EMFAC2011 MODEL OUTPUT DATA SUMMARY

EMFAC2011-SG Summary - Hayward GPU Baseline

Group	Area	Scenario	Sub-Area	Calendar Year	Season	Title	Vehicle Population	VMT	Trips	Total TOG	Total ROG	Total CO	Total NOx	Total CO2	Total CO2 (Pavley I + LCFS)	Total PM10	Total PM2_5	Total SOx	Fuel GAS (1000 gal)	Fuel DSL (1000 gal)	
1	Alameda	0	ALL	2010	Annual	Alameda (ALL) 2010 Annual	84,951.15	3,199,918.00	537,183.05	1.75	1.59	15.58	4.45	1,783.04	1,778.06	0.28	0.17	0.02	153.04	33.47	daily
1	Alameda	1	Alameda (SF)	2010	Annual	Hayward Baseline - Boundary Method	84,951.15	3,199,918.00	537,183.05	1.75	1.59	15.58	4.45	1,783.04	1,778.06	0.28	0.17	0.02	153.04	33.47	daily
										637.874	580.934	5687.9045	1625.9655	650810.5855	648990.9875	103.587	60.4075	5.986	55860.0745	12217.9005	annual

EMFAC2011-SG Summary - Hayward GPU 2035 No Project

Group	Area	Scenario	Sub-Area	Calendar Year	Season	Title	Vehicle Population	VMT	Trips	Total TOG	Total ROG	Total CO	Total NOx	Total CO2	Total CO2 (Pavley I + LCFS)	Total PM10	Total PM2_5	Total SOx	Fuel GAS (1000 gal)	Fuel DSL (1000 gal)	
1	Alameda	0	ALL	2035	Annual	Alameda (ALL) 2035 Annual	123,777.56	4,788,468.00	772,222.92	0.76	0.69	5.47	1.64	2,847.06	2,063.81	0.32	0.15	0.03	218.05	72.68	daily
1	Alameda	1	Alameda (SF)	2035	Annual	Hayward 2035 No Project - Boundary VMT	123,777.56	4,788,468.00	772,222.92	0.76	0.69	5.47	1.64	2,847.06	2,063.81	0.32	0.15	0.03	218.05	72.68	daily
										278.42	252.03	1,997.50	598.93	1,039,176.79	753,291.45	118.08	55.12	9.67	79,586.97	26,526.92	annual

EMFAC2011-SG Summary - Hayward GPU 2035 + Proposed Project

Group	Area	Scenario	Sub-Area	Calendar Year	Season	Title	Vehicle Population	VMT	Trips	Total TOG	Total ROG	Total CO	Total NOx	Total CO2	Total CO2 (Pavley I + LCFS)	Total PM10	Total PM2_5	Total SOx	Fuel GAS (1000 gal)	Fuel DSL (1000 gal)	
1	Alameda	0	ALL	2035	Annual	Alameda (ALL) 2035 Annual	124,531.12	4,817,620.00	776,924.19	0.77	0.69	5.51	1.65	2,864.39	2,076.38	0.33	0.15	0.03	219.37	73.12	daily
1	Alameda	1	Alameda (SF)	2035	Annual	Hayward 2035 Plus Project - Boundary VMT	124,531.12	4,817,620.00	776,924.19	0.77	0.69	5.51	1.65	2,864.39	2,076.38	0.33	0.15	0.03	219.37	73.12	daily
										280.247	253.602	2009.5805	602.5785	1045503.19	757877.5685	118.8075	55.3705	9.709	80071.51	26688.435	annual

HayGPU - Construction

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	299.00	Dwelling Unit	97.08	538,200.00	855
Apartments Low Rise	296.00	Dwelling Unit	18.50	296,000.00	847
Strip Mall	65.00	1000sqft	1.49	65,000.00	0
General Office Building	312.00	1000sqft	7.16	312,000.00	0
Research & Development	121.00	1000sqft	2.78	121,000.00	0
Manufacturing	13.00	1000sqft	0.30	13,000.00	0
Industrial Park	46.00	1000sqft	1.06	46,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Hayward GPU - Average Annual Construction Emissions (Project - Baseline, units and square feet, divided by 25 years).

Land Use - Inputs based on net increase in GPU land use and units (Project - Baseline), average annual growth over 25 years (2015-2040)

Construction Phase - Assume all phases occur within 1 calendar year (average annual emission). Phase lengths estimated based on varying project sizes.

Grading - -

Table Name	Column Name	Default Value	New Value

tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	220.00	175.00
tblConstructionPhase	NumDays	3,100.00	175.00
tblConstructionPhase	NumDays	200.00	12.00
tblConstructionPhase	NumDays	310.00	22.00
tblConstructionPhase	NumDays	220.00	21.00
tblConstructionPhase	NumDays	120.00	42.00
tblConstructionPhase	PhaseEndDate	1/29/2016	12/31/2015
tblConstructionPhase	PhaseEndDate	1/30/2015	1/31/2015
tblConstructionPhase	PhaseEndDate	1/29/2016	5/31/2015
tblConstructionPhase	PhaseStartDate	6/1/2015	5/1/2015
tblConstructionPhase	PhaseStartDate	1/1/2016	5/1/2015
tblGrading	AcresOfGrading	55.00	775.00
tblProjectCharacteristics	OperationalYear	2014	2015

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	21.4945	7.3895	9.0297	0.0137	1.4332	0.3710	1.8042	0.4446	0.3468	0.7914	0.0000	1,183.3341	1,183.3341	0.1423	0.0000	1,186.3224
Total	**21.4945**	**7.3895**	**9.0297**	**0.0137**	**1.4332**	**0.3710**	**1.8042**	**0.4446**	**0.3468**	**0.7914**	**0.0000**	**1,183.3341**	**1,183.3341**	**0.1423**	**0.0000**	**1,186.3224**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	21.4938	7.3830	9.0254	0.0137	1.4332	0.3706	1.8038	0.4446	0.3464	0.7910	0.0000	1,182.8301	1,182.8301	0.1422	0.0000	1,185.8156
Total	**21.4938**	**7.3830**	**9.0254**	**0.0137**	**1.4332**	**0.3706**	**1.8038**	**0.4446**	**0.3464**	**0.7910**	**0.0000**	**1,182.8301**	**1,182.8301**	**0.1422**	**0.0000**	**1,185.8156**

	ROG	**NOx**	**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	**3.3032e-003**	**0.0881**	**0.0480**	**0.0730**	**0.0000**	**0.1105**	**0.0222**	**0.0000**	**0.1096**	**0.0480**	**0.0000**	**0.0426**	**0.0426**	**0.0914**	**0.0000**	**0.0427**

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	1/15/2015	1/31/2015	5	12	
2	Site Preparation	Site Preparation	2/1/2015	3/31/2015	5	42	
3	Grading	Grading	4/1/2015	4/30/2015	5	22	
4	Building Construction	Building Construction	5/1/2015	12/31/2015	5	175	
5	Paving	Paving	5/1/2015	5/31/2015	5	21	
6	Architectural Coating	Architectural Coating	5/1/2015	12/31/2015	5	175	

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	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	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	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	505.00	155.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	101.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2015

Unmitigated Construction On-Site

Acres of Grading: 0

	ROG	NOx	CO	SO2	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	0.0271	0.2902	0.2164	2.4000e-004		0.0147	0.0147		0.0137	0.0137	0.0000	22.4648	22.4648	6.0900e-003	0.0000	22.5927
Total	**0.0271**	**0.2902**	**0.2164**	**2.4000e-004**		**0.0147**	**0.0147**		**0.0137**	**0.0137**	**0.0000**	**22.4648**	**22.4648**	**6.0900e-003**	**0.0000**	**22.5927**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7600e-003	5.7000e-004	5.5200e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.2000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7695	0.7695	5.0000e-005	0.0000	0.7705
Total	**1.7600e-003**	**5.7000e-004**	**5.5200e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.2000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7695**	**0.7695**	**5.0000e-005**	**0.0000**	**0.7705**

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	0.0270	0.2898	0.2162	2.4000e-004		0.0147	0.0147		0.0137	0.0137	0.0000	22.4380	22.4380	6.0800e-003	0.0000	22.5658
Total	**0.0270**	**0.2898**	**0.2162**	**2.4000e-004**		**0.0147**	**0.0147**		**0.0137**	**0.0137**	**0.0000**	**22.4380**	**22.4380**	**6.0800e-003**	**0.0000**	**22.5658**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7600e-003	5.7000e-004	5.5200e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.2000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7695	0.7695	5.0000e-005	0.0000	0.7705
Total	**1.7600e-003**	**5.7000e-004**	**5.5200e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.2000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7695**	**0.7695**	**5.0000e-005**	**0.0000**	**0.7705**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

Acres of Grading: 775

	ROG	NOx	CO	SO2	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					0.3794	0.0000	0.3794	0.2085	0.0000	0.2085	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1105	1.1947	0.8953	8.2000e-004		0.0649	0.0649		0.0597	0.0597	0.0000	78.3324	78.3324	0.0234	0.0000	78.8234

Total	**0.1105**	**1.1947**	**0.8953**	**8.2000e-004**	**0.3794**	**0.0649**	**0.4442**	**0.2085**	**0.0597**	**0.2682**	**0.0000**	**78.3324**	**78.3324**	**0.0234**	**0.0000**	**78.8234**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3900e-003	2.3900e-003	0.0232	4.0000e-005	3.4300e-003	3.0000e-005	3.4600e-003	9.1000e-004	3.0000e-005	9.4000e-004	0.0000	3.2319	3.2319	1.9000e-004	0.0000	3.2360
Total	**7.3900e-003**	**2.3900e-003**	**0.0232**	**4.0000e-005**	**3.4300e-003**	**3.0000e-005**	**3.4600e-003**	**9.1000e-004**	**3.0000e-005**	**9.4000e-004**	**0.0000**	**3.2319**	**3.2319**	**1.9000e-004**	**0.0000**	**3.2360**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3794	0.0000	0.3794	0.2085	0.0000	0.2085	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1104	1.1933	0.8942	8.2000e-004		0.0648	0.0648		0.0596	0.0596	0.0000	78.2392	78.2392	0.0234	0.0000	78.7297
Total	**0.1104**	**1.1933**	**0.8942**	**8.2000e-004**	**0.3794**	**0.0648**	**0.4442**	**0.2085**	**0.0596**	**0.2681**	**0.0000**	**78.2392**	**78.2392**	**0.0234**	**0.0000**	**78.7297**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3900e-003	2.3900e-003	0.0232	4.0000e-005	3.4300e-003	3.0000e-005	3.4600e-003	9.1000e-004	3.0000e-005	9.4000e-004	0.0000	3.2319	3.2319	1.9000e-004	0.0000	3.2360
Total	**7.3900e-003**	**2.3900e-003**	**0.0232**	**4.0000e-005**	**3.4300e-003**	**3.0000e-005**	**3.4600e-003**	**9.1000e-004**	**3.0000e-005**	**9.4000e-004**	**0.0000**	**3.2319**	**3.2319**	**1.9000e-004**	**0.0000**	**3.2360**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4772	0.0000	0.4772	0.0808	0.0000	0.0808	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0745	0.8695	0.5592	6.8000e-004		0.0418	0.0418		0.0385	0.0385	0.0000	64.7264	64.7264	0.0193	0.0000	65.1322
Total	**0.0745**	**0.8695**	**0.5592**	**6.8000e-004**	**0.4772**	**0.0418**	**0.5190**	**0.0808**	**0.0385**	**0.1193**	**0.0000**	**64.7264**	**64.7264**	**0.0193**	**0.0000**	**65.1322**

Unmitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-003	1.3900e-003	0.0135	2.0000e-005	2.0000e-003	2.0000e-005	2.0200e-003	5.3000e-004	2.0000e-005	5.5000e-004	0.0000	1.8810	1.8810	1.1000e-004	0.0000	1.8834
Total	**4.3000e-003**	**1.3900e-003**	**0.0135**	**2.0000e-005**	**2.0000e-003**	**2.0000e-005**	**2.0200e-003**	**5.3000e-004**	**2.0000e-005**	**5.5000e-004**	**0.0000**	**1.8810**	**1.8810**	**1.1000e-004**	**0.0000**	**1.8834**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4772	0.0000	0.4772	0.0808	0.0000	0.0808	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0744	0.8685	0.5586	6.8000e-004		0.0418	0.0418		0.0384	0.0384	0.0000	64.6494	64.6494	0.0193	0.0000	65.0547
Total	**0.0744**	**0.8685**	**0.5586**	**6.8000e-004**	**0.4772**	**0.0418**	**0.5190**	**0.0808**	**0.0384**	**0.1192**	**0.0000**	**64.6494**	**64.6494**	**0.0193**	**0.0000**	**65.0547**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-003	1.3900e-003	0.0135	2.0000e-005	2.0000e-003	2.0000e-005	2.0200e-003	5.3000e-004	2.0000e-005	5.5000e-004	0.0000	1.8810	1.8810	1.1000e-004	0.0000	1.8834
Total	**4.3000e-003**	**1.3900e-003**	**0.0135**	**2.0000e-005**	**2.0000e-003**	**2.0000e-005**	**2.0200e-003**	**5.3000e-004**	**2.0000e-005**	**5.5000e-004**	**0.0000**	**1.8810**	**1.8810**	**1.1000e-004**	**0.0000**	**1.8834**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

Acres of Paving: 0

	ROG	NOx	CO	SO2	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	0.3202	2.6276	1.6402	2.3500e-003		0.1852	0.1852		0.1742	0.1742	0.0000	213.4950	213.4950	0.0536	0.0000	214.6199
Total	**0.3202**	**2.6276**	**1.6402**	**2.3500e-003**		**0.1852**	**0.1852**		**0.1742**	**0.1742**	**0.0000**	**213.4950**	**213.4950**	**0.0536**	**0.0000**	**214.6199**

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	0.3457	1.5774	2.0924	3.2600e-003	0.0877	0.0258	0.1135	0.0252	0.0237	0.0489	0.0000	299.0903	299.0903	2.7100e-003	0.0000	299.1472
Worker	0.8637	0.2796	2.7089	4.7900e-003	0.4011	3.6500e-003	0.4047	0.1067	3.3300e-003	0.1100	0.0000	377.8055	377.8055	0.0227	0.0000	378.2820
Total	**1.2094**	**1.8570**	**4.8014**	**8.0500e-003**	**0.4888**	**0.0294**	**0.5182**	**0.1319**	**0.0270**	**0.1589**	**0.0000**	**676.8958**	**676.8958**	**0.0254**	**0.0000**	**677.4292**

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	0.3198	2.6245	1.6382	2.3400e-003		0.1850	0.1850		0.1740	0.1740	0.0000	213.2411	213.2411	0.0535	0.0000	214.3646
Total	**0.3198**	**2.6245**	**1.6382**	**2.3400e-003**		**0.1850**	**0.1850**		**0.1740**	**0.1740**	**0.0000**	**213.2411**	**213.2411**	**0.0535**	**0.0000**	**214.3646**

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	0.3457	1.5774	2.0924	3.2600e-003	0.0877	0.0258	0.1135	0.0252	0.0237	0.0489	0.0000	299.0903	299.0903	2.7100e-003	0.0000	299.1472
Worker	0.8637	0.2796	2.7089	4.7900e-003	0.4011	3.6500e-003	0.4047	0.1067	3.3300e-003	0.1100	0.0000	377.8055	377.8055	0.0227	0.0000	378.2820
Total	**1.2094**	**1.8570**	**4.8014**	**8.0500e-003**	**0.4888**	**0.0294**	**0.5182**	**0.1319**	**0.0270**	**0.1589**	**0.0000**	**676.8958**	**676.8958**	**0.0254**	**0.0000**	**677.4292**

3.6 Paving - 2015

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	0.0243	0.2644	0.1573	2.3000e-004		0.0149	0.0149		0.0137	0.0137	0.0000	22.2886	22.2886	6.6500e-003	0.0000	22.4283
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0243**	**0.2644**	**0.1573**	**2.3000e-004**		**0.0149**	**0.0149**		**0.0137**	**0.0137**	**0.0000**	**22.2886**	**22.2886**	**6.6500e-003**	**0.0000**	**22.4283**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0800e-003	1.0000e-003	9.6600e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3466	1.3466	8.0000e-005	0.0000	1.3483
Total	**3.0800e-003**	**1.0000e-003**	**9.6600e-003**	**2.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.3466**	**1.3466**	**8.0000e-005**	**0.0000**	**1.3483**

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	0.0243	0.2640	0.1571	2.3000e-004		0.0148	0.0148		0.0137	0.0137	0.0000	22.2621	22.2621	6.6500e-003	0.0000	22.4016
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0243**	**0.2640**	**0.1571**	**2.3000e-004**		**0.0148**	**0.0148**		**0.0137**	**0.0137**	**0.0000**	**22.2621**	**22.2621**	**6.6500e-003**	**0.0000**	**22.4016**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0800e-003	1.0000e-003	9.6600e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3466	1.3466	8.0000e-005	0.0000	1.3483
Total	**3.0800e-003**	**1.0000e-003**	**9.6600e-003**	**2.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.3466**	**1.3466**	**8.0000e-005**	**0.0000**	**1.3483**

3.7 Architectural Coating - 2015

Unmitigated Construction On-Site

Residential Indoor: 1,689,255; Residential Outdoor: 563,085; Non-Residential Indoor: 835,500; Non-Residential Outdoor: 278,500

	ROG	NOx	CO	SO2	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	19.5037					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0356	0.2249	0.1664	2.6000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	22.3410	22.3410	2.9100e-003	0.0000	22.4021
Total	**19.5393**	**0.2249**	**0.1664**	**2.6000e-004**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**22.3410**	**22.3410**	**2.9100e-003**	**0.0000**	**22.4021**

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	0.1727	0.0559	0.5418	9.6000e-004	0.0802	7.3000e-004	0.0809	0.0213	6.7000e-004	0.0220	0.0000	75.5611	75.5611	4.5400e-003	0.0000	75.6564

Total	**0.1727**	**0.0559**	**0.5418**	**9.6000e-004**	**0.0802**	**7.3000e-004**	**0.0809**	**0.0213**	**6.7000e-004**	**0.0220**	**0.0000**	**75.5611**	**75.5611**	**4.5400e-003**	**0.0000**	**75.6564**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	19.5037					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0355	0.2246	0.1662	2.6000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	22.3144	22.3144	2.9100e-003	0.0000	22.3754
Total	**19.5393**	**0.2246**	**0.1662**	**2.6000e-004**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**22.3144**	**22.3144**	**2.9100e-003**	**0.0000**	**22.3754**

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	0.1727	0.0559	0.5418	9.6000e-004	0.0802	7.3000e-004	0.0809	0.0213	6.7000e-004	0.0220	0.0000	75.5611	75.5611	4.5400e-003	0.0000	75.6564
Total	**0.1727**	**0.0559**	**0.5418**	**9.6000e-004**	**0.0802**	**7.3000e-004**	**0.0809**	**0.0213**	**6.7000e-004**	**0.0220**	**0.0000**	**75.5611**	**75.5611**	**4.5400e-003**	**0.0000**	**75.6564**

HayGPU-Operations-Baseline

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	30,989.00	Dwelling Unit	6,200.00	55,780,200.00	88629
Apartments Low Rise	20,395.00	Dwelling Unit	2,000.00	20,395,000.00	58330
Strip Mall	6,223.00	1000sqft	287.00	6,223,000.00	0
General Office Building	12,046.00	1000sqft	556.00	12,046,000.00	0
Research & Development	9,255.00	1000sqft	427.00	9,255,000.00	0
Manufacturing	11,054.00	1000sqft	1,855.00	11,054,000.00	0
Industrial Park	5,463.00	1000sqft	917.00	5,463,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2010
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - HayGPU Baseline - existing conditions in 2010

Land Use - Land Use inputs consistent with Kittelson Traffic Study inputs. Lot acreages apportioned by subtype, per Existing Land Use data in Background Report Table 1-1

Construction Phase - no construction for baseline

Off-road Equipment -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	11,000.00	0.00
tblLandUse	LotAcreage	10,061.36	6,200.00
tblLandUse	LotAcreage	1,274.69	2,000.00
tblLandUse	LotAcreage	142.86	287.00
tblLandUse	LotAcreage	276.54	556.00
tblLandUse	LotAcreage	212.47	427.00
tblLandUse	LotAcreage	253.76	1,855.00
tblLandUse	LotAcreage	125.41	917.00
tblProjectCharacteristics	OperationalYear	2014	2010

2.0 Emissions Summary

	ROG	NOx	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	847.1916	8.5644	709.0896	0.3336		46.0922	46.0922		46.0909	46.0909	4,620.3539	2,364.6856	6,985.0395	10.6057	0.2544	7,286.6320
Energy	15.9885	139.2956	77.6955	0.8721		11.0466	11.0466		11.0466	11.0466	0.0000	382,598.8856	382,598.8856	13.1780	4.9999	384,425.6006
Mobile	2,477.2803	2,859.7451	11,024.7489	10.7792	712.5790	63.0750	775.6540	191.4256	57.8584	249.2839	0.0000	969,210.3163	969,210.3163	67.0271	0.0000	970,617.8858
Waste						0.0000	0.0000		0.0000	0.0000	17,361.2507	0.0000	17,361.2507	1,026.0205	0.0000	38,907.6817
Water						0.0000	0.0000		0.0000	0.0000	4,543.0729	26,314.1651	30,857.2380	467.8070	11.2640	44,173.0306
Total	**3,340.4604**	**3,007.6051**	**11,811.5339**	**11.9849**	**712.5790**	**120.2138**	**832.7928**	**191.4256**	**114.9959**	**306.4214**	**26,524.6775**	**1,380,488.0525**	**1,407,012.7300**	**1,584.6384**	**16.5184**	**1,445,410.8307**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	847.1916	8.5644	709.0896	0.3336		46.0922	46.0922		46.0909	46.0909	4,620.3539	2,364.6856	6,985.0395	10.6057	0.2544	7,286.6320
Energy	15.9885	139.2956	77.6955	0.8721		11.0466	11.0466		11.0466	11.0466	0.0000	382,598.8856	382,598.8856	13.1780	4.9999	384,425.6006
Mobile	2,477.2803	2,859.7451	11,024.7489	10.7792	712.5790	63.0750	775.6540	191.4256	57.8584	249.2839	0.0000	969,210.3163	969,210.3163	67.0271	0.0000	970,617.8858
Waste						0.0000	0.0000		0.0000	0.0000	17,361.2507	0.0000	17,361.2507	1,026.0205	0.0000	38,907.6817
Water						0.0000	0.0000		0.0000	0.0000	4,543.0729	26,314.1651	30,857.2380	467.7219	11.2464	44,165.7828
Total	**3,340.4604**	**3,007.6051**	**11,811.5339**	**11.9849**	**712.5790**	**120.2138**	**832.7928**	**191.4256**	**114.9959**	**306.4214**	**26,524.6775**	**1,380,488.0525**	**1,407,012.7300**	**1,584.5533**	**16.5008**	**1,445,403.5829**

	ROG	**NOx**	**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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.3722e-003**	**0.1066**	**5.0144e-004**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	none	Architectural Coating	1/1/2014	12/31/2013	5	0	no construction for baseline

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

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
none				0.00	12.40	7.30				

3.1 Mitigation Measures Construction

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	2,477.2803	2,859.7451	11,024.7489	10.7792	712.5790	63.0750	775.6540	191.4256	57.8584	249.2839	0.0000	969,210.3163	969,210.3163	67.0271	0.0000	970,617.8858
Unmitigated	2,477.2803	2,859.7451	11,024.7489	10.7792	712.5790	63.0750	775.6540	191.4256	57.8584	249.2839	0.0000	969,210.3163	969,210.3163	67.0271	0.0000	970,617.8858

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	134,403.05	146,028.20	123797.65	300,362,013	300,362,013
Single Family Housing	296,564.73	312,369.12	271773.53	659,175,055	659,175,055
General Office Building	132,626.46	28,549.02	11805.08	240,165,515	240,165,515
Industrial Park	38,022.48	13,602.87	3987.99	77,794,612	77,794,612
Manufacturing	42,226.28	16,470.46	6853.48	97,784,997	97,784,997
Research & Development	75,058.05	17,584.50	10273.05	144,341,160	144,341,160
Strip Mall	275,803.36	261,614.92	127135.89	388,917,218	388,917,218
Total	994,704.41	796,219.09	555,626.67	1,908,540,570	1,908,540,570

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.537263	0.062598	0.171546	0.122367	0.033581	0.004911	0.017278	0.038073	0.001730	0.003843	0.005176	0.000215	0.001419

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					
NaturalGas Mitigated	15.9885	139.2956	77.6955	0.8721		11.0466	11.0466		11.0466	11.0466	0.0000	158,231.1134	158,231.1134	3.0328	2.9009	159,194.0816
NaturalGas Unmitigated	15.9885	139.2956	77.6955	0.8721		11.0466	11.0466		11.0466	11.0466	0.0000	158,231.1134	158,231.1134	3.0328	2.9009	159,194.0816
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	224,367.7721	224,367.7721	10.1453	2.0990	225,231.5190
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	224,367.7721	224,367.7721	10.1453	2.0990	225,231.5190

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	4.77417e+008	2.5743	21.9986	9.3611	0.1404		1.7786	1.7786		1.7786	1.7786	0.0000	25,476.7985	25,476.7985	0.4883	0.4671	25,631.8460
General Office Building	2.44413e+008	1.3179	11.9811	10.0641	0.0719		0.9106	0.9106		0.9106	0.9106	0.0000	13,042.8266	13,042.8266	0.2500	0.2391	13,122.2031
Industrial Park	1.10844e+008	0.5977	5.4335	4.5642	0.0326		0.4130	0.4130		0.4130	0.4130	0.0000	5,915.0724	5,915.0724	0.1134	0.1084	5,951.0705
Manufacturing	2.83867e+008	1.5307	13.9150	11.6886	0.0835		1.0575	1.0575		1.0575	1.0575	0.0000	15,148.2092	15,148.2092	0.2903	0.2777	15,240.3987
Research & Development	2.37668e+008	1.2816	11.6504	9.7864	0.0699		0.8854	0.8854		0.8854	0.8854	0.0000	12,682.8909	12,682.8909	0.2431	0.2325	12,760.0769
Single Family Housing	1.58106e+009	8.5253	72.8527	31.0012	0.4650		5.8902	5.8902		5.8902	5.8902	0.0000	84,371.3175	84,371.3175	1.6171	1.5468	84,884.7873
Strip Mall	2.98704e+007	0.1611	1.4642	1.2300	8.7900e-003		0.1113	0.1113		0.1113	0.1113	0.0000	1,593.9983	1,593.9983	0.0306	0.0292	1,603.6991
Total		**15.9885**	**139.2956**	**77.6955**	**0.8721**		**11.0466**	**11.0466**		**11.0466**	**11.0466**	**0.0000**	**158,231.1134**	**158,231.1134**	**3.0328**	**2.9009**	**159,194.0816**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	4.77417e+008	2.5743	21.9986	9.3611	0.1404		1.7786	1.7786		1.7786	1.7786	0.0000	25,476.7985	25,476.7985	0.4883	0.4671	25,631.8460
General Office Building	2.44413e+008	1.3179	11.9811	10.0641	0.0719		0.9106	0.9106		0.9106	0.9106	0.0000	13,042.8266	13,042.8266	0.2500	0.2391	13,122.2031
Industrial Park	1.10844e+008	0.5977	5.4335	4.5642	0.0326		0.4130	0.4130		0.4130	0.4130	0.0000	5,915.0724	5,915.0724	0.1134	0.1084	5,951.0705
Manufacturing	2.83867e+008	1.5307	13.9150	11.6886	0.0835		1.0575	1.0575		1.0575	1.0575	0.0000	15,148.2092	15,148.2092	0.2903	0.2777	15,240.3987
Research & Development	2.37668e+008	1.2816	11.6504	9.7864	0.0699		0.8854	0.8854		0.8854	0.8854	0.0000	12,682.8909	12,682.8909	0.2431	0.2325	12,760.0769
Single Family Housing	1.58106e+009	8.5253	72.8527	31.0012	0.4650		5.8902	5.8902		5.8902	5.8902	0.0000	84,371.3175	84,371.3175	1.6171	1.5468	84,884.7873
Strip Mall	2.98704e+007	0.1611	1.4642	1.2300	8.7900e-003		0.1113	0.1113		0.1113	0.1113	0.0000	1,593.9983	1,593.9983	0.0306	0.0292	1,603.6991
Total		**15.9885**	**139.2956**	**77.6955**	**0.8721**		**11.0466**	**11.0466**		**11.0466**	**11.0466**	**0.0000**	**158,231.1134**	**158,231.1134**	**3.0328**	**2.9009**	**159,194.0816**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	7.2532e+007	21,100.3795	0.9541	0.1974	21,181.6095
General Office Building	1.67198e+008	48,639.9550	2.1994	0.4550	48,827.2039
Industrial Park	7.58264e+007	22,058.7809	0.9974	0.2064	22,143.7004
Manufacturing	9.14166e+007	26,594.1314	1.2025	0.2488	26,696.5106
Research & Development	7.65389e+007	22,266.0291	1.0068	0.2083	22,351.7465
Single Family Housing	2.15497e+008	62,690.4251	2.8347	0.5865	62,931.7639
Strip Mall	7.2249e+007	21,018.0713	0.9504	0.1966	21,098.9844

Total		**224,367.7721**	**10.1453**	**2.0990**	**225,231.5190**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	7.2532e+007	21,100.3795	0.9541	0.1974	21,181.6095
General Office Building	1.67198e+008	48,639.9550	2.1994	0.4550	48,827.2039
Industrial Park	7.58264e+007	22,058.7809	0.9974	0.2064	22,143.7004
Manufacturing	9.14166e+007	26,594.1314	1.2025	0.2488	26,696.5106
Research & Development	7.65389e+007	22,266.0291	1.0068	0.2083	22,351.7465
Single Family Housing	2.15497e+008	62,690.4251	2.8347	0.5865	62,931.7639
Strip Mall	7.2249e+007	21,018.0713	0.9504	0.1966	21,098.9844
Total		**224,367.7721**	**10.1453**	**2.0990**	**225,231.5190**

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	847.1916	8.5644	709.0896	0.3336		46.0922	46.0922		46.0909	46.0909	4,620.3539	2,364.6856	6,985.0395	10.6057	0.2544	7,286.6320
Unmitigated	847.1916	8.5644	709.0896	0.3336		46.0922	46.0922		46.0909	46.0909	4,620.3539	2,364.6856	6,985.0395	10.6057	0.2544	7,286.6320

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	165.0911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	469.5044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	197.9841	3.6930	302.6059	0.3135		44.0827	44.0827		44.0814	44.0814	4,620.3539	1,740.6727	6,361.0266	9.8436	0.2544	6,646.6142
Landscaping	14.6120	4.8714	406.4837	0.0202		2.0095	2.0095		2.0095	2.0095	0.0000	624.0129	624.0129	0.7621	0.0000	640.0178
Total	**847.1916**	**8.5644**	**709.0896**	**0.3336**		**46.0922**	**46.0922**		**46.0909**	**46.0909**	**4,620.3539**	**2,364.6856**	**6,985.0395**	**10.6058**	**0.2544**	**7,286.6320**

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	165.0911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	469.5044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	197.9841	3.6930	302.6059	0.3135		44.0827	44.0827		44.0814	44.0814	4,620.3539	1,740.6727	6,361.0266	9.8436	0.2544	6,646.6142
Landscaping	14.6120	4.8714	406.4837	0.0202		2.0095	2.0095		2.0095	2.0095	0.0000	624.0129	624.0129	0.7621	0.0000	640.0178
Total	**847.1916**	**8.5644**	**709.0896**	**0.3336**		**46.0922**	**46.0922**		**46.0909**	**46.0909**	**4,620.3539**	**2,364.6856**	**6,985.0395**	**10.6058**	**0.2544**	**7,286.6320**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	30,857.2380	467.8070	11.2640	44,173.0306
Mitigated	30,857.2380	467.7219	11.2464	44,165.7828

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1328.82 / 837.732	3,366.2616	43.4327	1.0499	4,603.8297
General Office Building	2140.98 / 1312.21	5,385.4825	69.9767	1.6913	7,379.2975
Industrial Park	1263.32 / 0	2,389.4105	41.2552	0.9906	3,562.8569
Manufacturing	2556.24 / 0	4,834.8058	83.4770	2.0044	7,209.1927
Research & Development	4550.63 / 0	8,606.9467	148.6062	3.5683	12,833.8428
Single Family Housing	2019.06 / 1272.88	5,114.8360	65.9934	1.5953	6,995.2478
Strip Mall	460.953 / 282.52	1,159.4948	15.0660	0.3641	1,588.7633
Total		**30,857.2379**	**467.8070**	**11.2640**	**44,173.0306**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1328.82 / 837.732	3,366.2616	43.4248	1.0483	4,603.1572
General Office Building	2140.98 / 1312.21	5,385.4825	69.9640	1.6887	7,378.2139
Industrial Park	1263.32 / 0	2,389.4105	41.2477	0.9891	3,562.2174
Manufacturing	2556.24 / 0	4,834.8058	83.4618	2.0013	7,207.8989
Research & Development	4550.63 / 0	8,606.9467	148.5791	3.5627	12,831.5396
Single Family Housing	2019.06 / 1272.88	5,114.8360	65.9814	1.5928	6,994.2259
Strip Mall	460.953 / 282.52	1,159.4948	15.0633	0.3636	1,588.5300
Total		**30,857.2379**	**467.7219**	**11.2464**	**44,165.7828**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17,361.2507	1,026.0205	0.0000	38,907.6817
Unmitigated	17,361.2507	1,026.0205	0.0000	38,907.6817

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9381.7	1,904.4003	112.5468	0.0000	4,267.8838
General Office Building	11202.8	2,274.0631	134.3933	0.0000	5,096.3220
Industrial Park	6774.12	1,375.0851	81.2652	0.0000	3,081.6544
Manufacturing	13707	2,782.3890	164.4345	0.0000	6,235.5131
Research & Development	703.32	142.7676	8.4373	0.0000	319.9514
Single Family Housing	37224.2	7,556.1721	446.5570	0.0000	16,933.8687
Strip Mall	6534.15	1,326.3734	78.3864	0.0000	2,972.4883
Total		**17,361.2507**	**1,026.0205**	**0.0000**	**38,907.6817**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9381.7	1,904.4003	112.5468	0.0000	4,267.8838
General Office Building	11202.8	2,274.0631	134.3933	0.0000	5,096.3220
Industrial Park	6774.12	1,375.0851	81.2652	0.0000	3,081.6544
Manufacturing	13707	2,782.3890	164.4345	0.0000	6,235.5131
Research & Development	703.32	142.7676	8.4373	0.0000	319.9514

Single Family Housing	37224.2	7,556.1721	446.5570	0.0000	16,933.8687
Strip Mall	6534.15	1,326.3734	78.3864	0.0000	2,972.4883
Total		**17,361.2507**	**1,026.0205**	**0.0000**	**38,907.6817**

9.0 Operational Offroad

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

10.0 Vegetation

HayGPU-Operations-NoProject

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	17,291.00	1000sqft	1,036.00	17,291,000.00	0
Research & Development	12,270.00	1000sqft	735.00	12,270,000.00	0
Industrial Park	6,606.00	1000sqft	1,635.00	6,606,000.00	0
Manufacturing	13,544.00	1000sqft	3,352.00	13,544,000.00	0
Apartments Low Rise	27,135.00	Dwelling Unit	1,700.00	27,135,000.00	77606
Single Family Housing	38,461.00	Dwelling Unit	7,744.00	69,229,800.00	109998
Strip Mall	7,845.00	1000sqft	470.00	7,845,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - HayGPU No Project - existing General Plan buildout

Land Use - Land Use inputs consistent with Kittelson Traffic Study inputs. Lot acreages apportioned by subtype per total No Project acreages.

Construction Phase - no construction for No Project (operations only)

Off-road Equipment -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	11,000.00	0.00
tblLandUse	LotAcreage	396.95	1,036.00
tblLandUse	LotAcreage	281.68	735.00
tblLandUse	LotAcreage	151.65	1,635.00
tblLandUse	LotAcreage	310.93	3,352.00
tblLandUse	LotAcreage	1,695.94	1,700.00
tblLandUse	LotAcreage	12,487.34	7,744.00
tblLandUse	LotAcreage	180.10	470.00
tblProjectCharacteristics	OperationalYear	2014	2040

2.0 Emissions Summary

	ROG	NOx	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	960.6711	10.2094	863.0353	0.4165		57.7089	57.7089		57.7073	57.7073	5,764.2256	3,005.1957	8,769.4214	13.0324	0.3183	9,141.7614
Energy	20.3980	177.7967	99.7426	1.1126		14.0932	14.0932		14.0932	14.0932	0.0000	492,842.8483	492,842.8483	17.0261	6.4231	495,191.5513

Mobile					777.3828	0.0000	777.3828	190.8122	0.0000	190.8122	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	22,109.2824	0.0000	22,109.2824	1,306.6212	0.0000	49,548.3267
Water						0.0000	0.0000		0.0000	0.0000	5,907.5553	34,335.4410	40,242.9963	608.3151	14.6482	57,558.5550
Total	**981.0691**	**188.0061**	**962.7779**	**1.5291**	**777.3828**	**71.8021**	**849.1849**	**190.8122**	**71.8005**	**262.6126**	**33,781.0633**	**530,183.4850**	**563,964.5483**	**1,944.9948**	**21.3895**	**611,440.1944**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	960.6711	10.2094	863.0353	0.4165		57.7089	57.7089		57.7073	57.7073	5,764.2256	3,005.1957	8,769.4214	13.0324	0.3183	9,141.7614
Energy	20.3980	177.7967	99.7426	1.1126		14.0932	14.0932		14.0932	14.0932	0.0000	492,842.8483	492,842.8483	17.0261	6.4231	495,191.5513
Mobile					777.3828	0.0000	777.3828	190.8122	0.0000	190.8122	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	22,109.2824	0.0000	22,109.2824	1,306.6212	0.0000	49,548.3267
Water						0.0000	0.0000		0.0000	0.0000	5,907.5553	34,335.4410	40,242.9963	608.2044	14.6253	57,549.1304
Total	**981.0691**	**188.0061**	**962.7779**	**1.5291**	**777.3828**	**71.8021**	**849.1849**	**190.8122**	**71.8005**	**262.6126**	**33,781.0633**	**530,183.4850**	**563,964.5483**	**1,944.8841**	**21.3666**	**611,430.7697**

	ROG	NOx	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.6915e-003**	**0.1071**	**1.5414e-003**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	none	Architectural Coating	1/1/2014	12/31/2013	5	0	no construction in this run

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

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
none				0.00	12.40	7.30				

3.1 Mitigation Measures Construction

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					777.3828	0.0000	777.3828	190.8122	0.0000	190.8122	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated					777.3828	0.0000	777.3828	190.8122	0.0000	190.8122	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	178,819.65	194,286.60	164709.45	399,623,595	399,623,595
General Office Building	190,373.91	40,979.67	16945.18	344,737,002	344,737,002
Industrial Park	45,977.76	16,448.94	4822.38	94,071,244	94,071,244

Manufacturing	51,738.08	20,180.56	8397.28	119,811,832	119,811,832
Research & Development	99,509.70	23,313.00	13619.70	191,363,158	191,363,158
Single Family Housing	368,071.77	387,686.88	337302.97	818,113,904	818,113,904
Strip Mall	347,690.40	329,803.80	160273.35	490,286,932	490,286,932
Total	1,282,181.27	1,012,699.45	706,070.31	2,458,007,668	2,458,007,668

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH

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					
NaturalGas Mitigated	20.3980	177.7967	99.7426	1.1126		14.0932	14.0932		14.0932	14.0932	0.0000	201,869.9824	201,869.9824	3.8692	3.7010	203,098.5294
NaturalGas Unmitigated	20.3980	177.7967	99.7426	1.1126		14.0932	14.0932		14.0932	14.0932	0.0000	201,869.9824	201,869.9824	3.8692	3.7010	203,098.5294
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	290,972.8659	290,972.8659	13.1570	2.7221	292,093.0219

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	290,972.8659	290,972.8659	13.1570	2.7221	292,093.0219

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	6.35191e+008	3.4251	29.2686	12.4547	0.1868		2.3664	2.3664		2.3664	2.3664	0.0000	33,896.1965	33,896.1965	0.6497	0.6214	34,102.4831
General Office Building	3.50834e+008	1.8918	17.1978	14.4461	0.1032		1.3070	1.3070		1.3070	1.3070	0.0000	18,721.8591	18,721.8591	0.3588	0.3432	18,835.7972
Industrial Park	1.34036e+008	0.7227	6.5704	5.5191	0.0394		0.4994	0.4994		0.4994	0.4994	0.0000	7,152.6575	7,152.6575	0.1371	0.1311	7,196.1874
Manufacturing	3.4781e+008	1.8755	17.0495	14.3216	0.1023		1.2958	1.2958		1.2958	1.2958	0.0000	18,560.4619	18,560.4619	0.3557	0.3403	18,673.4178
Research & Development	3.15094e+008	1.6990	15.4458	12.9744	0.0927		1.1739	1.1739		1.1739	1.1739	0.0000	16,814.5945	16,814.5945	0.3223	0.3083	16,916.9253
Single Family Housing	1.96228e+009	10.5809	90.4188	38.4761	0.5771		7.3105	7.3105		7.3105	7.3105	0.0000	104,714.7454	104,714.7454	2.0070	1.9198	105,352.0219
Strip Mall	3.7656e+007	0.2031	1.8459	1.5505	0.0111		0.1403	0.1403		0.1403	0.1403	0.0000	2,009.4676	2,009.4676	0.0385	0.0368	2,021.6969
Total		**20.3980**	**177.7967**	**99.7426**	**1.1126**		**14.0932**	**14.0932**		**14.0932**	**14.0932**	**0.0000**	**201,869.9823**	**201,869.9823**	**3.8692**	**3.7010**	**203,098.5294**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	6.35191e+008	3.4251	29.2686	12.4547	0.1868		2.3664	2.3664		2.3664	2.3664	0.0000	33,896.1965	33,896.1965	0.6497	0.6214	34,102.4831
General Office Building	3.50834e+008	1.8918	17.1978	14.4461	0.1032		1.3070	1.3070		1.3070	1.3070	0.0000	18,721.8591	18,721.8591	0.3588	0.3432	18,835.7972

Industrial Park	1.34036e+008	0.7227	6.5704	5.5191	0.0394		0.4994	0.4994		0.4994	0.4994	0.0000	7,152.6575	7,152.6575	0.1371	0.1311	7,196.1874
Manufacturing	3.4781e+008	1.8755	17.0495	14.3216	0.1023		1.2958	1.2958		1.2958	1.2958	0.0000	18,560.4619	18,560.4619	0.3557	0.3403	18,673.4178
Research & Development	3.15094e+008	1.6990	15.4458	12.9744	0.0927		1.1739	1.1739		1.1739	1.1739	0.0000	16,814.5945	16,814.5945	0.3223	0.3083	16,916.9253
Single Family Housing	1.96228e+009	10.5809	90.4188	38.4761	0.5771		7.3105	7.3105		7.3105	7.3105	0.0000	104,714.7454	104,714.7454	2.0070	1.9198	105,352.0219
Strip Mall	3.7656e+007	0.2031	1.8459	1.5505	0.0111		0.1403	0.1403		0.1403	0.1403	0.0000	2,009.4676	2,009.4676	0.0385	0.0368	2,021.6969
Total		**20.3980**	**177.7967**	**99.7426**	**1.1126**		**14.0932**	**14.0932**		**14.0932**	**14.0932**	**0.0000**	**201,869.9823**	**201,869.9823**	**3.8692**	**3.7010**	**203,098.5294**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	9.65018e+007	28,073.4885	1.2694	0.2626	28,181.5628
General Office Building	2.39999e+008	69,818.4843	3.1570	0.6532	70,087.2640
Industrial Park	9.16913e+007	26,674.0447	1.2061	0.2495	26,776.7316
Manufacturing	1.12009e+008	32,584.6675	1.4734	0.3048	32,710.1085
Research & Development	1.01473e+008	29,519.6302	1.3348	0.2762	29,633.2716
Single Family Housing	2.67457e+008	77,806.2034	3.5182	0.7279	78,105.7333
Strip Mall	9.10805e+007	26,496.3473	1.1981	0.2479	26,598.3501
Total		**290,972.8659**	**13.1569**	**2.7221**	**292,093.0219**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	9.65018e+007	28,073.4885	1.2694	0.2626	28,181.5628
General Office Building	2.39999e+008	69,818.4843	3.1570	0.6532	70,087.2640
Industrial Park	9.16913e+007	26,674.0447	1.2061	0.2495	26,776.7316
Manufacturing	1.12009e+008	32,584.6675	1.4734	0.3048	32,710.1085
Research & Development	1.01473e+008	29,519.6302	1.3348	0.2762	29,633.2716
Single Family Housing	2.67457e+008	77,806.2034	3.5182	0.7279	78,105.7333
Strip Mall	9.10805e+007	26,496.3473	1.1981	0.2479	26,598.3501
Total		**290,972.8659**	**13.1569**	**2.7221**	**292,093.0219**

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	960.6711	10.2094	863.0353	0.4165		57.7089	57.7089		57.7073	57.7073	5,764.2256	3,005.1957	8,769.4214	13.0324	0.3183	9,141.7614
Unmitigated	960.6711	10.2094	863.0353	0.4165		57.7089	57.7089		57.7073	57.7073	5,764.2256	3,005.1957	8,769.4214	13.0324	0.3183	9,141.7614

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	97.8470					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	601.1377					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	247.1349	4.6075	377.5917	0.3908		55.0061	55.0061		55.0045	55.0045	5,764.2256	2,208.5669	7,972.7926	12.2724	0.3183	8,329.1740
Landscaping	14.5516	5.6019	485.4437	0.0258		2.7029	2.7029		2.7029	2.7029	0.0000	796.6288	796.6288	0.7599	0.0000	812.5874
Total	**960.6711**	**10.2094**	**863.0353**	**0.4165**		**57.7089**	**57.7089**		**57.7073**	**57.7073**	**5,764.2256**	**3,005.1957**	**8,769.4214**	**13.0324**	**0.3183**	**9,141.7613**

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	97.8470					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	601.1377					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	247.1349	4.6075	377.5917	0.3908		55.0061	55.0061		55.0045	55.0045	5,764.2256	2,208.5669	7,972.7926	12.2724	0.3183	8,329.1740
Landscaping	14.5516	5.6019	485.4437	0.0258		2.7029	2.7029		2.7029	2.7029	0.0000	796.6288	796.6288	0.7599	0.0000	812.5874
Total	**960.6711**	**10.2094**	**863.0353**	**0.4165**		**57.7089**	**57.7089**		**57.7073**	**57.7073**	**5,764.2256**	**3,005.1957**	**8,769.4214**	**13.0324**	**0.3183**	**9,141.7613**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e

Category	MT/yr			
Unmitigated	40,242.9963	608.3151	14.6482	57,558.5550
Mitigated	40,242.9963	608.2044	14.6253	57,549.1304

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1767.95 / 1114.58	4,478.7207	57.7860	1.3969	6,125.2718
General Office Building	3073.19 / 1883.57	7,730.3983	100.4455	2.4277	10,592.3487
Industrial Park	1527.64 / 0	2,889.3366	49.8868	1.1979	4,308.2981
Manufacturing	3132.05 / 0	5,923.8836	102.2808	2.4559	8,833.1197
Research & Development	6033.08 / 0	11,410.8305	197.0176	4.7307	17,014.7219
Single Family Housing	2505.89 / 1579.8	6,348.1141	81.9055	1.9800	8,681.9267
Strip Mall	581.099 / 356.157	1,461.7124	18.9929	0.4591	2,002.8680
Total		**40,242.9963**	**608.3151**	**14.6482**	**57,558.5550**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Apartments Low Rise	1767.95 / 1114.58	4,478.7207	57.7755	1.3948	6,124.3770
General Office Building	3073.19 / 1883.57	7,730.3983	100.4273	2.4239	10,590.7933
Industrial Park	1527.64 / 0	2,889.3366	49.8777	1.1960	4,307.5249
Manufacturing	3132.05 / 0	5,923.8836	102.2622	2.4521	8,831.5345
Research & Development	6033.08 / 0	11,410.8305	196.9817	4.7233	17,011.6684
Single Family Housing	2505.89 / 1579.8	6,348.1141	81.8906	1.9769	8,680.6584
Strip Mall	581.099 / 356.157	1,461.7124	18.9894	0.4583	2,002.5739
Total		**40,242.9963**	**608.2044**	**14.6253**	**57,549.1304**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22,109.2824	1,306.6212	0.0000	49,548.3267
Unmitigated	22,109.2824	1,306.6212	0.0000	49,548.3267

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Apartments Low Rise	12482.1	2,533.7535	149.7405	0.0000	5,678.3049
General Office Building	16080.6	3,264.2226	192.9100	0.0000	7,315.3331
Industrial Park	8191.44	1,662.7883	98.2680	0.0000	3,726.4157
Manufacturing	16794.6	3,409.1439	201.4746	0.0000	7,640.1112
Research & Development	932.43	189.2749	11.1858	0.0000	424.1772
Single Family Housing	46199.2	9,378.0120	554.2246	0.0000	21,016.7292
Strip Mall	8237.25	1,672.0873	98.8175	0.0000	3,747.2554
Total		**22,109.2824**	**1,306.6212**	**0.0000**	**49,548.3267**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	12482.1	2,533.7535	149.7405	0.0000	5,678.3049
General Office Building	16080.6	3,264.2226	192.9100	0.0000	7,315.3331
Industrial Park	8191.44	1,662.7883	98.2680	0.0000	3,726.4157
Manufacturing	16794.6	3,409.1439	201.4746	0.0000	7,640.1112
Research & Development	932.43	189.2749	11.1858	0.0000	424.1772
Single Family Housing	46199.2	9,378.0120	554.2246	0.0000	21,016.7292
Strip Mall	8237.25	1,672.0873	98.8175	0.0000	3,747.2554
Total		**22,109.2824**	**1,306.6212**	**0.0000**	**49,548.3267**

9.0 Operational Offroad

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

10.0 Vegetation

HayGPU-Operations-Project

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	19,836.00	1000sqft	1,112.00	19,836,000.00	0
Research & Development	12,270.00	1000sqft	688.00	12,270,000.00	0
Industrial Park	6,606.00	1000sqft	1,832.00	6,606,000.00	0
Manufacturing	11,374.00	1000sqft	3,155.00	11,374,000.00	0
Apartments Low Rise	27,794.00	Dwelling Unit	1,700.00	27,794,000.00	79491
Single Family Housing	38,461.00	Dwelling Unit	7,744.00	69,229,800.00	109998
Strip Mall	7,845.00	1000sqft	440.00	7,845,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - HayGPU Project - proposed 2040 General Plan buildout

Land Use - Land Use inputs consistent with Kittelson Traffic Study inputs. Lot acreages apportioned by subtype per total Project acreages.

Construction Phase - no construction in this run (operations only)

Off-road Equipment -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	11,000.00	0.00
tblLandUse	LotAcreage	455.37	1,112.00
tblLandUse	LotAcreage	281.68	688.00
tblLandUse	LotAcreage	151.65	1,832.00
tblLandUse	LotAcreage	261.11	3,155.00
tblLandUse	LotAcreage	1,737.13	1,700.00
tblLandUse	LotAcreage	12,487.34	7,744.00
tblLandUse	LotAcreage	180.10	440.00
tblProjectCharacteristics	OperationalYear	2014	2040

2.0 Emissions Summary

	ROG	NOx	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	966.0258	10.2744	868.6414	0.4174		57.8425	57.8425		57.8408	57.8408	5,775.0054	3,030.6203	8,805.6257	13.0600	0.3192	9,178.8245
Energy	20.4591	178.3071	99.8768	1.1160		14.1354	14.1354		14.1354	14.1354	0.0000	499,185.3785	499,185.3785	17.2972	6.4879	501,559.8513

Mobile					790.4287	0.0000	790.4287	194.0143	0.0000	194.0143	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	22,105.0582	0.0000	22,105.0582	1,306.3715	0.0000	49,538.8599
Water						0.0000	0.0000		0.0000	0.0000	5,905.4793	34,634.9806	40,540.4599	608.1154	14.6460	57,851.1333
Total	**986.4850**	**188.5815**	**968.5182**	**1.5334**	**790.4287**	**71.9779**	**862.4065**	**194.0143**	**71.9762**	**265.9905**	**33,785.5429**	**536,850.9793**	**570,636.5222**	**1,944.8441**	**21.4530**	**618,128.6691**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	966.0258	10.2744	868.6414	0.4174		57.8425	57.8425		57.8408	57.8408	5,775.0054	3,030.6203	8,805.6257	13.0600	0.3192	9,178.8245
Energy	20.4591	178.3071	99.8768	1.1160		14.1354	14.1354		14.1354	14.1354	0.0000	499,185.3785	499,185.3785	17.2972	6.4879	501,559.8513
Mobile					790.4287	0.0000	790.4287	194.0143	0.0000	194.0143	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	22,105.0582	0.0000	22,105.0582	1,306.3715	0.0000	49,538.8599
Water						0.0000	0.0000		0.0000	0.0000	5,905.4793	34,634.9806	40,540.4599	608.0048	14.6231	57,841.7120
Total	**986.4850**	**188.5815**	**968.5182**	**1.5334**	**790.4287**	**71.9779**	**862.4065**	**194.0143**	**71.9762**	**265.9905**	**33,785.5429**	**536,850.9793**	**570,636.5222**	**1,944.7334**	**21.4301**	**618,119.2477**

	ROG	NOx	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.6899e-003**	**0.1067**	**1.5242e-003**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	none	Architectural Coating	1/1/2014	12/31/2013	5	0	no construction in this run

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

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
none				0.00	12.40	7.30				

3.1 Mitigation Measures Construction

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					790.4287	0.0000	790.4287	194.0143	0.0000	194.0143	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated					790.4287	0.0000	790.4287	194.0143	0.0000	194.0143	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	183,162.46	199,005.04	168709.58	409,328,845	409,328,845
General Office Building	218,394.36	47,011.32	19439.28	395,477,600	395,477,600
Industrial Park	45,977.76	16,448.94	4822.38	94,071,244	94,071,244

Manufacturing	43,448.68	16,947.26	7051.88	100,615,755	100,615,755
Research & Development	99,509.70	23,313.00	13619.70	191,363,158	191,363,158
Single Family Housing	368,071.77	387,686.88	337302.97	818,113,904	818,113,904
Strip Mall	347,690.40	329,803.80	160273.35	490,286,932	490,286,932
Total	1,306,255.13	1,020,216.24	711,219.14	2,499,257,438	2,499,257,438

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH

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					
NaturalGas Mitigated	20.4591	178.3071	99.8768	1.1160		14.1354	14.1354		14.1354	14.1354	0.0000	202,475.0574	202,475.0574	3.8808	3.7120	203,707.2868
NaturalGas Unmitigated	20.4591	178.3071	99.8768	1.1160		14.1354	14.1354		14.1354	14.1354	0.0000	202,475.0574	202,475.0574	3.8808	3.7120	203,707.2868
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	296,710.3211	296,710.3211	13.4164	2.7758	297,852.5645

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	296,710.3211	296,710.3211	13.4164	2.7758	297,852.5645

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	6.50617e+008	3.5082	29.9794	12.7572	0.1914		2.4239	2.4239		2.4239	2.4239	0.0000	34,719.3987	34,719.3987	0.6655	0.6365	34,930.6952
General Office Building	4.02472e+008	2.1702	19.7290	16.5724	0.1184		1.4994	1.4994		1.4994	1.4994	0.0000	21,477.4621	21,477.4621	0.4117	0.3938	21,608.1704
Industrial Park	1.34036e+008	0.7227	6.5704	5.5191	0.0394		0.4994	0.4994		0.4994	0.4994	0.0000	7,152.6575	7,152.6575	0.1371	0.1311	7,196.1874
Manufacturing	2.92084e+008	1.5750	14.3179	12.0270	0.0859		1.0882	1.0882		1.0882	1.0882	0.0000	15,586.7316	15,586.7316	0.2988	0.2858	15,681.5899
Research & Development	3.15094e+008	1.6990	15.4458	12.9744	0.0927		1.1739	1.1739		1.1739	1.1739	0.0000	16,814.5945	16,814.5945	0.3223	0.3083	16,916.9253
Single Family Housing	1.96228e+009	10.5809	90.4188	38.4761	0.5771		7.3105	7.3105		7.3105	7.3105	0.0000	104,714.7454	104,714.7454	2.0070	1.9198	105,352.0219
Strip Mall	3.7656e+007	0.2031	1.8459	1.5505	0.0111		0.1403	0.1403		0.1403	0.1403	0.0000	2,009.4676	2,009.4676	0.0385	0.0368	2,021.6969
Total		**20.4591**	**178.3071**	**99.8768**	**1.1160**		**14.1354**	**14.1354**		**14.1354**	**14.1354**	**0.0000**	**202,475.0574**	**202,475.0574**	**3.8808**	**3.7120**	**203,707.2868**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	6.50617e+008	3.5082	29.9794	12.7572	0.1914		2.4239	2.4239		2.4239	2.4239	0.0000	34,719.3987	34,719.3987	0.6655	0.6365	34,930.6952
General Office Building	4.02472e+008	2.1702	19.7290	16.5724	0.1184		1.4994	1.4994		1.4994	1.4994	0.0000	21,477.4621	21,477.4621	0.4117	0.3938	21,608.1704

Industrial Park	1.34036e+008	0.7227	6.5704	5.5191	0.0394		0.4994	0.4994		0.4994	0.4994	0.0000	7,152.6575	7,152.6575	0.1371	0.1311	7,196.1874
Manufacturing	2.92084e+008	1.5750	14.3179	12.0270	0.0859		1.0882	1.0882		1.0882	1.0882	0.0000	15,586.7316	15,586.7316	0.2988	0.2858	15,681.5899
Research & Development	3.15094e+008	1.6990	15.4458	12.9744	0.0927		1.1739	1.1739		1.1739	1.1739	0.0000	16,814.5945	16,814.5945	0.3223	0.3083	16,916.9253
Single Family Housing	1.96228e+009	10.5809	90.4188	38.4761	0.5771		7.3105	7.3105		7.3105	7.3105	0.0000	104,714.7454	104,714.7454	2.0070	1.9198	105,352.0219
Strip Mall	3.7656e+007	0.2031	1.8459	1.5505	0.0111		0.1403	0.1403		0.1403	0.1403	0.0000	2,009.4676	2,009.4676	0.0385	0.0368	2,021.6969
Total		**20.4591**	**178.3071**	**99.8768**	**1.1160**		**14.1354**	**14.1354**		**14.1354**	**14.1354**	**0.0000**	**202,475.0574**	**202,475.0574**	**3.8808**	**3.7120**	**203,707.2868**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	9.88455e+007	28,755.2806	1.3002	0.2690	28,865.9796
General Office Building	2.75324e+008	80,094.8155	3.6217	0.7493	80,403.1559
Industrial Park	9.16913e+007	26,674.0447	1.2061	0.2495	26,776.7316
Manufacturing	9.4063e+007	27,363.9995	1.2373	0.2560	27,469.3424
Research & Development	1.01473e+008	29,519.6302	1.3348	0.2762	29,633.2716
Single Family Housing	2.67457e+008	77,806.2034	3.5182	0.7279	78,105.7333
Strip Mall	9.10805e+007	26,496.3473	1.1981	0.2479	26,598.3501
Total		**296,710.3211**	**13.4164**	**2.7758**	**297,852.5645**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	9.88455e+007	28,755.2806	1.3002	0.2690	28,865.9796
General Office Building	2.75324e+008	80,094.8155	3.6217	0.7493	80,403.1559
Industrial Park	9.16913e+007	26,674.0447	1.2061	0.2495	26,776.7316
Manufacturing	9.4063e+007	27,363.9995	1.2373	0.2560	27,469.3424
Research & Development	1.01473e+008	29,519.6302	1.3348	0.2762	29,633.2716
Single Family Housing	2.67457e+008	77,806.2034	3.5182	0.7279	78,105.7333
Strip Mall	9.10805e+007	26,496.3473	1.1981	0.2479	26,598.3501
Total		**296,710.3211**	**13.4164**	**2.7758**	**297,852.5645**

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	966.0258	10.2744	868.6414	0.4174		57.8425	57.8425		57.8408	57.8408	5,775.0054	3,030.6203	8,805.6257	13.0600	0.3192	9,178.8245
Unmitigated	966.0258	10.2744	868.6414	0.4174		57.8425	57.8425		57.8408	57.8408	5,775.0054	3,030.6203	8,805.6257	13.0600	0.3192	9,178.8245

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	98.5064					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	605.1760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	247.6459	4.6161	378.3227	0.3914		55.1125	55.1125		55.1108	55.1108	5,775.0054	2,225.9919	8,000.9973	12.2924	0.3192	8,358.0775
Landscaping	14.6976	5.6582	490.3187	0.0260		2.7300	2.7300		2.7300	2.7300	0.0000	804.6284	804.6284	0.7676	0.0000	820.7471
Total	**966.0258**	**10.2743**	**868.6414**	**0.4174**		**57.8425**	**57.8425**		**57.8408**	**57.8408**	**5,775.0054**	**3,030.6203**	**8,805.6257**	**13.0600**	**0.3192**	**9,178.8245**

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	98.5064					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	605.1760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	247.6459	4.6161	378.3227	0.3914		55.1125	55.1125		55.1108	55.1108	5,775.0054	2,225.9919	8,000.9973	12.2924	0.3192	8,358.0775
Landscaping	14.6976	5.6582	490.3187	0.0260		2.7300	2.7300		2.7300	2.7300	0.0000	804.6284	804.6284	0.7676	0.0000	820.7471
Total	**966.0258**	**10.2743**	**868.6414**	**0.4174**		**57.8425**	**57.8425**		**57.8408**	**57.8408**	**5,775.0054**	**3,030.6203**	**8,805.6257**	**13.0600**	**0.3192**	**9,178.8245**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e

Category	MT/yr			
Unmitigated	40,540.4599	608.1154	14.6460	57,851.1333
Mitigated	40,540.4599	608.0048	14.6231	57,841.7120

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1810.89 / 1141.65	4,587.4908	59.1894	1.4309	6,274.0301
General Office Building	3525.53 / 2160.81	8,868.2078	115.2298	2.7851	12,151.3984
Industrial Park	1527.64 / 0	2,889.3366	49.8868	1.1979	4,308.2981
Manufacturing	2630.24 / 0	4,974.7676	85.8935	2.0625	7,417.8901
Research & Development	6033.08 / 0	11,410.8305	197.0176	4.7307	17,014.7219
Single Family Housing	2505.89 / 1579.8	6,348.1141	81.9055	1.9800	8,681.9267
Strip Mall	581.099 / 356.157	1,461.7124	18.9929	0.4591	2,002.8680
Total		**40,540.4599**	**608.1154**	**14.6460**	**57,851.1333**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Apartments Low Rise	1810.89 / 1141.65	4,587.4908	59.1786	1.4286	6,273.1135
General Office Building	3525.53 / 2160.81	8,868.2078	115.2088	2.7807	12,149.6140
Industrial Park	1527.64 / 0	2,889.3366	49.8777	1.1960	4,307.5249
Manufacturing	2630.24 / 0	4,974.7676	85.8779	2.0592	7,416.5589
Research & Development	6033.08 / 0	11,410.8305	196.9817	4.7233	17,011.6684
Single Family Housing	2505.89 / 1579.8	6,348.1141	81.8906	1.9769	8,680.6584
Strip Mall	581.099 / 356.157	1,461.7124	18.9894	0.4583	2,002.5739
Total		**40,540.4599**	**608.0048**	**14.6231**	**57,841.7120**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22,105.0582	1,306.3715	0.0000	49,538.8599
Unmitigated	22,105.0582	1,306.3715	0.0000	49,538.8599

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Apartments Low Rise	12785.2	2,595.2882	153.3771	0.0000	5,816.2081
General Office Building	18447.5	3,744.6717	221.3038	0.0000	8,392.0507
Industrial Park	8191.44	1,662.7883	98.2680	0.0000	3,726.4157
Manufacturing	14103.8	2,862.9358	169.1947	0.0000	6,416.0237
Research & Development	932.43	189.2749	11.1858	0.0000	424.1772
Single Family Housing	46199.2	9,378.0120	554.2246	0.0000	21,016.7292
Strip Mall	8237.25	1,672.0873	98.8175	0.0000	3,747.2554
Total		**22,105.0582**	**1,306.3715**	**0.0000**	**49,538.8599**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	12785.2	2,595.2882	153.3771	0.0000	5,816.2081
General Office Building	18447.5	3,744.6717	221.3038	0.0000	8,392.0507
Industrial Park	8191.44	1,662.7883	98.2680	0.0000	3,726.4157
Manufacturing	14103.8	2,862.9358	169.1947	0.0000	6,416.0237
Research & Development	932.43	189.2749	11.1858	0.0000	424.1772
Single Family Housing	46199.2	9,378.0120	554.2246	0.0000	21,016.7292
Strip Mall	8237.25	1,672.0873	98.8175	0.0000	3,747.2554
Total		**22,105.0582**	**1,306.3715**	**0.0000**	**49,538.8599**

9.0 Operational Offroad

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

10.0 Vegetation