn from the tank, allowing fresh air to enter to enhance evaporation, also has a major effect on the quantity of these emission. An average breathing emission rate is 120 mg/l of throughput.<sup>5</sup>

Service and fueling station refueling activity also produces evaporative emissions. Vehicle-refueling emissions come from vapors displaced from the automobile tank by dispensed gasoline and from spillage. The quantity of displaced vapors depends on gasoline temperature, auto tank temperature, gasoline RVP, and dispensing rate. It is estimated that the uncontrolled emissions displaced during vehicle refueling average 1,320 mg/l of dispensed gasoline. Spillage loss is made up of contributions from prefill and postfill nozzle drip, as well as from spit-back and overflow from the vehicle's fuel tank filler pipe during filling. An average spillage loss is 80 mg/l of dispensed gasoline.<sup>6</sup>

## Dry Cleaning

The dry-cleaning industry can be divided into 3 sectors: coin-operated facilities, commercial operations (e.g., Galindo's Cleaners), and industrial cleaners. Commercial operations, which are predominantly found within the Project vicinity, are small neighborhood or franchise dry-cleaning shops that clean soiled apparel for the consumer. Generally, perchloroethylene and petroleum solvents are used in commercial operations. A typical commercial cleaner operates a 30- to 60-pound capacity washer/extractor and an equivalent size reclaiming. Typically, a commercial cleaner emits less than 1 ton per year.<sup>7</sup>

The solvent itself is the primary emission from dry-cleaning operations. Solvent is given off by washer, dryer, solvent still, muck cooker, still residue, and filter muck storage areas, as well as by leaky pipes, flanges, and pumps.

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4 AP-42, Section 5.2: Transportation and Marketing of Petroleum Liquids, accessed September 2018, <https://www3.epa.gov/ttnchie1/ap42/ch05/final/c05s02.pdf>.

5 AP-42 Section 5.2, Transportation and Marketing of Petroleum Liquids. 8

6 AP-42 Section 5.2, Transportation and Marketing of Petroleum Liquids. 8

7 AP-42 Section 5.2, Transportation and Marketing of Petroleum Liquids.

## **EXPOSURE QUANTIFICATION**

To assess the impact of emitted compounds on individuals who may work and/or attend classes at the proposed school facility, air quality modeling utilizing the Industrial Source Complex-Short Term (ISCST3) model was performed. This model, a steady-state Gaussian plume model, is utilized by CalEPA for estimating ground-level impacts from point and fugitive sources in simple and complex terrain. For stationary sources, appropriate model settings were employed to characterize identified release parameters for each emitting source (i.e., point, area, and volume).

The model requires various input parameters, including chemical emission data and local meteorology. Meteorological data from the SCAQMD's Hawthorne Airport monitoring station were used to represent local weather conditions and prevailing winds.

The modeling analysis also considered the spatial distribution of each emitting source in relation to the proposed school site. To accommodate the model's Cartesian grid format, direction-dependent calculations were obtained by identifying the universal transverse mercator coordinates for each source location.

To determine contaminant impacts during school hours, the model's scalar option was invoked to predict ground-level concentrations for emissions generated between the hours of 8:00 AM and 4:00 PM.

## **RISK CHARACTERIZATION**

### **Carcinogenic Chemical Risks**

Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below no risks exist). Any exposure, therefore, will have some associated risk. As a result, the State of California has established a threshold of 1 in 100,000 (1.0E-05) as a level posing no significant risk for exposures to carcinogens regulated under the Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

Health risks associated with the exposure to carcinogenic compounds at the proposed school facility can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. Under a deterministic approach (i.e., point-estimate methodology), the cancer risk probability is determined by multiplying the chemical's annual concentration by its unit risk factor (URF). The URF is a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It represents an upper-bound estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of 1 microgram per cubic meter ( $\mu\text{g}/\text{m}^3$ ) over a 70-year lifetime.

Notwithstanding, recent guidance from the CalEPA, the Office of Environmental Health Hazard Assessment (OEHHA) recommends a refinement to the standard point-estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations, such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of inverse dose expressed in milligrams per kilogram per day (mg/kg/day)<sup>-1</sup> to derive the cancer risk estimate.

Therefore, to accommodate the unique exposures associated with the proposed school-based population, the following dose algorithm was utilized:

$$CDI = (C_{air} \times EF \times ED \times IR) / (BW \times AT)$$

Where:

CDI = chronic daily intake (mg/kg/day)

C<sub>air</sub> = concentration of contaminant in air (mg/m<sup>3</sup>)

EF = exposure frequency (days/year)

ED = exposure duration (years)

IR = inhalation rate (m<sup>3</sup>/day)

BW = body weight (kg)

AT = averaging time (days)

To represent the unique characteristics of the school-based population, the assessment employed the USEPA's guidance to develop viable dose estimates based on reasonable maximum exposures (RME). RME's are the highest exposure that is reasonably expected to occur for a given receptor population. As a result, lifetime risk values for the student population were adjusted account for an exposure duration of 180 days per year for 4 years. To assess staff-related risk, school-based exposures were adjusted to account for an employment duration of 240 days per year for 40 years. This timeline is considered appropriate for potential long-term exposures to both certificated and classified personnel and is consistent with workplace exposures established under Proposition 65.

Corresponding cancer potency factors for carcinogens considered in this assessment. Are provided in **Appendix D**, Tables A1 and A2, Columns f-g, present the unit risk factors (URFs). The cancer risk attributed to each compound and summation of those risks are presented in **Appendix D**, Tables A1 and A2, Column i. As shown, these values for a 40-year exposure to faculty and staff (1.1E-05) exceeds the significance threshold of 1 in 100,000 (1.0E-05); the 4-year exposure to students in grade 9 through 12 (8.4E-07) do not exceed the significance threshold.

## Noncarcinogenic Chemical Risks

An evaluation of the potential noncancer effects of chronic chemical exposures was also conducted (refer to **Appendix D**). Under the point-estimate approach, adverse health effects are evaluated by comparing the concentration of each compound with the appropriate Reference Exposure Level (REL). Available RELs presented in the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*<sup>8</sup> were considered in this assessment. The RELs' corresponding reference-dose values listed were used in the evaluation of chronic noncarcinogenic exposures. For chronic noncarcinogenic effects, the hazard index identified for the respiratory, kidney, and eye target organs totaled less than 1, both for faculty and staff and for students, respectively, as shown in **Table 4: Noncarcinogenic Hazards/Toxicological Endpoints**.

**Table 4**  
**Noncarcinogenic Hazards/Toxicological Endpoints**

	Respiratory System	Kidneys	Eye Irritation/ Other Effects
Total Risk	9.4E-01	5.6E-02	2.3E-01

Refer to **Appendix D**.

## Accidental Releases

Hazardous material accidental risks are determined through an assessment conducted under the auspices of the CalARP Program. Information related to potential accidental releases is available through a facility's submittal of a Risk Management Plan based on a significant likelihood of a regulated substance accidental risk, pursuant to HSC, Article 2, Section 25534. The CalARP Program, established by the EPA, applies to a wide variety of facilities that contain regulated substances and aims to prevent accidental releases of hazardous materials into the environment through adoption of proper storing, containing, and handling procedures. As a result, should a stationary source employ a covered process utilizing more than a threshold quantity of a regulated substance,<sup>9</sup> a subsequent determination is required to comply with the provisions of the federal Accidental Release Prevention program (Title 40, Code of Federal Regulations, Part 68) and related requirements of the State pursuant to Article 2, Chapter 6.95 of the HSC.

8 California Air Resources Board, *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*, accessed October 2018, <https://www.arb.ca.gov/toxics/healthval/healthval.htm>.

9 Each regulated substance has its own threshold quantity and is required to comply with the appropriate federal ARP and related State regulations.

Available information collected during the source identification process (e.g., SCAQMD permit review and site reconnaissance and source verification) did not reveal the presence of a regulated substance that may present an acute hazard from a process upset and/or accidental release.

## RECOMMENDATIONS

With respect to cancer risk, any nonzero concentration of a carcinogen represents an increased risk of developing cancer. As explained above, carcinogenic values for a 40-year exposure to faculty and staff exceed the significance threshold of 1 in 100,000 (1.0E-05).

To minimize any potential adverse health effects associated with exposure of future faculty and staff, the following design features are recommended:

- Install, operate, and maintain a heating, air conditioning, and ventilation system that uses high-efficiency filters with a Minimum Efficiency Reporting Values (MERV) 14 or higher for the school.

Limiting particulate infiltration will be accomplished by installing and maintaining air filtration systems with efficiencies of MERV 14 or better as defined by the American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 52.2.<sup>10</sup> High-efficiency (MERV 14–16 or higher) pleated particle filters for uses are generally considered the most effective approach to filtration because these filters can remove very small particles without emitting ozone, formaldehyde, or other harmful byproducts. Such high-efficiency filtration can reduce indoor PM<sub>2.5</sub> and ultrafine particle levels by up to 90 percent (MERV 16) relative to incoming outdoor levels when doors and windows are kept mostly closed. However, only those particles in the airstream actually passing through the filter are removed. Any opening of windows or doors for at least part of the day would affect the pollutant reduction attained through the use of high-efficiency filters. **Table 5: Reduced Estimated Inhalation Cancer Risk to Faculty and Staff (40-Year Exposure)** identifies the reduction in risk associated with incorporation of MERV 14 through MERV 16 filters when windows are open 25 percent, 50 percent, and 75 percent of the time. Implementation of MERV filters will reduce risk exposure to faculty and staff to below 1 in 100,000 (1.0E-05).

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**10** ASHRAE Standard 52.2 is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document titled "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size (ANSI/ASHRAE Standard 52.2-2007 including ANSI/ASHRAE Addendum b to ANSI/ASHRAE Standard 52.2-2007) (2007).

**Table 5**  
**Reduced Estimated Inhalation Cancer Risk to Faculty and Staff (40-Year Exposure)**

Receptor	MERV 14	MERV 15	MERV 16
Windows open 25 percent of the time	9.3E-06	9.19E-06	9.08E-06
Windows open 50 percent of the time	7.59E-06	7.38E-06	7.16E-06
Windows open 75 percent of the time	5.59E-06	5.57E-06	5.25E-06
Windows open 100 percent of the time	4.18E-06	3.75E-06	3.33E-06

*Note: See Appendix D for calculations.*

## CONCLUSIONS

For carcinogenic exposures, the summation of risk totals 1.1 in 100,000 (1.1E-05) for adults (faculty and staff); this exceeds the established threshold of 1 in 100,000 (1.0E-05) for long-term exposure (40 years) for faculty and staff. The risk factor for students is calculated to be 8.4 in 10,000,000 (8.4E-07) for a 4-year exposure, which does not exceed the significance threshold of threshold of 1 in 100,000 (1.0E-05). To reduce the exposure of off-site emissions to faculty and staff who may be exposed to emissions that exceed the established threshold, it is recommended that high-efficiency filters with MERV 14 or higher) be installed. The implementation of MERV 14 filters will reduce risk exposure to below the 1.0E-05 threshold; this would also be dependent on the amount of time windows or doors are open.

For noncarcinogenic effects, the hazard index identified for respiratory, kidney, and eye target organs totaled less than 1 both for faculty and staff and for students (9.4E-01 for respiratory system; 5.6E-02 for kidneys; and 2.3E-01 for eye irritation and other effects). As such, the noncarcinogenic effects risk are considered to be within acceptable limits.

Available information collected during the source identification process (e.g., regulatory records review and on-site interviews with business owners/operators) did not reveal the presence of a regulated substance that may present an acute hazard from a process upset and/or accidental release.

Hazardous and/or acutely hazardous air emissions generated from the seven identified facilities within a quarter-mile radius are within the acceptable risk levels and will not pose an actual or potential endangerment to persons (faculty, staff, and students) who attend or work at the proposed school.



**APPENDIX A**

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**Health Risk Assessment Protocol**



# **CALIFORNIA ENVIRONMENTAL QUALITY ACT SPECIFICATION MANUAL**

**Los Angeles Unified School District  
Office of Environmental Health & Safety**

**December 2005  
Revised June 2007**

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# **Appendix J**

*Health Risk Assessment Protocol*



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## **AIR TOXICS HEALTH RISK ASSESSMENT (HRA)**

### **SCOPE OF WORK**

June 2007

#### **Purpose**

To characterize all permitted, non-permitted, and mobile sources located within a minimum one-quarter mile radius of a proposed school site that might reasonably be anticipated to emit hazardous air emissions and determine the potential long-term or short-term endangerment to the health of persons who may attend and/or work at the proposed project site.

#### **Supplied Material**

The Office of Environmental Health and Safety (OEHS) will provide a site map of the proposed school site along with a description of its intended use. OEHS will also provide template text and emission rate calculations (see electronic attachment) for the Health Risk Assessment (HRA) that will be modified by either OEHS or the consultant for each specific site. A copy of all relevant statutes, legislation, and regulations will be provided upon request. Lastly, a workshop for all HRA consultants will be arranged that will provide more detailed procedures and an opportunity to raise issues not specifically addressed in this document.

#### **Work to be Completed by Consultant**

The consultant is to complete the activities discussed in Tasks 1 through 6 and provide requested deliverables. In general, the risk assessment methodology should follow that provided in the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spot Guidance. The following protocol provides specific modifications or clarifications to that guidance as it pertains to HRA's conducted for the Los Angeles Unified School District (LAUSD). Where this protocol and regulatory guidance is silent, the consultant shall discuss alternatives with OEHS staff.

## **Task 1: Identify and Screen Potential Emission Sources**

1. Conduct an area reconnaissance and identify facilities/process operations as well as mobile and stationary sources (e.g. agricultural areas, freeways, rail lines, transportation or distribution centers, delivery stations, etc.) that have a potential to emit air contaminants within a minimum one quarter mile radius of the proposed school site.
2. Obtain a list of permitted facilities located within one-quarter mile of the proposed school site from the South Coast Air Quality Management District (SCAQMD) at the beginning of the HRA process.
3. Obtain relevant public records from any of the necessary agencies, including but not limited to:
  - U.S. Environmental Protection Agency
  - California Air Resources Board
  - California Department of Transportation
  - South Coast Air Quality Management District
  - Administering Agency (e.g., Certified Unified Program Agency)
  - Local Health Department
  - City or County Fire Department

## **Task 2: Characterize Sources**

The standard approach for characterizing sources of potentially hazardous air emissions is to:

1. Obtain information about a potential source (i.e. by interviewing a business operator) then,
2. Use that data to quantitatively calculate the emissions of regulated hazardous substances from that source.

A more thorough description of this process is presented below. In rare cases, a source may emit hazardous material that does not have any regulatory thresholds that have been quantifiably defined (e.g. ultrafine particles associated with major transportation corridors). These sources should be called out in the risk assessment as potentially hazardous, and a qualitative characterization of their emissions presented.

### **2.1 INTERVIEWS**

The first step in characterizing sources is obtaining emission source-specific information. The following steps broadly outline the type of data to be collected from each source. Supplementary information to the following list should be collected based on the professional judgment of the consultant.

1. During onsite interviews with *permitted* and *non-permitted* facilities, identify contaminants emitted from each discrete facility process/operation. To the degree practical, each potentially hazardous emitted compound shall be identified and considered in the health risk assessment. For *mobile* sources, obtain usage information

(e.g. daily train traffic, annual average daily traffic counts, etc.) from an appropriate authority/operator.

2. For all source types (permitted, non-permitted, mobile), determine the hours of operation of the emitting sources. In general, only emissions occurring during regular school occupation hours (e.g. 8 a.m. to 5 p.m.) will be considered for the risk assessment.
3. For all source types, determine the potential intensity of emissions (e.g. quantity of toxic materials used per day, quantity of toxic materials stored onsite, speed of vehicles, etc.). Where applicable, obtain Material Safety Data Sheets (MSDS) for potential emitted compounds from each facility.
4. For all source types, determine geometry of emissions (e.g. configuration of facility, dimensions of source, stack height, etc.).
5. For all source types, obtain any other information that may be useful when calculating health risk (e.g. stack exit velocity, stack exit temperature, operational limitations of equipment, etc.).

In the event that a business owner is uncooperative with the consultant or if a potential OCA is required, OEHS staff should be consulted immediately to determine a valid approach to determine how to proceed.

## 2.2 CALCULATIONS

The second step for characterizing sources is to calculate the emission rate for each specific source during school occupation hours. The attached emission calculations worksheets can be used as a guide; however, in consultation with OEHS staff, each consultant should use their professional judgment to modify these equations to best fit each source.

Each source worksheet shall include: all relevant calculations illustrating how the emission factor was obtained, a brief description of how each facility was characterized, how source parameters were obtained, and references for each equation and/or parameter used in the emission calculations. The information in the report should be sufficient to allow all calculations to be independently replicated. A summary table showing all relevant information used to determine the emission factors should be provided in each report. An example is provided on Table 1 following this document. Emission factors can be obtained from, but not limited to, the following references:

- U.S. Environmental Protection Agency, 1995. *Compilation of Air Pollutant Emission Factors: Volume I Stationary Point and Area Sources. AP-42 (Fifth Edition)*
- California Air Resources Board, 1997. *Emission Inventory Procedural Manual: Volume III Methods for assessing Area Source Emissions.*
- California Air Resources Board, 2007. *EMFAC2007* or *OFFROAD2007*
- California Air Resources Board, 2004-2007. Various rail yard HRA's

### **Task 3: Predict Air Contaminant Levels**

Information collected in Tasks 1 and 2 above shall be used to predict the ground level concentrations of each emitted compound at the proposed school site.

#### **3.1 MODEL SELECTION**

##### *3.1.1 Process Emissions*

Where feasible, the estimation of air concentrations shall be conducted using appropriate air dispersion modeling pursuant to Education Code §17213(c)(2)(C) and Health and Safety Code §44360(b)(2). Where these are silent, U.S. Environmental Protection Agency (EPA) Office of Air Quality Planning and Standards, or other relevant regulatory agency guidance shall be consulted. The following should be considered to ensure appropriate model selection:

- Terrain (simple, intermediate, complex, etc.)
- Downwash (stack tip, building, etc.)
- Emission source (point, area, volume, etc.)
- Distance from source to receptor and to site (most models are certified to some minimum distance from source to receptor)
- Averaging Period or term of exposure
- Level of accuracy, detail and refinement required (parsing emission rates or selecting hours for emissions to occur, post processing to get averages over specific time windows, etc.)
- Type (accidental, spill, stack, etc.) and duration (intermittent, explosive event, continuous, etc) of release

Currently, in most cases the EPA's Industrial Source Complex Short-Term (ISCST3) model should be used. Some newer models (e.g., ISC-PRIME, AERMOD, AERMOD-PRIME) will be considered on a case-by-case basis as meteorological data becomes available and may be used with approval of OEHS staff.

##### *3.1.2 Accidental Release*

The risk and probable impact from worst-case and one alternative-case accidental release scenarios of a hazardous material will be evaluated at a minimum utilizing the guidance from the California Accidental Release Prevention (CalARP) Program and the EPA Risk Management Program Guidance For Offsite Consequence Analysis (OCA). Typically, information related to potential accidental releases is available through a facility's submittal of a Risk Management Plan based upon a significant likelihood of a regulated substance accidental risk pursuant to California Health and Safety Code, §25531-25543.3 and California Code of Regulations, Title 19, Division 2, Chapter 4.5 Sections 2735.3-2780.7.

Based on information collected in Tasks 1 and 2 above and other necessary data collected from the site or elsewhere, the assessment shall reference the results of the available offsite consequence analysis (OCA) and report the identified impacts, if any, on the school-based



population. This analysis shall include a worst-case and alternative analysis as described in the guidance cited above.

Following discussions with OEHS staff, confirmation of the results of the OCA analysis may be optionally performed using the EPA RMP Comp software. Further analysis may also be requested by OEHS staff utilizing more refined modeling software such as ALOHA or ISC. For more refined modeling of acute exposures other than the RMP Comp method, both one-hour levels and IDLH values should be evaluated. Appropriate peaking factors should be applied to estimate 30 minute concentrations for IDLH analysis should it not be exceeded for one-hour concentrations.

## **3.2 MODEL PARAMETERS**

### *3.2.1 Model Geography*

All effort should be made to ensure that the geographic settings of the model accurately reflect real world conditions. This includes, but is not limited to, the following parameters.

1. Sources and receptors should be placed so as to most accurately represent real world conditions as possible within the model coordinate system.
2. The coordinate system used in the model should be WGS84. A datum/ellipsoid other than WGS84 may be used on a case-by-case basis after consultation with OEHS staff.
3. Spacing of mobile volume sources should be close enough so as to remove localized aberrations from influencing ground level concentrations determined onsite.
4. In setting the receptor grid, the consultant shall consider if the site is likely to have significant differences in concentration of the modeled chemicals (more likely to happen in the near field). If so, the grid size or spacing of both receptors and sources should allow reasonable resolution of the impacts of the changing concentration across the site.

### *3.2.2 Stationary Sources*

Consultants should use standard guidance provided by EPA, OEHHA, and AQMD when determining model parameters for stationary sources. OEHS staff should be consulted in the event that a non-industry standard approach is required.

### *3.2.3 Mobile Sources*

As no standard guidance exists for mobile sources, all methodologies must be explicitly approved by OEHS staff prior to use. During the HRA workshop, an example methodology will be presented for several different mobile source types.

### *3.2.4 Meteorological Data*

When called for by the model and the guidance documents, sequentially processed meteorological data from the South Coast Air Quality Management District shall be employed to represent local weather conditions and prevailing winds and a wind rose shall be included in

the final report. Other sources of met data shall be identified to OEHS staff for consideration on a case-by-case basis.

### **3.3 MODEL OUTPUT**

#### *3.3.1 Carcinogenic and Non-carcinogenic compounds*

The model output will provide Ground Level Concentrations (GLC) at discrete receptors on the site. For carcinogenic and non-carcinogenic exposures, the highest annual average GLC will be identified for each source. As a preliminary conservative screening approach, the highest GLC's for each source will be used in the health risk assessment (Task 4). If the subsequent health risk is found to be significant, and after consultation with OEHS staff, a more refined estimate of the GLC may be determined by grouping all sources emitting the same contaminant, and determining the collective highest GLC at the single worst receptor location. When this approach is taken, the consultant will provide a breakdown of the contribution of each source to this aggregated GLC.

#### *3.3.2 Criteria Pollutants*

For projects located less than 500 feet of a roadway that exceeds an annual average daily traffic (AADT) count of 100,000 vehicles, or 50,000 vehicles in a rural area, an evaluation of acute health effects from both vehicle exhaust and re-entrained road dust shall be conducted. In consultation with OEHS staff, other sources of criteria pollutants may also be modeled if they are expected to present a locally significant effect on the site.

Localized impacts shall be based upon the attainment status of the pollutant within the defined source-receptor area (SRA). For attainment pollutants, the predicted concentrations shall be added to identified background levels to determine their potential to cause or contribute to a violation of the applicable ambient air quality standard (AAQS). Background concentrations shall be based upon the highest measured concentration for the last three (3) years of available data from the monitoring station nearest the proposed project site.

For non-attainment pollutants, the threshold concentration shall be based upon the identified pollutant concentration required to contribute to the degradation of local air quality by producing a measurable change in ambient air concentrations. These values are currently presented in the SCAQMD's Rule 1303, Table A-2, and are duplicated in section 5.3.1 of this document.

#### *3.3.3 Odors*

For projects that are located in close proximity to sources that may emit nuisance odors, an optional odor analysis should be performed after consultation with OEHS staff. As odors typically are experienced in a shorter interval than one hour, peaking factors must be used to adjust the one-hour concentrations output by the model software to 1, 2, or 3-minute concentrations. Peaking factors and emission factors should be discussed with OEHS staff prior to modeling of potential odor impacts.

## **Task 4: Assessment of Exposure**

### **4.1 EXPOSURE ASSUMPTIONS**

The HRA report is designed to analyze the incremental health risk that a school occupant may experience by using the facility. As such, the exposure assumptions used in the report estimate the full exposure a school occupant will experience during their lifetime while using district facilities. For example, in each HRA staff is assumed to work at the school for 40 years. Although it is rare for an individual to work at a single facility for a 40-year period, it is not uncommon for an individual to work within the school district at several facilities for longer periods of time. If a 40-year exposure is assumed for staff at each facility, then staff may move from facility to facility without danger of exceeding established risk thresholds. Similarly, student exposure is assumed to last 13 years for each school. Though no school operates over 13 grades, this exposure assumption assures that no student “uses up” their allowable risk at a single school site.

Tables 2-6 following this document present the exposure assumptions to be used in all HRA’s.

### **4.2 MODEL EXPOSURE ADJUSTMENTS**

Due to limitations in the ISC modeling software, it is difficult to determine annual average GLC’s (from Task 3.3) for time periods other than 24 hours. Because school occupants typically spend only 9 hours at school<sup>1</sup> (8 am to 5 pm), adjustments to the exposure assumptions must be made. To account for this variation, the model’s scalar function should be invoked to allow for full emissions during school hours, and no emissions during non-school hours. The resulting annual daily average GLC will underestimate the true predicted concentration by 2.67 times (24/9) as the software automatically averages the GLC’s over 8760 hours (365 days x 24 hours). To account for this underestimation, a full 24 hours of inhalation is assumed for all school occupants. This 24-hour inhalation overestimates the typical 9-hour exposure, thus canceling out any effects of the GLC underestimation (due to the linearity of the health risk calculations).

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<sup>1</sup>As described in:

1) OEHHA Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites, 2004.

2) Descriptive Statistics Tables from a Detailed Analysis of the National Human Activity Pattern Survey Data, 1996.

## **Task 5: Health Risk Assessment**

### **5.1 GENERAL RISK ASSESSMENT METHODOLOGY**

Annual daily average GLC's for the worst receptor predicted in Task 3 and exposure assumptions from Task 4 shall be used to determine the cumulative and chronic health impacts to persons who may attend or work at the proposed project site. The assessment shall consider both carcinogenic and non-carcinogenic effects of modeled contaminants through the inhalation pathway.

The assessment procedure shall be based upon Office of Environmental Health Hazard Assessment Guidance Documents and approved methods and models. Where these guidance documents are silent, the methodologies presented in guidance documents from the U.S. Environmental Protection Agency, and the California Environmental Protection Agency, may also be consulted.

### **5.2 TOXICITY CRITERIA**

Tables 7-10 following this document list the chronic and acute toxicity levels to be considered in each HRA. While these tables should be used as a template, the consultant should update this table (and references) as new standards are promulgated.

### **5.3 LEVELS OF SIGNIFICANCE**

#### *5.3.1 Quantified Levels of Significance*

Table 11 following this document describes the quantifiable levels of significance defined by SCAQMD.

#### *5.3.2 Unquantified Levels of Significance*

Although most toxic air contaminants have defined thresholds, emerging science may identify contaminants of concern that do not yet have established regulatory levels. These contaminants may still pose a significant health risk to site occupants, and should be called out as such in the HRA. These include, but are not limited to:

- Odorous contaminants. Although lacking specific thresholds defined by SCAQMD, the American Industrial Hygiene Association (AIHA) has published multiple lists<sup>2</sup> that may be consulted after discussion with OEHS staff.
- Ultrafine particulate matter. Emerging science has found strong correlations between adverse health effects and proximity to major sources of ultrafine particulate matter (such as major transportation corridors). Although no toxicity data or emissions factors (as

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<sup>2</sup> Ruth, J., Odor Thresholds and Irritant Levels of Several Chemical Substances: A Review. 1986  
AIHA, Odor Thresholds for Chemical with Established Occupational Health Standards. 1989

they are not measured by mass, but by particle count) are available for ultrafines, CalEPA recommends keeping sensitive receptors at least 500 feet from freeways. Furthermore, data<sup>3</sup> indicates that concentrations of ultrafine particulate matter diminish to background levels within ~500 feet of a freeway. As such, if a major source of ultrafine particulate matter is discovered near a school site, the consultant should discuss the potential significance with OEHS staff.

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<sup>3</sup> Zhu, Y., et al., Study of Ultrafine Particles near a Major Highway with Heavy-Duty Diesel Traffic. 2002

## **Task 6: Preparation of Assessment Report**

The consultant shall present all relevant data, information, and calculations for facility and contaminant identification, source characterization, emission inventory and modeling, and chronic and cumulative health risk results in a standardized assessment report format. Included in the report, the consultant will provide a figure illustrating the school site location as well as the location of all sources of air emissions utilizing a recent aerial photograph as a base map. In addition, the final model files and emissions calculation spreadsheets shall be provided electronically to OEHS staff. The information in the report should be sufficient to allow all calculations to be independently replicated.

### **Project Deliverables**

After completion of Tasks 1 through 6, provide a draft copy of the assessment report including all model files, calculations, and text. After approval of the draft report by listed points of contact, submit two (2) bound copies, and one electronic copy of the amended final assessment report to client. All final reports must be signed by an appropriate California professional (P.E., REA II).

LAUSD expects that activities related to Tasks 1 through 5 should be routine at most locations that are surrounded by common air emission sources (e.g., gasoline station, auto body shops, dry cleaners, etc.). Therefore, a six to eight week completion time (after NTP) is anticipated for locations with limited numbers of air emission sources.

**Table 1**

Facilities	Sources	Method of source identification	Speciated chemicals	Chemical selection criteria	Emission factors determination
<b>List</b>	<b>List</b>	<b>ID source, e.g., from database, by ID in walk-through, etc.</b>	<b>list of specific chemicals for each facility/operation</b>	<b>Source of information and basis of selecting COCs, permitted chemicals, typical for operation or business, owner response to inquiry, etc.; and identification of informational source for the emission factor</b>	<b>Emission factor associated with each specific chemical</b>
<b>Fac 1</b>	<b>Gen'l Operations</b>	<b>data base - CARB</b>	<b>Chem 1</b>	<b>typical use list, ref</b>	<b>3.4 g/s</b>
			<b>Chem 2</b>	<b>typical use list, ref</b>	<b>1.4 g/s</b>
	<b>Spray booth</b>		<b>Chem 3</b>	<b>permit, ref</b>	<b>20 g/s</b>
			<b>Chem 4</b>	<b>permit, ref</b>	<b>3.7g/s</b>
			<b>Chem 5</b>	<b>MSDS</b>	<b>1.4 g/s</b>
	<b>Chrome Plating</b>		<b>Chem 6</b>	<b>permit, ref</b>	<b>20 g/s</b>
			<b>Chem 7</b>	<b>permit, ref</b>	<b>3.7g/s</b>
<b>Fac 2</b>	<b>Wood refinishing</b>	<b>letter &amp; interview</b>	<b>Chem 1</b>	<b>owner inform</b>	<b>100 lb/hr</b>
		<b>contact: ref file</b>	<b>Chem 2</b>	<b>MSDS</b>	<b>1.4 g/s</b>
		<b>contact: ref file</b>	<b>Chem 3</b>	<b>MSDS</b>	<b>20 g/s</b>
		<b>contact: ref file</b>	<b>Chem 4</b>	<b>MSDS</b>	<b>3.7g/s</b>
<b>Fac 3, etc</b>	<b>Off Road Vehicle 1</b>	<b>Visual, Owner ID</b>	<b>Chem 1</b>	<b>From Model     (see Table XX)</b>	<b>1.4 g/s</b>
			<b>Chem 2</b>	<b>From Model     (see Table XX)</b>	<b>20 g/hr</b>
	<b>Off Road Vehicle 2</b>	<b>Permit</b>	<b>Chem 5</b>	<b>From Model     (see Table XX)</b>	<b>23 g/s</b>
			<b>Chem 6</b>	<b>From Model     (see Table XX)</b>	<b>24g/mile</b>
			<b>Chem 7</b>	<b>From Model     (see Table XX)</b>	<b>24g/mile</b>
<b>Alameda</b>	<b>Alameda Corridor</b>	<b>Permit</b>	<b>Chem 1</b>	<b>From Roseville Railyard study, see table XX</b>	<b>50g/mile</b>
<b>Corridor</b>			<b>Chem 2</b>	<b>From Roseville Railyard study, see table XX</b>	<b>87 g/s</b>
			<b>Chem 3</b>	<b>From Roseville Railyard study, see table XX</b>	<b>24g/mile</b>

**Table 2**  
**Student/Staff Body Weight Distribution**

(OEHHA 2004, Guidance for assessing exposures and health risk at existing and proposed school sites, Table 8)

Age Group (yr)	Grade Level	Body Weight (Kg)
< 1	EEC	7.04
1	EEC	11.1
2	EEC	13.3
3	EEC	16.4
4	EEC	18.6
5	Kindergarten	21.2
6	1	23.8
7	2	26.5
8	3	29.8
9	4	33.9
10	5	38.7
11	6	42.3
12	7	47.9
13	8	53.2
14	9	57.1
15	10	60.4
16	11	62.9
17	12	64.2
Staff		70

**Table 3**  
**Average Student Body Weight by Occupancy**

(Average body weight for each school type is calculated using the table of student/staff body weight distribution.)

School Type (Grade Level)	Body Weight (Kg)
Primary Center (K-2)	23.8
Primary Center (K-3)	25.3
Elementary (K-5)	29.0
Elementary (K-6)	30.9
Middle (6-8)	47.8
Senior (9-12)	61.2
Span (K-8)	35.26
EEC	See note
Adult School	70

note: For EEC, average student body weight should be derived depending on a projected program.



**Table 4****Point Estimates for Daily Breathing Rate for Students and Staff**

(OEHHA 2003, Air Toxics Hot Spots Program Risk Assessment Guidelines, Table 5.4)

Scenario	Population	Average Estimate (L/Kg-Day)
9-Year Exposure Duration <sup>1</sup> 30/70-Year Exposure Duration	Student	452
	Staff	271

1. While the point estimate of 452 (L/Kg-Day) for "children" is listed under the 9-Year exposure duration, we utilize this estimate for a shorter duration. We also assume students (less than or equal to 17-years old) are children because the OEHHA Guidance (2003) does not provide an age range for children.

**Conversion from (L/Kg-Day) to M<sup>3</sup>/Day**Daily Breathing Rate (M<sup>3</sup>/Day) =(Daily Breathing Rate (L/Kg-Day) \_ Body Weight (Kg))/1000 (L/M<sup>3</sup>)**Table 5****Daily Breathing Rate by Population**

Population	Body Weight (Kg)	Daily Breathing Rate (M <sup>3</sup> /day)
Primary Center (K-2)	23.8	10.8
Primary Center (K-3)	25.3	11.4
Elementary (K-5)	29.0	13.1
Elementary (K-6)	30.9	14.0
Middle (6-8)	47.8	21.6
Senior (9-12)	61.2	27.6
Span (K-8) EEC	35.26 See note	15.9
Adult School	70	19.0
Staff	70	19.0

**Table 6****Final Exposure Assumptions**

As OEHHA does not support the use of current cancer potency factor to evaluate cancer risk for exposures of less than 9 years, we will consider a minimum of 9 years for students as exposure duration at a school (regardless of school type, e.g., K-5, middle or high). If we consider all schools as K-12 (except EEC and adult school), the following are estimated:

Average Body Weight (Kg) for K-12: 43.2

Daily Breathing Rate (M<sup>3</sup>/day) : 19.5

Exposure Duration (years): 13

## **Guidance for the Appropriate Selection of Toxicity Criteria for OEHS Air Toxics Risk Assessments**

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### **For cancer risk evaluation:**

Preferentially use the toxicity criteria (unit risk factor or cancer slope factor) from OEHHA.  
If not available from OEHHA, use a criteria value from USEPA's IRIS database.  
If not available from the IRIS database, use an inhalation route cancer slope factor from the USEPA Region 9 PRGs.  
If no inhalation CSP is available from the USEPA Region 9 PRGs then use the oral route cancer slope factor.

### **For non-cancer risk evaluation (chronic exposure):**

Preferentially use the toxicity criteria (chronic REL or inhalation RfD) from OEHHA.  
If not available from OEHHA, use an RfC or inhalation RfD from USEPA's IRIS database.  
If not available from the IRIS database, use an inhalation route RfD from the USEPA Region 9 PRGs.  
If no inhalation RfD is available from the USEPA Region 9 PRGs then use the oral route RfD from the PRGs.  
If none of the above are available, then derive from ACGIH TLV.  
If none of the above are available, then derive from OSHA PEL.

### **For non-cancer risk evaluation (acute exposure/routine process emissions):**

Use the acute REL from Table 4.

### **For non-cancer risk evaluation (acute exposure/accidental release emissions):**

Use the CalARP Program and IDLH values shown in Table 4.

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TABLE 7

Standardized Table of Cancer Toxicity Criteria for  
Use in OEHS Air Toxics Risk Assessments

Chemical	USEPA Cancer Group Classification	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup>	Source	CSF <sub>inh</sub> ( $\text{mg}/\text{kg}\cdot\text{day}$ ) <sup>-1</sup>	Source
Acetaldehyde	B2	2.7E-06	OTCD	1.0E-02	OTCD
Acetic acid		NC		NC	
Acetone		NC		NC	
Acrolein		NC		NC	
Ammonia		NC		NC	
Aniline	B2	1.6E-06	OTCD	5.7E-03	OTCD
Arsenic		3.3E-03	OTCD	1.2E+01	OTCD
Benzene	A	2.9E-05	OTCD	1.0E-01	OTCD
Beryllium		2.4E-03	OTCD	8.4E+00	OTCD
1,3-Butadiene	B2	1.7E-04	OTCD	6.0E-01	OTCD
n-Butanol	see n-Butyl alcohol				
2-Butanone	see Methyl ethyl ketone				
2-Butoxyethanol Ethylene glycol mono butyl ether* EGMBE* EGBE* Butyl cellosolve*		NC		NC	
n-Butyl acetate		NC		NC	
n-Butyl alcohol n-Butanol*	D	NC		NC	
Butyl benzyl phthalate	C	NC		NC	
Butyl carbitol	see Diethylene glycol monobutyl ether				
Butyl cellosolve	see 2-Butoxyethanol				
2-Butyltetrahydrofuran		NC		NC	
Cadmium	B1	4.2E-03	OTCD	1.5E+01	OTCD
1-Chlorobutane	D	NC		NC	
Chloroethane Ethyl chloride*				6.7E-03	PRGISF
Chloromethane Methyl Chloride*	D	NC		NC	
3-Chloromethyl-heptane		NC		NC	
Chromium (hexavalent)	A	1.5E-01		5.1E+02	
Chromium (trivalent)	D	NC		NC	
Copper	D	NC		NC	
n-Decane		NC		NC	
Diacetone alcohol		NC		NC	
Dibutyl ether		NC		NC	
Dichloromethane	see Methylene chloride				
Diesel Particulate		3.0E-04	OTCD	1.1E+00	OTCD
Diethylene glycol monobutyl ether Butyl carbitol*		NC		NC	

**TABLE 7**

**Standardized Table of Cancer Toxicity Criteria for  
Use in OEHS Air Toxics Risk Assessments**

Chemical	USEPA Cancer Group Classification	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup>	Source	CSF <sub>inh</sub> ( $\text{mg}/\text{kg}\text{-day}$ ) <sup>-1</sup>	Source
<b>Dioxins and Dibenzofurans</b>					
1,2,3,4,6,7,8-HpCDD		3.8E-01	OTCD	1.3E+03	OTCD
1,2,3,4,6,7,8-HpCDF		3.8E-01	OTCD	1.3E+03	OTCD
1,2,3,4,7,8,9-HpCDF		3.8E-01	OTCD	1.3E+03	OTCD
1,2,3,4,7,8-HxCDD		3.8E+00	OTCD	1.3E+04	OTCD
1,2,3,4,7,8-HxCDF		3.8E+00	OTCD	1.3E+04	OTCD
1,2,3,6,7,8-HxCDD		3.8E+00	OTCD	1.3E+04	OTCD
1,2,3,6,7,8-HxCDF	B2	3.8E+00	OTCD	1.3E+04	OTCD
1,2,3,7,8,9-HxCDD		3.8E+00	OTCD	1.3E+04	OTCD
1,2,3,7,8,9-HxCDF	B2	3.8E+00	OTCD	1.3E+04	OTCD
1,2,3,7,8-PeCDD		3.8E+01	OTCD	1.3E+05	OTCD
1,2,3,7,8-PeCDF		1.9E+00	OTCD	6.5E+03	OTCD
2,3,4,6,7,8-HxCDF		3.8E+00	OTCD	1.3E+03	OTCD
2,3,4,7,8-PeCDF		1.9E+01	OTCD	6.5E+03	OTCD
2,3,7,8-TCDD		3.8E+01	OTCD	1.3E+05	OTCD
2,3,7,8-TCDF		3.8E+00	OTCD	1.3E+04	OTCD
EGBE	see 2-Butoxyethanol				
EGMBE	see 2-Butoxyethanol				
Ethanol		NC		NC	
Ethyl alcohol*					
1-Ethoxy-2-propanol		NC		NC	
Ethyl acetate		NC		NC	
Ethyl alcohol	see Ethanol				
Ethyl benzene		NC		NC	
Ethyl chloride	see Chloroethane				
Ethylene glycol		NC		NC	
Ethylene glycol mono butyl ether	see 2-Butoxyethanol				
2-Ethyl hexanol		NC		NC	
Ethylisopropyl ether		NC		NC	
Formaldehyde	B1	6.0E-06	OTCD	2.1E-02	OTCD
Gasoline		See note.		See note.	
n-Heptane	D	NC		NC	
2-Heptanone	see Methyl amyl ketone				
n-Hexane		NC		NC	
Hexylene glycol		NC		NC	
Hydrochloric acid		NC		NC	
Hydrogen chloride*					
Hydrogen chloride	see Hydrochloric acid				
Hydrogen fluoride		NC		NC	
Isopropanol	see Isopropyl alcohol				

**TABLE 7**

**Standardized Table of Cancer Toxicity Criteria for  
Use in OEHS Air Toxics Risk Assessments**

Chemical	USEPA Cancer Group Classification	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup>	Source	CSF <sub>inh</sub> ( $\text{mg}/\text{kg}\text{-day}$ ) <sup>-1</sup>	Source
Isopropyl alcohol Isopropanol*		NC		NC	
Lead					
MEK	see Methyl ethyl ketone				
Mercury					
Methanol Methyl alcohol*		NC		NC	
Methylal		NC		NC	
Methyl alcohol	see Methanol				
Methyl amyl ketone 2-Heptanone* Methyl n-amyl ketone*					
Methyl n-amyl ketone	see Methyl amyl ketone				
n-Methylaniline					
Methyl chloride	see Chloromethane				
Methyl chloroform	see 1,1,1-Trichloroethane				
Methylene chloride Dichloromethane*	B2	1.0E-06	OTCD	3.5E-03	OTCD
4,4-Methylene dianiline		4.6E-04	OTCD	1.6E+00	OTCD
Methylene diphenyl isocyanate Nacconate 300*	D	NC		NC	
Methyl ethyl ketone MEK* 2-Butanone*		NC		NC	
Methyl isobutyl ketone MIBK*		NC		NC	
Methyl palmitate		NC		NC	
MIBK	see Methyl isobutyl ketone				
Mineral spirits	see Naptha				
Nacconate 300	see Methylene diphenyl isocyanate				
Naphthalene		3.4E-05	OTCD	1.2E-01	OTCD
Naptha Mineral spirits* Petroleum distillates*		NC		NC	
VM&P Naptha		NC		NC	
Nickel	A	2.6E-04	OTCD	9.1E-01	OTCD
PAHs (polycyclic aromatic hydrocarbons)					
Benzo(a)anthracene	B2	1.1E-04	OTCD	3.9E+01	OTCD
Benzo(a)pyrene	B2	1.1E-04	OTCD	3.9E+01	OTCD
Benzo(b)flouranthene	B2	1.1E-04	OTCD	3.9E-01	OTCD

**TABLE 7**

**Standardized Table of Cancer Toxicity Criteria for  
Use in OEHS Air Toxics Risk Assessments**

Chemical	USEPA Cancer Group Classification	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup>	Source	CSF <sub>inh</sub> ( $\text{mg}/\text{kg}\text{-day}$ ) <sup>-1</sup>	Source
Benzo(j)fluoranthene		1.1E-04	OTCD	3.9E-01	OTCD
Benzo(k)fluoranthene	B2	1.1E-04	OTCD	3.9E-01	OTCD
Chrysene	B2	1.0E-05	OTCD	3.9E-02	OTCD
Dibenzo(a,e)pyrene		1.1E-03	OTCD	3.9E+00	OTCD
Dibenzo(a,h)anthracene	B2	1.2E-03	OTCD	4.1E+00	OTCD
Dibenzo(a,h)pyrene		1.1E-02	OTCD	3.9E+01	OTCD
Dibenzo(a,i)pyrene		1.1E-02	OTCD	3.9E+01	OTCD
Dibenzo(a,l)pyrene		1.1E-02	OTCD	3.9E+01	OTCD
Indeno(1,2,3-cd)pyrene	B2	1.1E-04	OTCD	3.9E-01	OTCD
PCE	see Tetrachloroethylene				
Perc	see Tetrachloroethylene				
Perchloroethylene	see Tetrachloroethylene				
Petroleum distillates	see Naptha				
n-Propanol n-Propyl alcohol*		NC		NC	
n-Propyl alcohol	see n-Propanol				
Propylene		NC		NC	
Propylene glycol		NC		NC	
Selenium	D	NC		NC	
Stoddard solvent		NC		NC	
Styrene		NC		NC	
Substituted C9 ester (C12)					
Tetrachloroethane PCE* Perc* Perchloroethene*		5.9E-06	OTCD	2.1E-02	OTCD
Toluene		NC		NC	
1,1,1-Trichloroethane Methyl chloroform*		NC		NC	
Trimethyl benzenes		NC		NC	
1,2,4-Trimethylbenzene		NC		NC	
1,3,5-Trimethylbenzene		NC		NC	
n-Undecane		NC		NC	
Vinyl acetate		NC		NC	
Vinyl chloride		7.8E-05	OTCD	2.7E-01	OTCD
Xylenes		NC		NC	
m-Xylene		NC		NC	
o-Xylene		NC		NC	
p-Xylene		NC		NC	
Zinc	D	NC		NC	

**TABLE 7**

**Standardized Table of Cancer Toxicity Criteria for  
Use in OEHS Air Toxics Risk Assessments**

Chemical	USEPA Cancer Group Classification	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup>	Source	CSF <sub>inh</sub> ( $\text{mg}/\text{kg}\text{-day}$ ) <sup>-1</sup>	Source
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Notes:

\*Synonym

OTCD = OEHHA Toxicity Criteria Database

CT = Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values

PRGISF = Region 9 PRG table inhalation slope factor

NC = Not a carcinogen.

<sup>1</sup>USEPA Cancer Group Classification:

A = Human carcinogen (sufficient epidemiological evidence)

B1 = Probable human carcinogen (sufficient animal and limited human evidence)

B2 = Probable human carcinogen (sufficient animal and no human evidence)

C = Possible human carcinogen (limited animal and no human evidence)

D = Not classifiable (insufficient evidence, or not data available, in animals and humans)

E = Evidence of non-carcinogenicity for humans

<sup>2</sup>Health risks of gasoline should be calculated based on conversion to benzene equivalents (assuming 1% of gasoline vapor emissions are benzene).

**TABLE 8**

**Standardized Table of Chronic Non-Cancer Toxicity Criteria  
for Use in OEHS Air Toxics Risk Assessments**

Chemical	REL or Equivalent ( $\mu\text{g}/\text{m}^3$ )	Source	RfD <sub>inh</sub> (mg/kg-day)	Source
Acetaldehyde	9.0E+00	REL/OTCD	2.6E-03	Derived from REL
Acetic acid				
Acetone	3.2E+03	Derived from RfD <sub>inh</sub>	9.0E-01	PRG
Acrolein	6.0E-02	REL/OTCD	1.7E-05	Derived from REL
Ammonia	2.0E+02	REL/OTCD	5.7E-02	Derived from REL
Aniline	1.0E+00	RfC/IRIS	2.9E-01	Derived from RfC
Arsenic	3.0E-02	REL/OTCD	8.6E-06	Derived from REL
Benzene	6.0E+01	REL/OTCD	1.7E-02	Derived from REL
Beryllium	7.0E-03	CT	2.0E-06	Derived from REL
1,3-Butadiene	2.0E+01	CT	5.7E-03	Derived from REL
n-Butanol	see n-Butyl alcohol			
2-Butanone	see Methyl ethyl ketone			
2-Butoxyethanol Ethylene glycol mono butyl ether* EGMBE* EGBE* Butyl cellosolve*	2.3E+02	TLV	6.6E-02	Derived from REL
n-Butyl acetate				
n-Butyl alcohol n-Butanol*	3.5E+02	Derived from RfD <sub>inh</sub>	1.0E-01	RfD/IRIS
Butyl benzyl phthalate	7.0E+02	Derived from RfD <sub>inh</sub>	2.0E-01	RfD/IRIS
Butyl carbitol	see Diethylene glycol monobutyl ether			
Butyl cellosolve	see 2-Butoxyethanol			
2-Butyltetrahydrofuran				
Cadmium	2.0E-02	CT	5.7E-06	Derived from REL
1-Chlorobutane	1.5E+03	PRG		
Chloroethane Ethyl chloride*	3.0E+04	REL/OTCD	8.6E+00	Derived from REL
Chloromethane Methyl Chloride*	9.0E+01	RfC/IRIS	2.6E+01	Derived from RfC
3-Chloromethyl-heptane				
Chromium (hexavalent)	2.0E-01	CT	5.7E-05	Derived from REL
Chromium (trivalent)	5.3E+03	Derived from RfD <sub>inh</sub>	1.5E+00	RfD/IRIS
Copper	2.4E+00	CT	6.9E-04	Derived from REL
n-Decane				
Diacetone alcohol	5.7E+02	TLV	1.6E-01	Derived from REL
Dibutyl ether				
Dichloromethane	see Methylene chloride			
Diesel Particulate	5.0E+00	REL/OTCD	1.4E-03	Derived from REL
Diethylene glycol monobutyl ether Butyl carbitol*				



**TABLE 8**

**Standardized Table of Chronic Non-Cancer Toxicity Criteria  
for Use in OEHS Air Toxics Risk Assessments**

Chemical	REL or Equivalent ( $\mu\text{g}/\text{m}^3$ )	Source	RfD <sub>inh</sub> (mg/kg-day)	Source
<b>Dioxins and Dibenzofurans</b>				
1,2,3,4,6,7,8-HpCDD	4.0E-03	CT	1.1E-06	Derived from REL
1,2,3,4,6,7,8-HpCDF	4.0E-04	CT	1.1E-07	Derived from REL
1,2,3,4,7,8,9-HpCDF	4.0E-03	CT	1.1E-06	Derived from REL
1,2,3,4,7,8-HxCDD	4.0E-04	CT	1.1E-07	Derived from REL
1,2,3,4,7,8-HxCDF	4.0E-04	CT	1.1E-07	Derived from REL
1,2,3,6,7,8-HxCDD	4.0E-04	CT	1.1E-07	Derived from REL
1,2,3,6,7,8-HxCDF	4.0E-04	CT	1.1E-07	Derived from REL
1,2,3,7,8,9-HxCDD	4.0E-04	CT	1.1E-07	Derived from REL
1,2,3,7,8,9-HxCDF	4.0E-04	CT	1.1E-07	Derived from REL
1,2,3,7,8-PeCDD	4.0E-05	CT	1.1E-08	Derived from REL
1,2,3,7,8-PeCDF	8.0E-04	CT	2.3E-07	Derived from REL
2,3,4,6,7,8-HxCDF	4.0E-04	CT	1.1E-07	Derived from REL
2,3,4,7,8-PeCDF	4.0E-05	CT	1.1E-08	Derived from REL
2,3,7,8-TCDD	4.0E-05	CT	1.1E-08	Derived from REL
2,3,7,8-TCDF	4.0E-04	CT	1.1E-07	Derived from REL
EGBE	see 2-Butoxyethanol			
EGMBE	see 2-Butoxyethanol			
Ethanol				
Ethyl alcohol*				
1-Ethoxy-2-propanol				
Ethyl acetate	3.2E+06	Derived from RfD <sub>inh</sub>	9.0E+02	RfD/IRIS
Ethyl alcohol	see Ethanol			
Ethyl benzene	2.0E+03	REL/OTCD	5.7E-01	Derived from REL
Ethyl chloride	see Chloroethane			
Ethylene glycol	4.0E+02	REL/OTCD	1.1E-01	Derived from REL
Ethylene glycol mono butyl ether	see 2-Butoxyethanol			
2-Ethyl hexanol				
Ethylisopropyl ether				
Formaldehyde	3.0E+00	REL/OTCD	8.6E-04	Derived from REL
Gasoline	2.1E+03	CT	6.0E-01	Derived from REL
n-Heptane				
2-Heptanone	see Methyl amyl ketone			
n-Hexane	7.0E+03	CT	2.0E+00	Derived from REL
Hexylene glycol				
Hydrochloric acid	9.0E+00	REL/OTCD	2.6E-03	Derived from REL
Hydrogen chloride*				
Hydrogen chloride	see Hydrochloric acid			
Hydrogen fluoride	1.4E+01	CT	4.0E-03	Derived from REL
Isopropanol	see Isopropyl alcohol			

**TABLE 8**

**Standardized Table of Chronic Non-Cancer Toxicity Criteria  
for Use in OEHS Air Toxics Risk Assessments**

<b>Chemical</b>	<b>REL or Equivalent (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Source</b>	<b>RfD<sub>inh</sub> (mg/kg-day)</b>	<b>Source</b>
Isopropyl alcohol Isopropanol*	7.0E+03	CT	2.0E+00	Derived from REL
Lead				
MEK	see Methyl ethyl ketone			
Mercury	9.0E-02	REL/OTCD	2.6E-05	Derived from REL
Methanol Methyl alcohol*	4.0E+03	REL/OTCD	1.1E+00	Derived from REL
Methylal				
Methyl alcohol	see Methanol			
Methyl amyl ketone 2-Heptanone* Methyl n-amyl ketone*				
Methyl n-amyl ketone	see Methyl amyl ketone			
n-Methylaniline	7.0E+00	Derived from RfD <sub>inh</sub>	2.0E-03	RfD/IRIS
Methyl chloride	see Chloromethane			
Methyl chloroform	see 1,1,1-Trichloroethane			
Methylene chloride Dichloromethane*	4.0E+02	REL/OTCD	1.1E-01	Derived from REL
4,4-Methylene dianiline	2.0E+01	CT	5.7E-03	Derived from REL
Methylene diphenyl isocyanate Nacconate 300*	6.0E-01	RfC/IRIS	1.7E-01	Derived from RfC
Methyl ethyl ketone MEK* 2-Butanone*	1.0E+03	CT	2.9E-01	Derived from REL
Methyl isobutyl ketone MIBK*	3.0E+03	RfC/IRIS		
Methyl palmitate				
MIBK	see Methyl isobutyl ketone			
Mineral spirits	see Naptha			
Nacconate 300	see Methylene diphenyl isocyanate			
Naphthalene	4.8E+03	PEL	1.4E+00	Derived from REL
Naptha Mineral spirits* Petroleum distillates*	3.3E+03	TLV	9.5E-01	Derived from REL
VM&P Naptha	9.0E+00	REL/OTCD	2.6E-03	Derived from REL
Nickel	5.0E-02	CT	1.4E-05	Derived from REL
PAHs (polycyclic aromatic hydrocarbons)				
Benzo(a)anthracene	9.2E-03	PRG	2.6E-06	Derived from PRG
Benzo(a)pyrene	9.2E-03	PRG	2.6E-06	Derived from PRG
Benzo(b)fluoranthene	9.2E-03	PRG	2.6E-06	Derived from PRG
Benzo(j)fluoranthene				

**TABLE 8**

**Standardized Table of Chronic Non-Cancer Toxicity Criteria  
for Use in OEHS Air Toxics Risk Assessments**

Chemical	REL or Equivalent ( $\mu\text{g}/\text{m}^3$ )	Source	RfD <sub>inh</sub> (mg/kg-day)	Source
Benzo(k)fluoranthene	1.7E-02	PRG	4.9E-06	Derived from PRG
Chrysene	1.7E-01	PRG	4.9E-05	Derived from PRG
Dibenzo(a,e)pyrene				
Dibenzo(a,h)anthracene	9.2E-03	PRG	2.6E-06	Derived from PRG
Dibenzo(a,h)pyrene				
Dibenzo(a,i)pyrene				
Dibenzo(a,l)pyrene				
Indeno(1,2,3-cd)pyrene	9.2E-03	PRG	2.6E-06	Derived from PRG
PCE	see Tetrachloroethene			
Perc	see Tetrachloroethene			
Perchloroethylene	see Tetrachloroethene			
Petroleum distillates	see Naptha			
n-Propanol n-Propyl alcohol*				
n-Propyl alcohol	see n-Propanol			
Propylene	3.0E+03	REL/OTCD	8.6E-01	Derived from REL
Propylene glycol	3.1E+00	PRG	8.9E-04	Derived from PRG
Selenium	2.0E+01	CT	5.7E-03	Derived from REL
Stoddard solvent	1.4E+03	TLV	3.9E-01	Derived from REL
Styrene	9.0E+02	REL/OTCD	2.6E-01	Derived from REL
Substituted C9 ester (C12)				
Tetrachloroethane PCE* Perc* Perchloroethene*	3.5E+01	CT	1.0E-02	Derived from REL
Toluene	3.0E+02	REL/OTCD	8.6E-02	Derived from REL
1,1,1-Trichloroethane Methyl chloroform*	1.0E+03	REL/OTCD	2.9E-01	Derived from REL
Trimethyl benzenes				
1,2,4-Trimethylbenzene	6.2E+00	PRG	1.8E-03	Derived from PRG
1,3,5-Trimethylbenzene	6.2E+00	PRG	1.8E-03	Derived from PRG
n-Undecane				
Vinyl acetate	2.0E+02	REL/OTCD	5.7E-02	Derived from REL
Vinyl chloride	2.6E+01	REL/OTCD	7.4E-03	Derived from REL
Xylenes	7.0E+02	REL/OTCD	2.9E-01	Derived from REL
m-Xylene	7.0E+02	REL/OTCD	2.9E-01	Derived from REL
o-Xylene	7.0E+02	REL/OTCD	2.9E-01	Derived from REL
p-Xylene	7.0E+02	REL/OTCD	2.9E-01	Derived from REL
Zinc	3.5E+01	CT	1.0E-02	Derived from REL

Notes:

**TABLE 8**

**Standardized Table of Chronic Non-Cancer Toxicity Criteria  
for Use in OEHS Air Toxics Risk Assessments**

<b>Chemical</b>	<b>REL or Equivalent (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Source</b>	<b>RfD<sub>inh</sub> (mg/kg- day)</b>	<b>Source</b>
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\*Synonym

REL = Reference Exposure Level

OEHHA = Office of Environmental Health Hazard Assessment

REL/OTCD = Source was an REL from the OEHHA Toxicity Criteria Database

CT = Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values

RfC/IRIS = Source was RfC from the USEPA IRIS database

RfD/IRIS = Source was RfD from the USEPA IRIS database

TLV = Value was derived from a Threshold Limit Value (TLV) (ACGIH, 2007)

PRG = USEPA Region 9 Preliminary Remediation Goals (USEPA, 2004)

PEL = Permissible Exposure Limit

**TABLE 9**

**Standardized Table of Target Organ Toxicity  
for Use in OEHS Air Toxics Risk Assessments**

Chemical	Target Organs								
	Resp	CNS/ PNS	CV/BL	Immune	Kidney	GI/ Liver	Repro/ Dev	Eyes	Skin
Acetaldehyde	X								
Acetic acid	X								
Acetone					X	X			
Acrolein	X							X	
Ammonia	X								
Aniline			X						
Arsenic		X	X				X		
Benzene		X	X				X		
Beryllium	X								
1,3-Butadiene	X	X					X	X	
n-Butanol	see n-Butyl alcohol								
2-Butanone	see Methyl ethyl ketone								
2-Butoxyethanol Ethylene glycol mono butyl ether* EGMBE* EGBE* Butyl cellosolve*	X	X	X	X	X	X		X	
n-Butyl acetate	X	X						X	X
n-Butyl alcohol n-Butanol*									
Butyl benzyl phthalate						X			
Butyl carbitol	see Diethylene glycol monobutyl ether								
Butyl cellosolve	see 2-Butoxyethanol								
2-Butyltetrahydrofuran									
Cadmium	X				X				
1-Chlorobutane									

TABLE 9

Standardized Table of Target Organ Toxicity  
for Use in OEHS Air Toxics Risk Assessments

Chemical	Target Organs								
	Resp	CNS/ PNS	CV/BL	Immune	Kidney	GI/ Liver	Repro/ Dev	Eyes	Skin
Chloroethane Ethyl chloride*						X	X		
Chloromethane Methyl Chloride*		X							
3-Chloromethyl-heptane									
Chromium (hexavalent)	X								
Chromium (trivalent)								X	X
Copper						X			
n-Decane									
Diacetone alcohol	X							X	X
Dibutyl ether									
Dichloromethane	see Methylene chloride								
Diesel Particulate	X								
Diethylene glycol monobutyl ether Butyl carbitol*									
Dioxins and Dibenzofurans									
1,2,3,4,6,7,8-HpCDD									
1,2,3,4,6,7,8-HpCDF									
1,2,3,4,7,8,9-HpCDF									
1,2,3,4,7,8-HxCDD									
1,2,3,4,7,8-HxCDF									
1,2,3,6,7,8-HxCDD									
1,2,3,6,7,8-HxCDF									
Dioxins and Dibenzofurans (continued)									
1,2,3,7,8,9-HxCDD									
1,2,3,7,8,9-HxCDF									
1,2,3,7,8-PeCDD									

TABLE 9

Standardized Table of Target Organ Toxicity  
for Use in OEHS Air Toxics Risk Assessments

Chemical	Target Organs								
	Resp	CNS/ PNS	CV/BL	Immune	Kidney	GI/ Liver	Repro/ Dev	Eyes	Skin
1,2,3,7,8-PeCDF									
2,3,4,6,7,8-HxCDF									
2,3,4,7,8-PeCDF									
2,3,7,8-TCDD									
2,3,7,8-TCDF									
EGBE	see 2-Butoxyethanol								
EGMBE	see 2-Butoxyethanol								
Ethanol Ethyl alcohol*	X	X	X			X	X		
1-Ethoxy-2-propanol									
Ethyl acetate	X								
Ethyl alcohol	see Ethanol								
Ethyl benzene			X		X	X	X		
Ethyl chloride	see Chloroethane					X	X		
Ethylene glycol	X				X				
Ethylene glycol mono butyl ether	see 2-Butoxyethanol								
2-Ethyl hexanol									
Ethylisopropyl ether									
Formaldehyde	X							X	
Gasoline	X								
n-Heptane		X							
2-Heptanone	see Methyl amyl ketone								
n-Hexane		X							
Hexylene glycol									
Hydrochloric acid Hydrogen chloride*	X								
Hydrogen chloride	see Hydrochloric acid								
Hydrogen fluoride									

**TABLE 9**

**Standardized Table of Target Organ Toxicity  
for Use in OEHS Air Toxics Risk Assessments**

Chemical	Target Organs								
	Resp	CNS/ PNS	CV/BL	Immune	Kidney	GI/ Liver	Repro/ Dev	Eyes	Skin
Isopropanol	see Isopropyl alcohol								
Isopropyl alcohol Isopropanol*	X				X		X	X	
Lead		X	X		X		X		
MEK	see Methyl ethyl ketone								
Mercury		X							
Methanol Methyl alcohol*							X		
Methylal		X						X	X
Methyl alcohol	see Methanol								
Methyl amyl ketone 2-Heptanone* Methyl n-amyl ketone*	X	X						X	X
Methyl n-amyl ketone	see Methyl amyl ketone								
n-Methylaniline									
Methyl chloride	see Chloromethane								
Methyl chloroform	see 1,1,1-Trichloroethane								
Methylene chloride Dichloromethane*		X	X						
4,4-Methylene dianiline									
Methylene diphenyl isocyanate Nacconate 300*	X								
Methyl ethyl ketone MEK* 2-Butanone*	X							X	
Methyl isobutyl ketone MIBK*	X	X			X	X		X	X
Methyl palmitate									
MIBK	see Methyl isobutyl ketone								



**TABLE 9**

**Standardized Table of Target Organ Toxicity  
for Use in OEHS Air Toxics Risk Assessments**

Chemical	Target Organs								
	Resp	CNS/ PNS	CV/BL	Immune	Kidney	GI/ Liver	Repro/ Dev	Eyes	Skin
Mineral spirits	see Naptha								
Nacconate 300	see Methylene diphenyl isocyanate								
Naphthalene	X	X			X	X			
Naptha									
Mineral spirits*	X								
Petroleum distillates*									
VM&P Naptha	X								
Nickel	X		X						
PAHs (polycyclic aromatic hydrocarbons)									
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)flouranthene									
PAHs (polycyclic aromatic hydrocarbons) (continued)									
Benzo(j)fluoranthene					X				
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,e)pyrene					X				
Dibenzo(a,h)anthracene									
Dibenzo(a,h)pyrene					X				
Dibenzo(a,i)pyrene					X				
Dibenzo(a,l)pyrene					X				
Indeno(1,2,3-cd)pyrene									
PCE	see Tetrachloroethene								
Perc	see Tetrachloroethene								
Perchloroethylene	see Tetrachloroethene								
Petroleum distillates	see Naptha								

TABLE 9

Standardized Table of Target Organ Toxicity  
for Use in OEHS Air Toxics Risk Assessments

Chemical	Target Organs								
	Resp	CNS/ PNS	CV/BL	Immune	Kidney	GI/ Liver	Repro/ Dev	Eyes	Skin
n-Propanol n-Propyl alcohol*	X					X			
n-Propyl alcohol	see n-Propanol								
Propylene	X								
Propylene glycol									
Selenium		X							X
Stoddard solvent	X	X			X				
Styrene		X							
Substituted C9 ester (C12)									
Tetrachloroethane PCE* Perc* Perchloroethene*					X	X			
Toluene	X	X					X		
1,1,1-Trichloroethane Methyl chloroform*		X							
Trimethyl benzenes	X	X						X	X
1,2,4-Trimethylbenzene	X	X						X	X
1,3,5-Trimethylbenzene	X	X						X	X
n-Undecane									
Vinyl acetate	X								
Vinyl chloride						X			
Xylenes	X	X							
m-Xylene	X	X							
o-Xylene	X	X							
p-Xylene	X	X							
Zinc			X						

**TABLE 9**

**Standardized Table of Target Organ Toxicity  
for Use in OEHS Air Toxics Risk Assessments**

Chemical	Target Organs								
	Resp	CNS/ PNS	CV/BL	Immune	Kidney	GI/ Liver	Repro/ Dev	Eyes	Skin

Notes:

\*Synonym

Resp = respiratory

CNS/PNS = central/periferal nervous system

GI/Liver = gastrointestinal and liver

CV/BL = cardiovascular/blood

Repro/Dev = reproductive and developmental

**TABLE 10**

**Standardized Table of Acute Non-Cancer Toxicity Criteria  
for Use in LAUSD Air Toxics Risk Assessments**

<b>Chemical</b>	<b>Acute REL<sup>1</sup> (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Averaging Time (hours)</b>	<b>Acute Hazard Index Target Organ System</b>	<b>CalARP Program Toxic Endpoint<sup>2</sup></b>	<b>IDLH<sup>3</sup></b>
Acetaldehyde	NA	NA		NA	2000 ppm
Acetic acid	NA	NA			50 ppm
Acetone	NA	NA		NA	2500 ppm (LEL)
Acrolein	0	1	Eyes, respiratory system	1.1 $\text{mg}/\text{m}^3$	2 ppm
Ammonia	3,200	1	Eyes, respiratory system	140 $\text{mg}/\text{m}^3$	300 ppm
Aniline	NA	NA		38 $\text{mg}/\text{m}^3$	100 ppm
Arsenic	NA	NA		NA	5 $\text{mg}/\text{m}^3$
Benzene	1,300	6	Hematologic system, immune system, reproductive/developmental system	NA	500 ppm
Beryllium	NA	NA		NA	4 $\text{mg Be}/\text{m}^3$
1,3-Butadiene	NA	NA		NA	2000 ppm (LEL)
n-Butanol	see n-Butyl alcohol				
2-Butanone	see Methyl ethyl ketone				
2-Butoxyethanol Ethylene glycol mono butyl ether* EGMBE* EGBE* Butyl cellosolve*	14,000	1	Eyes, respiratory system	NA	700 ppm
n-Butyl acetate	NA	NA		NA	1700 ppm (LEL)
n-Butyl alcohol n-Butanol*	NA	NA		NA	1400 ppm (LEL)
Butyl benzyl phthalate	NA	NA		NA	NA
Butyl carbitol	see Diethylene glycol monobutyl ether				
Butyl cellosolve	see 2-Butoxyethanol				

**TABLE 10**

**Standardized Table of Acute Non-Cancer Toxicity Criteria  
for Use in LAUSD Air Toxics Risk Assessments**

Chemical	Acute REL <sup>1</sup> ( $\mu\text{g}/\text{m}^3$ )	Averaging Time (hours)	Acute Hazard Index Target Organ System	CalARP Program Toxic Endpoint <sup>2</sup>	IDLH <sup>3</sup>
2-Butyltetrahydrofuran	NA	NA		NA	NA
Cadmium	NA	NA		NA	9ma Cd/m <sup>3</sup>
1-Chlorobutane	NA	NA		NA	NA
Chloroethane Ethyl chloride*	NA	NA		NA	3800 ppm (LEL)
Chloromethane Methyl Chloride*	NA	NA		820 mg/m <sup>3</sup>	2000 ppm
3-Chloromethyl-heptane	NA	NA		NA	NA
Chromium (hexavalent)	NA	NA		NA	NA
Chromium (trivalent)	NA	NA		NA	25 ma Cr(III)/m <sup>3</sup>
Copper	100	1	Respiratory system	NA	100 ma Cu/m <sup>3</sup>
n-Decane	NA	NA		NA	NA
Diacetone alcohol	NA	NA		NA	1800 ppm (LEL)
Dibutyl ether	NA	NA		NA	NA
Dichloromethane	see Methylene chloride				
Diesel Particulate	NA			NA	NA
Diethylene glycol monobutyl ether Butyl carbitol*	NA	NA		NA	NA
Dioxins and Dibenzofurans	NA	NA		NA	NA
1,2,3,4,6,7,8-HpCDD	NA	NA		NA	NA
1,2,3,4,6,7,8-HpCDF	NA	NA		NA	NA
1,2,3,4,7,8,9-HpCDF	NA	NA		NA	NA
1,2,3,4,7,8-HxCDD	NA	NA		NA	NA
1,2,3,4,7,8-HxCDF	NA	NA		NA	NA
1,2,3,6,7,8-HxCDD	NA	NA		NA	NA
1,2,3,6,7,8-HxCDF	NA	NA		NA	NA

**TABLE 10**

**Standardized Table of Acute Non-Cancer Toxicity Criteria  
for Use in LAUSD Air Toxics Risk Assessments**

Chemical	Acute REL <sup>1</sup> ( $\mu\text{g}/\text{m}^3$ )	Averaging Time (hours)	Acute Hazard Index Target Organ System	CalARP Program Toxic Endpoint <sup>2</sup>	IDLH <sup>3</sup>
1,2,3,7,8,9-HxCDD	NA	NA		NA	NA
1,2,3,7,8,9-HxCDF	NA	NA		NA	NA
1,2,3,7,8-PeCDD	NA	NA		NA	NA
1,2,3,7,8-PeCDF	NA	NA		NA	NA
2,3,4,6,7,8-HxCDF	NA	NA		NA	NA
2,3,4,7,8-PeCDF	NA	NA		NA	NA
2,3,7,8-TCDD	NA	NA		NA	NA
2,3,7,8-TCDF	NA	NA		NA	NA
EGBE	see 2-Butoxyethanol				
EGMBE	see 2-Butoxyethanol				
Ethanol Ethyl alcohol*	NA	NA		NA	3300 (LEL)
1-Ethoxy-2-propanol	NA	NA		NA	NA
Ethyl acetate	NA	NA		NA	2000 ppm (LEL)
Ethyl alcohol	see Ethanol				
Ethyl benzene	NA	NA		NA	800 ppm (LEL)
Ethyl chloride	see Chloroethane				
Ethylene glycol	NA	NA		NA	NA
Ethylene glycol mono butyl ether	see 2-Butoxyethanol				
2-Ethyl hexanol	NA	NA		NA	NA
Ethylisopropyl ether	NA	NA		NA	NA
Formaldehyde	94	1	Eyes, respiratory system, immune system	12 mg/m <sup>3</sup>	20 ppm
Gasoline	NA	NA		NA	NA
n-Heptane	NA	NA		NA	750 ppm
2-Heptanone	see Methyl amyl ketone				

**TABLE 10**

**Standardized Table of Acute Non-Cancer Toxicity Criteria  
for Use in LAUSD Air Toxics Risk Assessments**

<b>Chemical</b>	<b>Acute REL<sup>1</sup> ( g/m<sup>3</sup>)</b>	<b>Averaging Time (hours)</b>	<b>Acute Hazard Index Target Organ System</b>	<b>CalARP Program Toxic Endpoint<sup>2</sup></b>	<b>IDLH<sup>3</sup></b>
n-Hexane	NA	NA		NA	1100 ppm (LEL)
Hexylene glycol	NA	NA		NA	NA
Hydrochloric acid Hydrogen chloride*	2,100	1	Eyes, respiratory system	30 mg/m <sup>3</sup>	50 ppm
Hydrogen chloride	see Hydrochloric acid				
Hydrogen fluoride	240		Eyes, respiratory system	16 mg/m <sup>3</sup>	30 ppm
Isopropanol	see Isopropyl alcohol				
Isopropyl alcohol Isopropanol*	3,200	1	Eyes, respiratory system	NA	2000 ppm (LEL)
Lead	NA	NA		NA	100 mg Pb/m <sup>3</sup>
MEK	see Methyl ethyl ketone				
Mercury	1.8	1	Reproductive/developmental	NA	10 mg Hg/m <sup>3</sup>
Methanol Methyl alcohol*	28,000	1	Nervous system	NA	6000 ppm
Methylal	NA	NA		NA	NA
Methyl alcohol	see Methanol				
Methyl amyl ketone 2-Heptanone* Methyl n-amyl ketone*	NA	NA		NA	800 ppm
Methyl n-amyl ketone	see Methyl amyl ketone				
n-Methylaniline	NA	NA		NA	NA
Methyl chloride	see Chloromethane				
Methyl chloroform	see 1,1,1-Trichloroethane				
Methylene chloride Dichloromethane*	14,000	1	Nervous system	NA	2300 ppm
4,4-Methylene dianiline	NA	NA		NA	NA

**TABLE 10**

**Standardized Table of Acute Non-Cancer Toxicity Criteria  
for Use in LAUSD Air Toxics Risk Assessments**

<b>Chemical</b>	<b>Acute REL<sup>1</sup> (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Averaging Time (hours)</b>	<b>Acute Hazard Index Target Organ System</b>	<b>CalARP Program Toxic Endpoint<sup>2</sup></b>	<b>IDLH<sup>3</sup></b>
Methylene diphenyl isocyanate Nacconate 300*	NA	NA		NA	75 mg/m <sup>3</sup>
Methyl ethyl ketone MEK* 2-Butanone*	13,000	1	Eyes, respiratory system	NA	3000 ppm
Methyl isobutyl ketone MIBK*	NA	NA		NA	500 ppm
Methyl palmitate	NA	NA		NA	NA
MIBK	see Methyl isobutyl ketone				
Mineral spirits	see Naptha				
Nacconate 300	see Methylene diphenyl isocyanate				
Naphthalene	NA	NA		NA	1000 ppm (LEL)
Naptha Mineral spirits* Petroleum distillates*	NA	NA		NA	NA
VM&P Naptha	NA	NA		NA	250 ppm
Nickel	6	1	Immune system, respiratory system	NA	10 mg Ni/m <sup>3</sup>
PAHs (polycyclic aromatic hydrocarbons)	NA	NA		NA	NA
Benzo(a)anthracene	NA	NA		NA	NA
Benzo(a)pyrene	NA	NA		NA	NA
Benzo(b)fluoranthene	NA	NA		NA	NA
Benzo(j)fluoranthene	NA	NA		NA	NA
Benzo(k)fluoranthene	NA	NA		NA	NA
Chrysene	NA	NA		NA	NA
Dibenzo(a,e)pyrene	NA	NA		NA	NA



**TABLE 10**

**Standardized Table of Acute Non-Cancer Toxicity Criteria  
for Use in LAUSD Air Toxics Risk Assessments**

<b>Chemical</b>	<b>Acute REL<sup>1</sup> (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Averaging Time (hours)</b>	<b>Acute Hazard Index Target Organ System</b>	<b>CalARP Program Toxic Endpoint<sup>2</sup></b>	<b>IDLH<sup>3</sup></b>
Dibenzo(a,h)anthracene	NA	NA		NA	NA
Dibenzo(a,h)pyrene	NA	NA		NA	NA
Dibenzo(a,i)pyrene	NA	NA		NA	NA
Dibenzo(a,l)pyrene	NA	NA		NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA		NA	NA
PCE	see Tetrachloroethene				
Perc	see Tetrachloroethene				
Perchloroethylene	see Tetrachloroethene				
Petroleum distillates	see Naptha				
n-Propanol n-Propyl alcohol*	NA	NA		NA	800 ppm
n-Propyl alcohol	see n-Propanol				
Propylene	NA	NA		NA	NA
Propylene glycol	NA	NA		NA	NA
Selenium	NA	NA		NA	1 $\mu\text{g Se}/\text{m}^3$
Stoddard solvent	NA	NA		NA	20,000 $\text{mg}/\text{m}^3$
Styrene	21,000	1	Eyes, respiratory system	NA	700 ppm
Substituted C9 ester (C12)	NA	NA		NA	NA
Tetrachloroethane PCE* Perc* Perchloroethene*	20,000	1	Eyes, respiratory system, nervous system	NA	150 ppm
Toluene	37,000	1	Eyes, respiratory system, reproductive/developmental	NA	500 ppm
1,1,1-Trichloroethane Methyl chloroform*	68,000	1	Nervous System	NA	700 ppm
Trimethyl benzenes	NA	NA		NA	NA

**TABLE 10**

**Standardized Table of Acute Non-Cancer Toxicity Criteria  
for Use in LAUSD Air Toxics Risk Assessments**

<b>Chemical</b>	<b>Acute REL<sup>1</sup> ( g/m<sup>3</sup>)</b>	<b>Averaging Time (hours)</b>	<b>Acute Hazard Index Target Organ System</b>	<b>CalARP Program Toxic Endpoint<sup>2</sup></b>	<b>IDLH<sup>3</sup></b>
1,2,4-Trimethylbenzene	NA	NA		NA	NA
1,3,5-Trimethylbenzene	NA	NA		NA	NA
n-Undecane	NA	NA		NA	NA
Vinyl acetate	NA	NA		260 mg/m <sup>3</sup>	NA
Vinyl chloride	180,000			NA	NA
Xylenes	22,000	1	Eyes, respiratory system	NA	900 ppm
m-Xylene	22,000	1	Eyes, respiratory system	NA	900 ppm
o-Xylene	22,000	1	Eyes, respiratory system	NA	900 ppm
p-Xylene	22,000	1	Eyes, respiratory system	NA	900 ppm
Zinc	NA	NA		NA	NA

Notes:

\*Synonym

<sup>1</sup>REL = Reference Exposure Level. All RELs obtained from the online OEHHA Toxicity Criteria Database (<http://www.oehha.ca.gov/risk/ChemicalDB/index.asp>)

<sup>2</sup>These values obtained from Appendix B of California Accidental Release Prevention (CalARP) Program. Administering Agency Guidance. State of California Office of Emergency Services.

<sup>3</sup>IDLH = Immediately Dangerous to Life and Health. Values obtained from the online NIOSH listing of IDLH values (<http://www.cdc.gov/niosh/idlh/intridl4.html>).

LEL = Lower Explosive Limit

ppm = parts per million

NA = Not available.

**Table 11**

<b>Toxic Air Contaminants (TACs) and Odor Thresholds</b>	
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk $\geq$ 10 in 1 million Hazard Index $\geq$ 1.0 (project increment)
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402
<b>Ambient Air Quality for Criteria Pollutants</b>	
NO <sub>2</sub>  1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)
PM <sub>10</sub> 24-hour average annual geometric average annual arithmetic mean	10.4 $\mu\text{g}/\text{m}^3$ (construction) <sup>e</sup> & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$ 20 $\mu\text{g}/\text{m}^3$
PM <sub>2.5</sub> 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) & 2.5 $\mu\text{g}/\text{m}^3$ (operation)
CO  1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)

**APPENDIX B**

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**Active and Inactive Facilities**

**Active and Inactive Facilities (within 0.25 miles)**

Facility ID	Company Name	Type of Use	Address	Status	Equipment Permit Status	On-site Reconassiance Status	Potential TAC
145613	Amnat Environmental & Geotechnical	Gasoline Remediation	201 S. Acacia Ave, Compton, CA 90220	Active	Inactive	No	No
12892	Compton City, Fire Department #1	Fire Protection	201 S. Acacia Ave, Compton, CA 90220	Active	No	Yes	No
68145	LA CO. INTERNAL SERVICES DEPT	General Government	400 S. Acacia Ave, Compton, CA 90220	Sold	Inactive	Yes	No
162334	Judicial Court of California	General Government	400 S. Acacia Ave, Compton, CA 90220	Active	Active	Yes	No
20993	Compton High School	School	601 S. Acacia Street, Compton, CA 90220	Active	No	Yes	No
71345	Rush Burger	Eating Place	107 E. Alondra Blvd, Compton, CA 90220	Active	No	Yes	Yes
24316	LA CO, Pub Social Serv Dept	Admin Program	211 E. Alondra Blvd, Compton, CA 90220	Active	Plans Granted	Yes	No
69785	LA CO, Compton AP District	Family Services	228 E. Alondra Blvd, Compton, CA 90220	Active	No	Yes	No
122203	Classic Gas	Gasoline Service Stations	220 W. Alondra Blvd, Compton, CA 90220	Inactive	No	Yes	No
185262	Alondra Oil Inc	Gasoline Storage	220 W. Alondra Blvd, Compton, CA 90220	Active	Active	Yes	Yes
132404	Ultramax	Gas Station	220 W. Alondra Blvd, Compton, CA 90220	Sold	Inactive	No	No
122351	Classic Gas, Reina Flores DBA	Gasoline Service Stations	220 W. Alondra Blvd, Compton, CA 90220	Sold	Inactive	No	No
176183	Alloush Enterprises	Gasoline	220 W. Alondra Blvd, Compton, CA 90220	Active	Inactive	No	No
11413	Mepco Oil Inc	Gas Station	220 W. Alondra Blvd, Compton, CA 90220	Sold	Denied	No	No
118665	Galindo Cleaners	Dry Cleaning	526 W. Alondra Blvd, Compton, CA 90220	Active	Active	Yes	Yes
81292	One Hour Photo	Laundry Services	111 E. Compton Blvd, Compton, CA 90220	Active	No Violation	No	No
137794	Vons 15	Market	111 Compton Blvd, Compton, CA 90220	Active	No Violation	Yes	No
44611	CVS PHARMACY #9495	Health/Personal Store	220 E. Compton Blvd, Compton, CA 90220	Active	No Violation	Yes	No
165243	COMPTON COURTHOUSE, JCC/AOC	Courts	200 W. Compton Blvd, Compton, CA 90220	Active	Active	Yes	No
183902	LA-RICS CCB LMR	Public Order and Safety	200 W. Compton Blvd, Compton, CA 90220	Active	Active	Yes	No
21230	LA Co. Internal Services Dept	General Government	200 W. Compton Blvd, Compton, CA 90220	Active	Inactive	Yes	No
69784	LA CO. COMPTON COURT HOUSE/ISD	Courts	200 W. Compton Blvd, Compton, CA 90220	Sold	Inactive	Yes	No
164225	Judicial Council of California	Courts	200 W. Compton Blvd, Compton, CA 90220	Duplicate	No	Yes	No
69783	LA CO. PROBATION	Courts	200 W. Compton Blvd, Compton, CA 90220	Duplicate	No	Yes	No
68440	LA Co. Internal Services Dept	General Government	200 W. Compton Blvd, Compton, CA 90220	Duplicate	No	Yes	No
4648	TEXACO DLR, KIM'S SERV STA	Gasoline Service Stations	300 W. Compton Blvd, Compton, CA 90222	Closed	Inactive	No	No
69787	LA CO. Compton Court House	Courts	240 W. Compton Blvd, Compton, CA 90220	Active	Plans Granted	Yes	No
1246	Fabric Services Inc, Compton Cleaners	Dry Cleaning	307 W. Compton Blvd, Compton, CA 90222	Active	Inactive	No	No
81318	BOYD'S KANSAS CITY BAR-B-QUE	Eating Place	312 W. Compton Blvd, Compton, CA 90220	Closed	Cancelled	No	No
122977	Compton Gas and Food Mart	Gasoline Service Station	390 W. Compton Blvd, Compton, CA 90220	Sold	Inactive	No	No
149112	Compton Valero, Cha Soo Cha	Gasoline Service Station	390 W. Compton Blvd, Compton, CA 90220	Sold	Inactive	No	No
152294	Compton Valero	Gasoline Service Station	390 W. Compton Blvd, Compton, CA 90220	Active	Inactive	No	No
180802	Veer Oil Partners	Gasoline Storage	390 W. Compton Blvd, Compton, CA 90220	Sold	Inactive	No	No
185608	Ace Fuels Inc	Gasoline Storage	390 W. Compton Blvd, Compton, CA 90220	Active	Active	Yes	Yes
172232	King II Gas and Super	Gas Station	390 W. Compton Blvd, Compton, CA 90220	Sold	No	No	No
22222	Compton School District Maintenance	Schools	429 S. Oleander Ave, Compton, CA 90220	Active	Inactive	No	No
2693531	Compton Unified School District	School District	604 S. Tamarind Ave, Compton, CA 90220	Active	No Violation	No	No
72590	City of Compton Paint Shop	General Government	201 S. Willowbrook Ave, Compton, CA 90220	Active	No	No	No
138071	LA CO Sheriff's Dept. Facs Serv Bureau	Storage Gasoline	301 S. Willowbrook Ave, Compton, CA 90220	Active	Active	Yes	Yes
72584	City of Compton Police Department	Public Protection	301 S. Willowbrook Ave, Compton, CA 90220	Sold	Inactive	No	No
N/A	Sr. Cliff's Texas Style Burritos	Fast-food Restaurant	408 W. Alondra Blvd, Compton, CA 90220	N/A	N/A	Yes	Yes
N/A	Mom's Burger	Fast-food Restaurant	336 W. Alondra Blvd, Compton, CA 90220	N/A	N/A	Yes	Yes

**APPENDIX C**

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**SCAQMD Facility Permits**

**APPENDIX C1**

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**Permit ID 185262**



## PERMIT TO CONSTRUCT/OPERATE

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership. If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

Legal Owner  
or Operator:

ALONDRA OIL INC  
10240 GEARY AVE  
SANTA FE SPRINGS, CA 90670

ID 185262

**Equipment Location:** 220 W ALONDRA BLVD, COMPTON, CA 90220

### Equipment Description:

Fuel Storage and Dispensing Facility Consisting of:

- 1) 12 - Gasoline Bellows-less Nozzles Dispensing 36 Products Equipped with Assist Phase II Enhanced Vapor Recovery (EVR) System Including Veeder-Root In-Station Diagnostics (ISD) System with Software Version Number 1.05 or Newer (VR-202-V).
- 2) 1 - Gasoline Underground Storage Tank, 15,000 Gallon Capacity, Equipped with Phase I Vapor Recovery System Phil-Tite/EBW/FFS (VR-101-C/P), 1 Methanol Compatible.
- 3) 1 - Dual Compartment Underground Gasoline/Diesel Storage Tank, 12,000 Gallon Capacity, 1 Methanol Compatible, Consisting Of:
  - A) One 6,000 Gallon Gasoline Compartment, Equipped with Phase I Vapor Recovery System Phil-Tite/EBW/FFS (VR-101-C/P).
  - B) One 6,000 Gallon Diesel Compartment, Not Equipped with Phase I Vapor Recovery System.

Conditions:

### SECTION I: GENERAL CONDITIONS

1. Operation of this equipment shall be in compliance with all data and specifications submitted with the application under which this permit was issued, unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.

### SECTION II: PHASE I VAPOR RECOVERY SYSTEM AND TESTING REQUIREMENTS

3. Except for diesel transfers, Phase I vapor recovery systems shall be in full operation whenever gasoline fuel is being transferred into the storage tanks.
4. A static torque test of rotatable phase I adaptors shall be conducted to quantify the amount of static torque required to start the rotation of the rotatable of the rotatable phase I adaptors. The test shall be conducted in accordance with the test procedure method outlined in TP-201.1B (October 8, 2003) as a performance test and as

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**PERMIT TO CONSTRUCT/OPERATE**

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a reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.

- 5. Depending on the system configuration, either a leak rate test of drop tube/drain valve assembly shall be conducted to quantify the pressure integrity of both the drop tube and drain valve seal or a leak rate test of drop tube overflow prevention device and drain valve shall be conducted to quantify the pressure integrity of the drop tube overflow prevention device and the pressure integrity of the spill container drain valve. Either test shall be conducted in accordance with test procedure method TP-201.1C (October 8, 2003) or TP-201.1D (October 8, 2003), respectively. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
- 6. A leak rate and cracking pressure test of pressure/vacuum relief vent valves shall be conducted within ten (10) days after the start of operation of the phase I EVR equipment and at least once every three (3) years thereafter to determine the pressure and vacuum at which the pressure/vacuum vent valve actuates, and to determine the volumetric leak rate at a given pressure. The test shall be conducted in accordance with the test procedure method TP-201.1E (October 8, 2003). Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test. This test result shall be kept on site for three (3) years and made available to District representatives upon request.

**SECTION III: PHASE II VAPOR RECOVERY SYSTEM AND TESTING REQUIREMENTS**

- 7. Except for diesel transfers, Phase II vapor recovery systems shall be in full operation whenever fuel is being transferred into motor vehicles, as defined in Rule 461.
- 8. A static pressure integrity test shall be conducted to demonstrate that the storage tanks, the remote and/or nozzle vapor recovery check valves, associated vapor return piping and fittings are free from vapor leaks. The test shall be conducted in accordance with CARB test procedure method TP-201.3 (March 17, 1999), as a performance test and as a reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
- 9. The static pressure leak decay test TP-201.3, shall be conducted in accordance with the most recent version of Exhibit 8 of CARB Executive Order VR-202. Verification of completing each step as outlined shall be documented by submitted a copy of Exhibit 8 to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
- 10. The phase II vapor recovery system shall be installed, operated, and maintained such that the maximum allowable pressure through the riser, and underground piping does not exceed the dynamic back pressure described by the California Air Resources Board Executive Order by which the system was certified:

NITROGEN FLOWRATES  
(CFH)  
60

DYNAMIC BACK PRESSURE  
(INCHES OF WATER)  
0.50

Dynamic back pressure tests shall be conducted as a performance test to determine the phase II system vapor recovery back pressures. The tests shall be conducted in accordance with CARB test procedure TP-201.4, Methodology 4 and 6 (July 3, 2002); as a performance test. This test shall be a one-time test and the results kept permanently on site. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.



CONTINUATION OF PERMIT TO CONSTRUCT/OPERATE

11. A static pressure performance test for the Healy clean air separator using both the vacuum decay procedure and the positive pressure procedure shall be conducted to quantify the vapor tightness of the Healy clean air separator tank pressure management system. These tests shall be conducted in accordance with the latest version of Exhibit 4 of CARB Executive Order VR-202 as a performance test and reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
12. A vapor to liquid volume ratio test shall be conducted to quantify the vapor to liquid (V/L) volumetric ratio of the Healy clean air separator system. The test shall be conducted in accordance with the latest version of Exhibit 5 of CARB Executive Order VR-202, as a performance test and reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
13. A nozzle bag test shall be conducted on the Healy phase II EVR nozzles to verify the integrity of the vapor valve. The test shall be conducted on any newly installed or replaced Healy phase II EVR nozzles and in accordance with the latest version of Exhibit 7 of CARB Executive Order VR-202. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.

**SECTION IV: IN-STATION DIAGNOSTICS SYSTEM AND TESTING REQUIREMENTS**

14. An ISD operability test shall be conducted in accordance with the latest version of either Exhibit 9 for the Veeder-Root ISD system or Exhibit 10 for the Incon VRM ISD system of CARB Executive Order VR-202 to verify the equipment's operability for vapor containment monitoring and vapor collection monitoring. The test shall be conducted as a performance test and reverification test. Furthermore, the ISD operability test shall be conducted immediately whenever a vapor pressure sensor or a vapor flow meter is replaced. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
15. Within two (2) hours of detecting the first ISD warning alarm by the ISD system, the facility attendant shall notify the responsible company official or their designee and request immediate service to correct the problem. All information relating to the alarm event and reporting shall be immediately recorded on an SCAQMD approved form and shall be made available to the District representative upon request. Only persons authorized by the applicable CARB certification Executive Orders shall be allowed to make vapor recovery repairs, ISD system repairs, or to reset ISD alarms.
16. If a second ISD warning alarm occurs indicating that the same problem still exists or if a failure alarm occurs where gasoline dispensing is terminated, the ISD system may be reset to allow for vehicle fueling to resume only if:
  - A) The fueling point(s) associated with the problem that triggered the failure alarm is isolated and not operated until the required repairs have been completed; or
  - B) An order for abatement or other administrative relief has been issued by the SCAQMD Hearing Board allowing gasoline dispensing to continue; or
  - C) All required repairs to correct the problem that triggered the second warning or failure alarm have been completed, and the necessary applicable tests or procedures have been performed:

DISPLAYED MESSAGE

APPLICABLE TEST(S) OR PROCEDURE(S)

ISD VAPOR LEAKAGE

TP-201.3, TP-201.1C, or TP-201.1D



**PERMIT TO CONSTRUCT/OPERATE**

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<p>ISD GROSS PRESSURE</p>     <p>Hnn: GROSS COLLECT Hnn: DEGRD COLLECT ISD SENSOR OUT ISD SETUP</p>	<p>Dispenser vapor line integrity test (Section B-3 installation, operation, maintenance manual) Exhibit 4 (Executive Order VR-202) Exhibit 5 (Executive Order VR-202) Exhibit 9 (Pressure sensor only Executive Order VR-202), or Flow rate verification (Section 1.2.3; Installation, operation, maintenance manual) Exhibit 5 (Executive Order VR-202) Exhibit 5 (Executive Order VR-202) Section 2 (ISD Install, setup &amp; operation manual) Section 3 (ISD Install, setup &amp; operation manual)</p>
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At a minimum, all information relating to the alarm event, course of action taken, repairs made, and tests or procedures performed shall be immediately recorded on an SCAQMD approved form and shall be made available to the District representative upon request.

- 17. The clear test after repair (reset) function for the Veeder-Root ISD system shall only be utilized once after the first ISD warning alarm or if the owner/operator has completed either condition 16A, 16B, or 16C above. The clear test after repair (reset) function for a specific alarm shall not be utilized when there is no such alarm posted.
- 18. There shall be no gasoline dispensing if the ISD system is shut off, tampered with, disconnected, or otherwise disabled.

**SECTION V: GENERAL REQUIREMENTS**

- 19. All Phase I and Phase II vapor recovery equipment at this facility shall be installed, operated and maintained to meet all California Air Resources Board certification requirements.
- 20. All permit conditions applicable to the equipment described in the previous Permit to Operate N30862 shall remain in effect until the new or modified equipment is constructed and operated as described in this new permit. This Permit to Construct/Operate shall become invalid if the modification as described in the equipment description has not been completed within one year from the issue date. If the modification has not been completed within one year from the issue date of the permit, a written request shall be submitted to the SCAQMD (Attention: Randy Matsuyama) to reinstate the previously inactivated permit to operate. A new application shall be filed if there are plans to continue with the modification. Furthermore, this condition does not allow any time extensions to any modifications required by the California Air Resources Board or SCAQMD.
- 21. The District at its discretion may wish to witness the installation and/or performance testing of the new vapor recovery equipment. At least seventy-two (72) hours prior to the installation of the equipment and any of the mentioned testing requirements in this permit, the applicant shall notify the SCAQMD by methods specified at the time by the Executive Officer. Such notification shall include the name of the owner or operator, the name of the contractor, the location of the facility, and the scheduled start and completion dates of the tests to be performed.
- 22. New equipment installations and subsequent service and repairs for any certified component for which this permit was issued, shall only be performed by a current and certified person who has successfully completed the



CONTINUATION OF PERMIT TO CONSTRUCT/OPERATE

manufacturer's training course and appropriate International Code Council (ICC) certification. Completion of any SCAQMD training course does not constitute as a substitute for this requirement. Proof of successful completion of any manufacturer training course shall be with the manufacturer.

23. At least seventy-two (72) hours prior to back-filling any underground storage tank or piping, the SCAQMD shall be notified electronically or other means as specified by the Executive Officer. Such notification shall include the name of the owner or operator; the name of the contractors; the location of the facility; and the scheduled start and completion dates of the back-filling procedure. The back-filling procedure shall not commence until inspected by a District representative.
24. Unless SCAQMD Rule 461 requires a more frequent testing or inspection schedule, the owner/operator shall be responsible to perform the scheduled weekly, quarterly, and annual inspections as outlined in the CARB approved Installation, Operation, and Maintenance manual for both the phase I and phase II EVR system, as well as all the required vapor recovery system tests as per the current and appropriate CARB Executive Order.
25. The SCAQMD shall be notified electronically or other means as specified by the Executive Officer at least seventy-two (72) hours prior to any of the above mentioned testing requirements. Such notification shall include the name of the owner or operator, the name of the contractor, the location of the facility, and the scheduled start and completion dates of the tests to be performed.
26. A copy of the pass/fail test results shall be sent electronically or other means as specified by the Executive Officer within seventy-two (72) hours after each test is conducted. Furthermore, the final test results demonstrating compliance shall be submitted electronically or other means as specified by the Executive Officer within fourteen (14) calendar days from the date when all tests were passed. The test report shall include at a minimum all the required records of all tests performed, test data, current SCAQMD facility ID number of the location being tested, the equipment permit to operate or application number, the SCAQMD ID number of the company performing the tests, a statement whether the system or component tested meets the required standards, and the name, SCAQMD tester ID number and signature of the person responsible for conducting the tests.
27. The testing for the above mentioned tests shall be conducted in accordance with the most recent Rule 461 amendment or CARB Executive Order requirements, whichever is more stringent.
28. All records and test results that are required to be maintained by Rule 461 shall be kept on site for four (4) years and made available to District representatives upon request.

**SECTION VI: GASOLINE THROUGHPUT REQUIREMENTS**

29. The maximum quantity of gasoline dispensed from the gasoline storage tank at this facility shall not exceed 204,900 gallons in any one calendar month nor 2,458,800 gallons in any one calendar year.
30. Records of monthly annual fuel dispensed shall be prepared, shall be retained on site for two years, and shall be made available to District representatives upon request.
31. The owner/operator shall submit the facility's monthly gasoline throughput data for the previous calendar year to the Executive Officer on or before March 1 following each calendar year.



South Coast Air Quality Management District  
21865 Copley Drive, Diamond Bar, CA 91765-4178

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Permit No.  
N31352  
A/N 603094

## PERMIT TO CONSTRUCT/OPERATE

### CONTINUATION OF PERMIT TO CONSTRUCT/OPERATE

#### NOTICE

In accordance with Rule 206, this permit to operate or copy shall be posted on or within 8 meters of the equipment.

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State Of California or the rules of the Air Quality Management District. This permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.

EXECUTIVE OFFICER

A handwritten signature in blue ink, appearing to read "L. Tisopoulos", written over a horizontal line.

BY LAKI TISOPULOS, PhD/ND02  
5/27/2018

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**APPENDIX C2**

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**Permit ID 118665**



This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.  
If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

LEGAL OWNER  
OR OPERATOR:

GALINDO'S CLEANERS  
526 W ALONDRA BLVD  
COMPTON, CA 90220

ID 118665

**Equipment Location:** 526 W ALONDRA BLVD, COMPTON, CA 90220

**Equipment Description:**

SYNTHETIC SOLVENT DRY CLEANING UNIT, PERCHLOROETHYLENE, LINDUS, MODEL NO. 350R, WITH INTEGRAL PRIMARY, SECONDARY AND FUGITIVE CONTROLS.

**Conditions:**

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
- 3) THE TOTAL QUANTITY OF SOLVENT THAT IS REPLENISHED IN THIS EQUIPMENT SHALL NOT EXCEED 3.5 GALLONS PER MONTH.
- 4) A TEMPERATURE GAUGE WITH A MINIMUM RANGE OF 0 TO 150 DEGREES FAHRENHEIT SHALL BE INSTALLED IN THE OUTLET DUCT OF THE CONDENSER.
- 5) THE REFRIGERATED VAPOR CONDENSER ON THE DRY-TO-DRY UNIT SHALL BE OPERATED DURING THE CLOSED LOOP COOL-DOWN PERIOD UNTIL THE AIR TEMPERATURE AT THE CONDENSER OUTLET IS 45 DEGREES FAHRENHEIT OR LOWER.
- 6) COMPLETE RECORDS OF MONTHLY REPLENISHED SOLVENT SHALL BE PREPARED, KEPT FOR AT LEAST TWO YEARS AND BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
- 7) ALL WASTE MATERIALS WHICH HAVE COME INTO CONTACT WITH ANY SOLVENT SHALL BE DISCARDED AS HAZARDOUS WASTE.
- 8) THIS EQUIPMENT SHALL COMPLY WITH RULE 1421 (d)(2)(B).



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 East Copley Drive, Diamond Bar, CA 91765

**PERMIT TO CONSTRUCT/OPERATE**

page 2  
Permit No.  
**F19693**  
**A/N 350190**

**CONTINUATION OF PERMIT TO CONSTRUCT/OPERATE**

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

*Dorris M. Bailey*

By Dorris M. Bailey/gv02  
2/23/1999

**FILE COPY**



**APPENDIX C3**

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**Permit ID 185608**



**PERMIT TO OPERATE**

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.  
If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

**Legal Owner  
or Operator :**

ACE FUELS INC  
390 W COMPTON BLVD  
COMPTON, CA 90220

ID 185608

**Equipment Location:** 390 W COMPTON BLVD, COMPTON, CA 90220

**Equipment Description:**

Fuel Storage and Dispensing Facility Consisting of:

- 1) 3 - Gasoline Underground Storage Tanks, Each 10,000 Gallon Capacity, Equipped with Phase I Vapor Recovery System OPW (VR-102-L/Q), 3 Methanol Compatible.
- 2) 8 - Gasoline Balance Nozzles Dispensing 24 Products Equipped with Balance Phase II Enhanced Vapor Recovery (EVR) System with a Veeder-Root Vapor Filter Processor Processor Including Veeder-Root In-Station Diagnostics (ISD) System (VR-204-M/V).

**CONDITIONS**

**SECTION I: GENERAL CONDITIONS**

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.

**SECTION II: PHASE I VAPOR RECOVERY SYSTEM AND TESTING REQUIREMENTS**

3. Except for diesel transfers, phase I vapor recovery systems shall be in full operation whenever fuel is being transferred into storage tanks.

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**PERMIT TO OPERATE**

CONTINUATION OF PERMIT TO OPERATE

- 4. Depending on the system configuration, either a leak rate test of drop tube/drain valve assembly shall be conducted to quantify the pressure integrity of both the drop tube and drain valve seal or a leak rate test of drop tube overflow prevention device and drain valve shall be conducted to quantify the pressure integrity of the drop tube overflow prevention device and the pressure integrity of the spill container drain valve. Either test shall be conducted in accordance with test procedure method TP-201.1C (October 8, 2003) or TP-201.1D (October 8, 2003), respectively. Results shall be submitted to the SCAQMD, office of Compliance and Enforcement, within seventy-two (72) hours of test.
- 5. A static torque test of rotatable phase I adaptors shall be conducted to quantify the amount of static torque required to start the rotation of the rotatable phase I adaptors. The test shall be conducted in accordance with the test procedure method outlined in TP-201.1B (October 8, 2003) as a performance test and as a reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement, within seventy-two (72) hours of test.
- 6. A leak rate and cracking pressure test of pressure/vacuum relief vent valves shall be conducted within ten days (10) after the start of operation of the phase I EVR equipment and at least once every three (3) years thereafter to determine the pressure and vacuum at which the pressure/vacuum vent valve actuates, and to determine the volumetric leak rate at a given pressure. The test shall be conducted in accordance with the test procedure method TP-201.1E (October 8, 2003). Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement, within seventy-two (72) hours of test. This test result shall be kept on site for three (3) years and made available to District representatives upon request.

**SECTION III: PHASE II VAPOR RECOVERY SYSTEM AND TESTING REQUIREMENTS**

- 7. Except for diesel transfers, phase II vapor recovery systems shall be in full operation whenever fuel is being transferred into motor vehicles, as defined in Rule 461.
- 8. The static pressure leak decay test TP-201.3 shall be conducted in accordance with the most recent version of Exhibit 4 of CARB Executive Order VR-204. Verification of completing each step as outlined shall be documented by submitting a copy of Exhibit 4 to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
- 9. A static pressure integrity test shall be conducted to demonstrate that the storage tanks, the remote and/or nozzle vapor recovery check valves, associated vapor return piping and fittings are free from vapor leaks. The test shall be conducted in accordance with CARB test procedure method TP-201.3 (March 17, 1999), as a performance test and as a reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement, within seventy-two (72) hours of test.
- 10. The Phase II vapor recovery system shall be installed, operated, and maintained such that the maximum allowable pressure through the system including nozzle, vapor hose, swivels, and underground piping does not exceed the dynamic back pressures described by the California Air Resources Board Executive Order by which the system was certified:

NITROGEN FLOWRATES	DYNAMIC BACK PRESSURE
(CFH)	(Inches of Water)
60	0.35



**PERMIT TO OPERATE**

CONTINUATION OF PERMIT TO OPERATE

80

0.62

Dynamic back pressure tests shall be conducted to determine the Phase II system vapor recovery back pressures. The tests shall be conducted in accordance with CARB test procedure TP-201.4, Methodology 1 (July 3, 2002); as a performance test and as a reverification test. Furthermore, CARB test procedure TP-201.4, Methodology 6 (July 3, 2002); shall be conducted within ten (10) days from start of operation as a performance test only. A copy of the TP-201.4, Methodology 6 test result shall remain permanently on site. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of tests.

11. A liquid removal test shall be conducted to quantify the removal rate of liquid from the vapor passage of a phase II balance system hose equipped with a liquid removal device. The test shall be conducted in accordance with the latest version of Exhibit 5 of CARB Executive Order VR-204 as a performance test and reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
12. The dynamic back pressure tests TP-201.4 shall be conducted in accordance with the latest version of Exhibit 6 of CARB Executive Order VR-204. Verification of completing each step as outlined shall be documented by submitting a copy of Exhibit 6 to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
13. A Veeder-Root vapor pressure sensor verification test shall be conducted to determine the pressure management control vapor pressure sensor is operating in accordance with the pressure sensor requirements. The test shall be conducted in accordance with the latest version of Exhibit 10 of CARB Executive Order VR-204 as a performance test and reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
14. A nozzle bag test shall be conducted on the balance phase II EVR nozzles to verify the integrity of the vapor valve. The test shall be conducted on any newly installed or replaced balance phase II EVR nozzles and in accordance with the latest version of Exhibit 7 of CARB Executive Order VR-204. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
15. A Veeder-Root vapor polisher operability test shall be conducted to verify the pressure integrity of the vapor polisher, confirm that the operating pressure is within certification parameters at a known flow rate, and verify the reading of the various thermometer elements and atmospheric pressure sensor. The test shall be conducted in accordance with the latest version of all of Exhibit 11 of CARB Executive Order VR-204. The test shall be conducted as a performance test and as a reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
16. A Veeder-Root vapor polisher hydrocarbon emissions verification test shall be conducted in accordance with the latest version of Exhibit 12 of CARB Executive Order VR-204 to verify the proper performance of the Veeder-Root vapor polisher. The test shall be conducted as a performance test and as a reverification test. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.



## PERMIT TO OPERATE

### CONTINUATION OF PERMIT TO OPERATE

17. If the security seal tag on the vapor polisher is broken or missing, the owner/operator shall perform both a Veeder-Root vapor polisher operability test (Exhibit 11), and a Veeder-Root vapor polisher hydrocarbon emissions verification test (Exhibit 12) within seven (7) days of discovery, or when it should be reasonably known that such seal is missing or broken. Within seven (7) days of a report of a missing or broken security seal tag, a new security seal tag shall be applied to the vapor polisher only by a manufacturer representative and only immediately after passing the above required tests. A new security seal tag shall not be placed and the vapor polisher shall be replaced with a new one if the vapor polisher failed any such tests.
18. If the vapor processor unit is not accessible for inspection and performing tests purposes from ground level, the owner/operator shall provide safe access, which is on-site and immediately available upon request, to the vapor processor unit. The access shall be constructed in accordance with the general industry safety orders of the State of California or in compliance with standards specified by the Division of Occupational Safety and Health of the California Department of Industrial Relations (i.e. CAL/OSHA).

#### SECTION IV: IN-STATION DIAGNOSTICS SYSTEM AND TESTING REQUIREMENTS

19. An ISD vapor flow meter operability test shall be conducted in accordance with the latest version of Exhibit 17 for the Veeder-Root ISD system of CARB Executive Order VR-204 to verify the equipment's operability for vapor containment monitoring and vapor collection monitoring. The test shall be conducted as a performance test and reverification test. Furthermore, the ISD operability test shall be conducted immediately whenever a vapor pressure sensor or a vapor flow meter is replaced. Results shall be submitted to the SCAQMD, Office of Compliance and Enforcement within seventy-two (72) hours of test.
20. Within two (2) hours of detecting the first ISD warning alarm by the ISD system, the facility attendant shall notify the responsible company official or their designee and request immediate service to correct the problem. All information relating to the alarm event and reporting shall be immediately recorded on an SCAQMD approved form and shall be made available to the District representative upon request. Only persons authorized by the applicable CARB certification Executive Orders shall be allowed to make vapor recovery repairs, ISD system repairs, or to reset ISD alarms.
21. If a second ISD warning alarm occurs indicating that the same problem still exists or if a failure alarm occurs where gasoline dispensing is terminated, the ISD system may be reset to allow for vehicle fueling to resume only if:
  - A) The fueling point(s) associated with the problem that triggered the failure alarm is isolated and not operated until the required repairs have been completed; or
  - B) An order for abatement or other administrative relief has been issued by the SCAQMD Hearing Board allowing gasoline dispensing to continue; or
  - C) All required repairs to correct the problem that triggered the second warning or failure alarm have been completed, and the necessary applicable tests or procedures have been performed. A listing of the required tests and or procedures can be found in CARB'S Executive Order VR-204 installation, operation, and maintenance manual, section 12 (Veeder-Root: ISD installation manual), subsection 5 (operation), table 3 (ISD alarm summary), and tables 4 and 5 (other alarms).

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CONTINUATION OF PERMIT TO OPERATE

At a minimum, all information relating to the alarm event, course of action taken, repairs made, and tests or procedures performed shall be immediately recorded on an SCAQMD approved form and shall be made available to the District representative upon request.

22. The clear test after repair (reset) function for the Veeder-Root ISD system shall only be utilized once after the first ISD warning alarm or if the owner/operator has completed either of the parameters mentioned in the above permit condition. The clear test after repair (reset) function for a specific alarm shall not be utilized when there is no such alarm posted.
23. There shall be no gasoline dispensing if the ISD system is shut off, tampered with, disconnected, or otherwise disabled.

**SECTION V: GENERAL REQUIREMENTS**

24. All phase I and phase II vapor recovery equipment at this facility shall be installed, operated and maintained to meet all California Air Resources Board certification requirements.
25. New equipment installations and subsequent service and repairs for any certified component for which this permit was issued, shall only be performed by a current and certified person who has successfully completed the manufacturer's training course and appropriate International Code Council (ICC) certification or CARB equivalent training. Completion of any SCAQMD training course does not constitute as a substitute for this requirement. Proof of successful completion of any manufacturer training course shall be with the manufacturer.
26. Unless SCAQMD Rule 461 requires a more frequent testing or inspection schedule, the owner/operator shall be responsible to perform the scheduled weekly, quarterly, and annual inspections as outlined in the CARB approved installation, operation, and maintenance manual for the balance phase II EVR systems, as well as all the required vapor recovery system tests as per the current and appropriate CARB Executive Order.
27. The SCAQMD shall be notified electronically or other means as specified by the Executive Officer at least seventy-two (72) hours prior to any of the above mentioned testing requirements. Such notification shall include the name of the owner or operator; the name of the contractor; the location of the facility; and the scheduled start and completion dates of the tests to be performed.
28. The testing for the above mentioned tests shall be conducted in accordance with the most recent Rule 461 amendment or CARB Executive Order requirements, whichever is more stringent.
29. All records and test results that are required to be maintained by Rule 461 shall be kept on site for four years and made available to District representatives upon request.

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CONTINUATION OF PERMIT TO OPERATE

30. A copy of the pass/fail test results shall be sent electronically or other means as specified by the Executive Officer within seventy-two (72) hours after each test is conducted. Furthermore, the final test results demonstrating compliance shall be submitted electronically or other means as specified by the executive officer within fourteen (14) calendar days from the date when all tests were passed. The test report shall include at a minimum all the required records of all tests performed, test data, current SCAQMD facility ID number of the location being tested, the equipment permit to operate or application number, the SCAQMD ID number of the company performing the tests, a statement whether the system or component tested meets the required standards, and the name, SCAQMD tester ID number and signature of the person responsible for conducting the tests.

**SECTION VI: GASOLINE THROUGHPUT REQUIREMENTS**

31. The maximum quantity of gasoline dispensed from the storage tanks at this facility shall not exceed 258,000 gallons in any one calendar month nor 3,096,000 gallons in any one calendar year.
32. Records of monthly and annual fuel dispensed shall be prepared, shall be retained on site for two years, and shall be made available to District representatives upon request.
33. The owner/operator shall submit the facility's monthly gasoline throughput data for the previous calendar year to the Executive Officer on or before March 1 following each calendar year.



**PERMIT TO OPERATE**

CONTINUATION OF PERMIT TO OPERATE

**NOTICE**

In accordance with Rule 206, this Permit to Operate or copy shall be posted on or within 8 meters of the equipment.

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the applicable Rules and Regulations of the South Coast Air Quality Management District (SCAQMD). This permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.

Executive Officer

A handwritten signature in blue ink, appearing to read "L. Tisopoulos".

BY LAKI TISOPULOS, PhD/JM04  
6/10/2018

**FILE COPY**



**APPENDIX C4**

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**Permit ID 138071**



**PERMIT TO CONSTRUCT/OPERATE**

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership  
If the billing for the annual renewal fee (Rule 301 f) is not received by the expiration date, contact the District

Legal Owner  
or Operator

LA CO SHERIFF'S DEPT, FAC SERVS BUREAU  
4700 RAMONA BLVD  
MONTEREY PARK, CA 91754

ID 138071

**Equipment Location** 301 S WILLOWBROOK AVE, COMPTON, CA 90220

**Equipment Description**

INTERNAL COMBUSTION ENGINE, GENERAC, MODEL NO 12 0DTA, TURBOCHARGED,  
AFTERCOOLED, DIESEL FUELED, RATED AT 354 B H P , DRIVING AN EMERGENCY ELECTRICAL  
GENERATOR

**Conditions**

- 1 OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW
- 2 THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES
- 3 SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THE ENGINE SHALL NOT EXCEED 0.05% BY WEIGHT
- 4 AFTER JUNE 1, 2004, THE OPERATOR SHALL NOT PURCHASE ANY DIESEL FUEL UNLESS THE FUEL IS LOW SULFUR DIESEL FOR WHICH THE SULFUR CONTENT DOES NOT EXCEED 15 PPM BY WEIGHT AS SUPPLIED BY THE SUPPLIER
- 5 THIS ENGINE SHALL NOT BE OPERATED MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES
- 6 AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME

**FILE COPY**



**PERMIT TO CONSTRUCT/OPERATE**

CONTINUATION OF PERMIT TO CONSTRUCT/OPERATE

- 7 AN ENGINE OPERATING LOG SHALL BE KEPT AND MAINTAINED ON FILE TO RECORD WHEN THIS ENGINE IS STARTED MANUALLY THE LOG SHALL LIST THE DATE OF OPERATION, THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION, AND THE REASON FOR OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF TWO CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR
- 8 OPERATION BEYOND 50 HOURS PER YEAR FOR MAINTENANCE AND TESTING IS ALLOWED ONLY IN THE EVENT OF LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE PROVIDED THAT
- 1) THE ELECTRICAL GRID OPERATOR OR ELECTRIC UTILITY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME
  - 2) THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE

**NOTICE**

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUES OF OTHER GOVERNMENT AGENCIES

EXECUTIVE OFFICER

*Dorris M Bailey*

By Dorris M Bailey/NJ02

1/28/2004

**FILE COPY**



**Table A1**  
**Quantification of Carcinogenic Risks and Noncarcinogenic Hazards**  
**40 Year Exposure Scenario / Maximum Residential Receptor at Ground Level**

Source (a)	Concentration (ug/m <sup>3</sup> ) (b) (c)		Weight Fraction (d)	Contaminant (e)	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints*									
	URF (ug/m <sup>3</sup> ) <sup>-1</sup> (f)	CPF (mg/kg-day) <sup>-1</sup> (g)			DOSE (mg/kg-day) (h)	RISK (i)	REL (ug/m <sup>3</sup> ) (j)	RfD (mg/kg/day) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)		
Cair	1.95	2.0E-03	4.91E-01	Benzene	2.9E-05	1.0E-01	1.3E-05	4.7E-07	3.0E+00	8.6E-04	3.2E-01							
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	8.1E-06	6.3E-08	9.0E+00	2.6E-03	6.9E-02							6.9E-02
			2.10E-02	1,3-Butadiene	1.7E-04	6.0E-01	5.4E-07	1.2E-07	2.0E+00	5.7E-04	2.0E-02							2.0E-02
			5.70E-02	Acetaldehyde	2.7E-06	9.5E-03	1.5E-06	5.1E-09	1.4E+02	4.0E-02	7.9E-04							7.9E-04
			2.60E-02	Acrolein		0.0E+00	6.7E-07	0.0E+00	3.5E-01	1.0E-04	1.4E-01							1.4E-01
			1.00E+00	Perchloroethylene	6.1E-06	2.1E-02	2.6E-05	2.0E-07	3.5E+01	1.0E-02					5.6E-02			
		1.00E+00	Particulate Matter	3.0E-04	1.1E+00	2.6E-05	1.0E-05	5.0E+00	1.4E-03	3.9E-01								
TOTAL							1.1E-05			9.4E-01	0.0E+00	0.0E+00	0.0E+00	5.6E-02	0.0E+00	0.0E+00	2.3E-01	

\* Key to Toxicological Endpoints

RESP Respiratory System  
 CNS/PNS Central/Peripheral Nervous System  
 CV/BL Cardiovascular/Blood System  
 IMMUN Immune System  
 KIDN Kidney  
 GI/LV Gastrointestinal System/Liver  
 REPRO Reproductive System (e.g. teratogenic and developmental effects)  
 EYES Eye irritation and/or other effects

$$\text{Cancer Risk} = \text{Cair (ug/m}^3\text{)} \times \text{CPF (kg-day/mg)} \times \text{A} \times \text{CEF}$$

$$\text{Dose} = (\text{Cair} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{CF}) / \text{AT}$$

Note: Exposure factors used to calculate contaminant intake

Cair	Concentration in air (from AERMOD)		
EF	exposure frequency (days/year)	240	
	exposure duration (years)	40	
DBR	Daily Breathing Rate	350	
	inhalation rate (L/kg-day)	20	
A	inhalation absorption factor	1	
ED or AT	averaging time (years)	70	
FAH	fraction of time at home	1	
ASF	age sensitivity factor	10	
DBR	breathing rate	361	Third Trimester
DBR	breathing rate	1090	Age 0 to 2
	Weighted Breathing rate	20	

**Table A2**  
**Quantification of Carcinogenic Risks and Noncarcinogenic Hazards**  
**4 Year Exposure Scenario / Maximum Residential Receptor at Ground Level**

Source (a)	Concentration		Weight Fraction (d)	Contaminant (e)	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints*										
	(ug/m <sup>3</sup> ) (b)	(mg/m <sup>3</sup> ) (c)			URF (ug/m <sup>3</sup> ) <sup>-1</sup> (f)	CPF (mg/kg/day) <sup>-1</sup> (g)	DOSE (mg/kg-day) (h)	RISK (i)	REL (ug/m <sup>3</sup> ) (j)	RfD (mg/kg/day) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)	
Cair	1.95	2.0E-03	4.91E-01	Benzene	2.9E-05	1.0E-01	9.4E-06	3.5E-08	3.0E+00	8.6E-04	3.2E-01								
			3.17E-01	Formaldehyde	6.0E-06	2.1E-02	6.1E-06	4.7E-09	9.0E+00	2.6E-03	6.9E-02							6.9E-02	
			2.10E-02	1,3-Butadiene	1.7E-04	6.0E-01	4.0E-07	8.8E-09	2.0E+00	5.7E-04	2.0E-02							2.0E-02	
			5.70E-02	Acetaldehyde	2.7E-06	9.5E-03	1.1E-06	3.8E-10	1.4E+02	4.0E-02	7.9E-04							7.9E-04	
			2.60E-02	Acrolein		0.0E+00	5.0E-07	0.0E+00	3.5E-01	1.0E-04	1.4E-01							1.4E-01	
TOTAL			1.00E+00	Perchloroethylene	6.1E-06	2.1E-02	1.9E-05	1.5E-08	3.5E+01	1.0E-02					5.6E-02				
			1.00E+00	Particulate Matter	3.0E-04	1.1E+00	1.9E-05	7.8E-07	5.0E+00	1.4E-03	3.9E-01								
					8.4E-07				9.4E-01				0.0E+00	0.0E+00	0.0E+00	5.6E-02	0.0E+00	0.0E+00	2.3E-01

\* Key to Toxicological Endpoints

RESP      Respiratory System  
CNS/PNS    Central/Peripheral Nervous System  
CV/BL      Cardiovascular/Blood System  
IMMUN      Immune System  
KIDN        Kidney  
GI/LV        Gastrointestinal System/Liver  
REPRO      Reproductive System (e.g. teratogenic and developmental effects)  
EYES        Eye irritation and/or other effects

$$\text{Cancer Risk} = \text{Cair (ug/m}^3\text{)} \times \text{CPF (kg-day/mg)} \times \text{A} \times \text{CEF}$$

$$\text{Dose} = (\text{Cair} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{CF}) / \text{AT}$$

Note:      Exposure factors used to calculate contaminant intake

Cair	Concentration in air (from AERMOD)	
EF	exposure frequency (days/year)	180
	exposure duration (years)	4
DBR	Daily Breathing Rate	350
	inhalation rate (L/kg-day))	20
A	inhalation absorption factor	1
ED or AT	averaging time (years)	70
FAH	fraction of time at home	1
ASF	age sensitivity factor	10
DBR	breathing rate	361
DBR	breathing rate	1090
	Weighted Breathing rate	20

Third Trimester  
Age 0 to 2

## MERV Calculations - Faculty/Staff

### Cancer Risk Computation

Cancer Risk	1.10E-05
	1.00E-05

### Reduced Risk

Risk Reduction - Cancer risk \* reduction potential

Filtration	%windows closed							
	100%	75%	50%	25%				
MERV 16	3.33E-06	5.25E-06	7.16E-06	9.08E-06	TRUE	TRUE	TRUE	TRUE
MERV 15	3.75E-06	5.57E-06	7.38E-06	9.19E-06	TRUE	TRUE	TRUE	TRUE
MERV 14	4.18E-06	5.89E-06	7.59E-06	9.30E-06	TRUE	TRUE	TRUE	TRUE

Reduction Assumptions:

1. Assumes 77% of day is spent indoors
- 2a. Sealed HVAC system with MERV 16 or higher rated filters (90% reduction on particulates less than 0.3 microns or larger), effectiveness.
- 2b. Sealed HVAC system with MERV 15 or higher rated filters (85% reduction on particulates less than 0.3 microns or larger), effectiveness.
- 2c. Sealed HVAC system with MERV 14 or higher rated filters (80% reduction on particulates less than 0.3 microns or larger), effectiveness.
3. Institute tiered vegetation along the perimeter of the Project area.

Reduction	Time Windows Closed		
100%	75%	50%	25%
0.775	0.58125	0.3875	0.19375
0.9	0.9	0.9	0.9
0.85	0.85	0.85	0.85
0.8	0.8	0.8	0.8
N/A	N/A	N/A	NA

Total Percent Reduction 2a (1*2a)	0.6975	0.523125	0.34875	0.174375
Total Percent Reduction 2b (1*2b)	0.65875	0.494063	0.329375	0.1646875
Total Percent Reduction 2c (1*2c)	0.62	0.465	0.31	0.155

### Source

- 1 U.S. Department of Labor, Bureau of Labor Statistics. American Time Use Survey - 2012 Results, USLD-13-1178. Released June 20, 2013
- 2 National Air Filtration Association. User Guide for ANSI/ASHRAE Standard 52.2 - 1999 Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size. Retrieved from [http://www.filtera-b2b.com/businessfilters/PDFfiles/NAFA\\_Filter\\_Guide.pdf](http://www.filtera-b2b.com/businessfilters/PDFfiles/NAFA_Filter_Guide.pdf)
- 3 CARB, 2012. Status of Research on Potential Mitigation Concepts to Reduce Exposure to Nearby Traffic Pollution. August 23