

## **Appendix B**

### **Air Quality and GHG Modeling**

**DISCLAIMER:** Due to the nature and length of this appendix, this document is not available as an accessible document. If you need assistance accessing the contents of this document, please contact Victoria Willard, ADA Coordinator for Sonoma County, at (707) 565-2331, or through the California Relay Service by dialing 711. For an explanation of the contents of this document, please direct inquiries to Karen Davis-Brown, Park Planner II, Sonoma County Regional Parks Department at (707) 565-2041.

Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

**Tolay Lake Master Plan Existing Operational Emissions**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	150.00	Acre	150.00	6,534,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4			<b>Operational Year</b>	2018
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<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 - PTG - Operational run for existing conditions at Tolay Lake Regional Park.

Land Use -

Vehicle Trips - PTG - Model to reflect 30 trips per day on weekdays and 60 trips per day on the weekend with a distance of 14.4 miles, as presented in the distribution of trips from TIA Phase A. All trips presumed to be primary trips due to the remote location.

Fleet Mix - PTG - Fleet mix updated to reflect what conditions would be in 2022, since fleet mix is presumed to stay approximately constant.

## Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.57	0.61
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.3750e-003	5.3580e-003
tblFleetMix	MCY	6.0050e-003	5.8740e-003
tblFleetMix	MDV	0.12	0.11
tblFleetMix	MH	8.6400e-004	0.00
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	2.4590e-003	0.00
tblFleetMix	SBUS	8.6800e-004	8.8700e-004
tblFleetMix	UBUS	2.6830e-003	0.00
tblVehicleTrips	CC_TL	7.30	14.40
tblVehicleTrips	CNW_TL	7.30	14.40
tblVehicleTrips	CW_TL	9.50	14.40
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	ST_TR	22.75	0.40
tblVehicleTrips	SU_TR	16.74	0.40
tblVehicleTrips	WD_TR	1.89	0.20

## 2.0 Emissions Summary

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Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

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	0.0616	1.0000e-005	1.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0178	0.0545	0.2801	8.3000e-004	0.0746	9.1000e-004	0.0755	0.0199	8.5000e-004	0.0208	0.0000	74.8469	74.8469	2.4400e-003	0.0000	74.9079
Waste						0.0000	0.0000		0.0000	0.0000	2.6186	0.0000	2.6186	0.1548	0.0000	6.4874
Water						0.0000	0.0000		0.0000	0.0000	0.0000	181.9732	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>	<b>0.0794</b>	<b>0.0545</b>	<b>0.2815</b>	<b>8.3000e-004</b>	<b>0.0746</b>	<b>9.2000e-004</b>	<b>0.0755</b>	<b>0.0199</b>	<b>8.6000e-004</b>	<b>0.0208</b>	<b>2.6186</b>	<b>256.8227</b>	<b>259.4413</b>	<b>0.1654</b>	<b>1.7000e-003</b>	<b>264.0844</b>

Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0616	1.0000e-005	1.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0178	0.0545	0.2801	8.3000e-004	0.0746	9.1000e-004	0.0755	0.0199	8.5000e-004	0.0208	0.0000	74.8469	74.8469	2.4400e-003	0.0000	74.9079
Waste						0.0000	0.0000		0.0000	0.0000	2.6186	0.0000	2.6186	0.1548	0.0000	6.4874
Water						0.0000	0.0000		0.0000	0.0000	0.0000	181.9732	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>	<b>0.0794</b>	<b>0.0545</b>	<b>0.2815</b>	<b>8.3000e-004</b>	<b>0.0746</b>	<b>9.2000e-004</b>	<b>0.0755</b>	<b>0.0199</b>	<b>8.6000e-004</b>	<b>0.0208</b>	<b>2.6186</b>	<b>256.8227</b>	<b>259.4413</b>	<b>0.1654</b>	<b>1.7000e-003</b>	<b>264.0844</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**

## Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	12/23/2016	12/22/2016	5	220	
2	Building Construction	Building Construction	12/23/2016	12/22/2016	5	3100	
3	Demolition	Demolition	12/23/2016	12/22/2016	5	200	
4	Grading	Grading	12/23/2016	12/22/2016	5	310	
5	Paving	Paving	12/23/2016	12/22/2016	5	220	
6	Site Preparation	Site Preparation	12/23/2016	12/22/2016	5	120	

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

**Acres of Grading (Grading Phase): 775**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

## Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

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**





























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**3.7 Site Preparation - 2016**

**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**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0178	0.0545	0.2801	8.3000e-004	0.0746	9.1000e-004	0.0755	0.0199	8.5000e-004	0.0208	0.0000	74.8469	74.8469	2.4400e-003	0.0000	74.9079
Unmitigated	0.0178	0.0545	0.2801	8.3000e-004	0.0746	9.1000e-004	0.0755	0.0199	8.5000e-004	0.0208	0.0000	74.8469	74.8469	2.4400e-003	0.0000	74.9079

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	30.00	60.00	60.00	202,176	202,176
Total	30.00	60.00	60.00	202,176	202,176

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.40	14.40	14.40	33.00	48.00	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.606102	0.039376	0.193723	0.112069	0.016317	0.005358	0.017943	0.000000	0.000000	0.000000	0.005874	0.000887	0.000000

5.0 Energy Detail

Historical Energy Use: N



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**5.2 Energy by Land Use - Natural Gas**

**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					
City Park	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>0.0000</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>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>



Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

**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	0.0616	1.0000e-005	1.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
Unmitigated	0.0616	1.0000e-005	1.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003

Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

**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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
<b>Total</b>	<b>0.0616</b>	<b>1.0000e-005</b>	<b>1.4000e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.6800e-003</b>	<b>2.6800e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.8600e-003</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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
<b>Total</b>	<b>0.0616</b>	<b>1.0000e-005</b>	<b>1.4000e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.6800e-003</b>	<b>2.6800e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.8600e-003</b>

**7.0 Water Detail**

Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	181.9732	8.2300e-003	1.7000e-003	182.6862
Unmitigated	181.9732	8.2300e-003	1.7000e-003	182.6862

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 178.722	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>		<b>181.9732</b>	<b>8.2300e-003</b>	<b>1.7000e-003</b>	<b>182.6862</b>

Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 178.722	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>		<b>181.9732</b>	<b>8.2300e-003</b>	<b>1.7000e-003</b>	<b>182.6862</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.6186	0.1548	0.0000	6.4874
Unmitigated	2.6186	0.1548	0.0000	6.4874

Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	12.9	2.6186	0.1548	0.0000	6.4874
<b>Total</b>		<b>2.6186</b>	<b>0.1548</b>	<b>0.0000</b>	<b>6.4874</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	12.9	2.6186	0.1548	0.0000	6.4874
<b>Total</b>		<b>2.6186</b>	<b>0.1548</b>	<b>0.0000</b>	<b>6.4874</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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Tolay Lake Master Plan Existing Operational Emissions - Bay Area AQMD Air District, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

**Tolay Lake Operational Run 2022 - No Contingency**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	150.00	Acre	150.00	6,534,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Rural	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4			<b>Operational Year</b>	2022
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<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 - PTG - Ops model run for 2022.

Land Use -

Vehicle Trips - PTG - updated to reflect trip distribution pertaining to the project.

Vehicle Emission Factors -

Fleet Mix - PTG - Fleet characteristics updated to exclude trips that would not be generated by the project.

## Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.58	0.61
tblFleetMix	MH	7.6800e-004	0.00
tblFleetMix	OBUS	2.6140e-003	0.00
tblFleetMix	UBUS	2.2740e-003	0.00
tblProjectCharacteristics	OperationalYear	2018	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	14.42
tblVehicleTrips	CNW_TL	6.60	14.42
tblVehicleTrips	CW_TL	14.70	14.42
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	ST_TR	22.75	4.59
tblVehicleTrips	SU_TR	16.74	4.59
tblVehicleTrips	WD_TR	1.89	1.70

## 2.0 Emissions Summary

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Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

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	0.0616	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1236	0.3388	1.9518	7.1500e-003	0.7333	5.1600e-003	0.7385	0.1960	4.7900e-003	0.2008	0.0000	649.7429	649.7429	0.0175	0.0000	650.1796
Waste						0.0000	0.0000		0.0000	0.0000	2.6186	0.0000	2.6186	0.1548	0.0000	6.4874
Water						0.0000	0.0000		0.0000	0.0000	0.0000	181.9732	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>	<b>0.1852</b>	<b>0.3389</b>	<b>1.9532</b>	<b>7.1500e-003</b>	<b>0.7333</b>	<b>5.1600e-003</b>	<b>0.7385</b>	<b>0.1960</b>	<b>4.7900e-003</b>	<b>0.2008</b>	<b>2.6186</b>	<b>831.7188</b>	<b>834.3373</b>	<b>0.1805</b>	<b>1.7000e-003</b>	<b>839.3561</b>

Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0616	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1236	0.3388	1.9518	7.1500e-003	0.7333	5.1600e-003	0.7385	0.1960	4.7900e-003	0.2008	0.0000	649.7429	649.7429	0.0175	0.0000	650.1796
Waste						0.0000	0.0000		0.0000	0.0000	2.6186	0.0000	2.6186	0.1548	0.0000	6.4874
Water						0.0000	0.0000		0.0000	0.0000	0.0000	181.9732	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>	<b>0.1852</b>	<b>0.3389</b>	<b>1.9532</b>	<b>7.1500e-003</b>	<b>0.7333</b>	<b>5.1600e-003</b>	<b>0.7385</b>	<b>0.1960</b>	<b>4.7900e-003</b>	<b>0.2008</b>	<b>2.6186</b>	<b>831.7188</b>	<b>834.3373</b>	<b>0.1805</b>	<b>1.7000e-003</b>	<b>839.3561</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**

Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	12/5/2016	12/4/2016	5	220	
2	Building Construction	Building Construction	12/5/2016	12/4/2016	5	3100	
3	Demolition	Demolition	12/5/2016	12/4/2016	5	200	
4	Grading	Grading	12/5/2016	12/4/2016	5	310	
5	Paving	Paving	12/5/2016	12/4/2016	5	220	
6	Site Preparation	Site Preparation	12/5/2016	12/4/2016	5	120	

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

**Acres of Grading (Grading Phase): 775**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

## Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

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**





























Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

**3.7 Site Preparation - 2016**

**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**

Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	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	0.1236	0.3388	1.9518	7.1500e-003	0.7333	5.1600e-003	0.7385	0.1960	4.7900e-003	0.2008	0.0000	649.7429	649.7429	0.0175	0.0000	650.1796
Unmitigated	0.1236	0.3388	1.9518	7.1500e-003	0.7333	5.1600e-003	0.7385	0.1960	4.7900e-003	0.2008	0.0000	649.7429	649.7429	0.0175	0.0000	650.1796

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	255.00	688.50	688.50	1,988,576	1,988,576
Total	255.00	688.50	688.50	1,988,576	1,988,576

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.42	14.42	14.42	33.00	48.00	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.606102	0.039376	0.193723	0.112069	0.016317	0.005358	0.017943	0.000000	0.000000	0.000000	0.005874	0.000887	0.000000

5.0 Energy Detail

Historical Energy Use: N



Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

**5.2 Energy by Land Use - Natural Gas**

**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					
City Park	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>0.0000</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>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

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**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

**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	0.0616	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
Unmitigated	0.0616	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003

Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

**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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
<b>Total</b>	<b>0.0616</b>	<b>1.0000e-005</b>	<b>1.3800e-003</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>2.6800e-003</b>	<b>2.6800e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.8600e-003</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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8600e-003
<b>Total</b>	<b>0.0616</b>	<b>1.0000e-005</b>	<b>1.3800e-003</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>2.6800e-003</b>	<b>2.6800e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.8600e-003</b>

**7.0 Water Detail**

Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	181.9732	8.2300e-003	1.7000e-003	182.6862
Unmitigated	181.9732	8.2300e-003	1.7000e-003	182.6862

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 178.722	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>		<b>181.9732</b>	<b>8.2300e-003</b>	<b>1.7000e-003</b>	<b>182.6862</b>



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**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 178.722	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>		<b>181.9732</b>	<b>8.2300e-003</b>	<b>1.7000e-003</b>	<b>182.6862</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.6186	0.1548	0.0000	6.4874
Unmitigated	2.6186	0.1548	0.0000	6.4874

Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	12.9	2.6186	0.1548	0.0000	6.4874
<b>Total</b>		<b>2.6186</b>	<b>0.1548</b>	<b>0.0000</b>	<b>6.4874</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	12.9	2.6186	0.1548	0.0000	6.4874
<b>Total</b>		<b>2.6186</b>	<b>0.1548</b>	<b>0.0000</b>	<b>6.4874</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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## Tolay Lake Operational Run 2022 - No Contingency - Bay Area AQMD Air District, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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Tolay Lake Operational Run 2040 - No Contingency - Bay Area AQMD Air District, Annual

**Tolay Lake Operational Run 2040 - No Contingency**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	150.00	Acre	150.00	6,534,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Rural	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4			<b>Operational Year</b>	2040
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<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 - PTG - Ops model run for 2040.

Land Use -

Vehicle Trips - PTG - updated to reflect trip distribution pertaining to the project.

Vehicle Emission Factors -

Fleet Mix - PTG - Fleet characteristics updated to exclude trips that would not be generated by the project.

## Tolay Lake Operational Run 2040 - No Contingency - Bay Area AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.59	0.62
tblFleetMix	MH	6.6300e-004	0.00
tblFleetMix	OBUS	2.7950e-003	0.00
tblFleetMix	UBUS	1.6200e-003	0.00
tblProjectCharacteristics	OperationalYear	2018	2040
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	14.59
tblVehicleTrips	CNW_TL	6.60	14.59
tblVehicleTrips	CW_TL	14.70	14.59
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	ST_TR	22.75	6.13
tblVehicleTrips	SU_TR	16.74	6.13
tblVehicleTrips	WD_TR	1.89	2.27

## 2.0 Emissions Summary

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Tolay Lake Operational Run 2040 - No Contingency - Bay Area AQMD Air District, Annual

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	0.0616	1.0000e-005	1.3700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8500e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0827	0.2096	1.2611	6.6800e-003	0.9915	2.7900e-003	0.9943	0.2651	2.5800e-003	0.2677	0.0000	609.1689	609.1689	0.0120	0.0000	609.4690
Waste						0.0000	0.0000		0.0000	0.0000	2.6186	0.0000	2.6186	0.1548	0.0000	6.4874
Water						0.0000	0.0000		0.0000	0.0000	0.0000	181.9732	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>	<b>0.1443</b>	<b>0.2096</b>	<b>1.2625</b>	<b>6.6800e-003</b>	<b>0.9915</b>	<b>2.7900e-003</b>	<b>0.9943</b>	<b>0.2651</b>	<b>2.5800e-003</b>	<b>0.2677</b>	<b>2.6186</b>	<b>791.1448</b>	<b>793.7633</b>	<b>0.1750</b>	<b>1.7000e-003</b>	<b>798.6455</b>

Tolay Lake Operational Run 2040 - No Contingency - Bay Area AQMD Air District, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0616	1.0000e-005	1.3700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8500e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0827	0.2096	1.2611	6.6800e-003	0.9915	2.7900e-003	0.9943	0.2651	2.5800e-003	0.2677	0.0000	609.1689	609.1689	0.0120	0.0000	609.4690
Waste						0.0000	0.0000		0.0000	0.0000	2.6186	0.0000	2.6186	0.1548	0.0000	6.4874
Water						0.0000	0.0000		0.0000	0.0000	0.0000	181.9732	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>	<b>0.1443</b>	<b>0.2096</b>	<b>1.2625</b>	<b>6.6800e-003</b>	<b>0.9915</b>	<b>2.7900e-003</b>	<b>0.9943</b>	<b>0.2651</b>	<b>2.5800e-003</b>	<b>0.2677</b>	<b>2.6186</b>	<b>791.1448</b>	<b>793.7633</b>	<b>0.1750</b>	<b>1.7000e-003</b>	<b>798.6455</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**



## Tolay Lake Operational Run 2040 - No Contingency - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/5/2016	12/4/2016	5	200	
2	Site Preparation	Site Preparation	12/5/2016	12/4/2016	5	120	
3	Grading	Grading	12/5/2016	12/4/2016	5	310	
4	Building Construction	Building Construction	12/5/2016	12/4/2016	5	3100	
5	Paving	Paving	12/5/2016	12/4/2016	5	220	
6	Architectural Coating	Architectural Coating	12/5/2016	12/4/2016	5	220	

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

**Acres of Grading (Grading Phase): 775**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

## Tolay Lake Operational Run 2040 - No Contingency - Bay Area AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

**Trips and VMT**



























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**3.7 Architectural Coating - 2016**

**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**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0827	0.2096	1.2611	6.6800e-003	0.9915	2.7900e-003	0.9943	0.2651	2.5800e-003	0.2677	0.0000	609.1689	609.1689	0.0120	0.0000	609.4690
Unmitigated	0.0827	0.2096	1.2611	6.6800e-003	0.9915	2.7900e-003	0.9943	0.2651	2.5800e-003	0.2677	0.0000	609.1689	609.1689	0.0120	0.0000	609.4690

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	340.50	919.50	919.50	2,686,865	2,686,865
Total	340.50	919.50	919.50	2,686,865	2,686,865

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.59	14.59	14.59	33.00	48.00	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.622242	0.035728	0.192384	0.105682	0.011547	0.005282	0.020653	0.000000	0.000000	0.000000	0.005545	0.000937	0.000000

5.0 Energy Detail

Historical Energy Use: N





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**5.2 Energy by Land Use - Natural Gas**

**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						
City Park	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	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>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

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**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

**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	0.0616	1.0000e-005	1.3700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8500e-003
Unmitigated	0.0616	1.0000e-005	1.3700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8500e-003

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**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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8500e-003
<b>Total</b>	<b>0.0616</b>	<b>1.0000e-005</b>	<b>1.3700e-003</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>2.6800e-003</b>	<b>2.6800e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.8500e-003</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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6800e-003	2.6800e-003	1.0000e-005	0.0000	2.8500e-003
<b>Total</b>	<b>0.0616</b>	<b>1.0000e-005</b>	<b>1.3700e-003</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>2.6800e-003</b>	<b>2.6800e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.8500e-003</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	181.9732	8.2300e-003	1.7000e-003	182.6862
Unmitigated	181.9732	8.2300e-003	1.7000e-003	182.6862

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 178.722	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>		<b>181.9732</b>	<b>8.2300e-003</b>	<b>1.7000e-003</b>	<b>182.6862</b>

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**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 178.722	181.9732	8.2300e-003	1.7000e-003	182.6862
<b>Total</b>		<b>181.9732</b>	<b>8.2300e-003</b>	<b>1.7000e-003</b>	<b>182.6862</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.6186	0.1548	0.0000	6.4874
Unmitigated	2.6186	0.1548	0.0000	6.4874

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**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	12.9	2.6186	0.1548	0.0000	6.4874
<b>Total</b>		<b>2.6186</b>	<b>0.1548</b>	<b>0.0000</b>	<b>6.4874</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	12.9	2.6186	0.1548	0.0000	6.4874
<b>Total</b>		<b>2.6186</b>	<b>0.1548</b>	<b>0.0000</b>	<b>6.4874</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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Tolay Lake Regional Park - Grading - Bay Area AQMD Air District, Annual

**Tolay Lake Regional Park - Grading**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Parking	1.00	User Defined Unit	2.00	87,120.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Rural	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4			<b>Operational Year</b>	2019
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<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 - PTG - Model run for estimating grading for parking lots.

Land Use - PTG - Simple grading of a site.

Construction Phase - PTG - Grading presumed to take ~10 days.

Construction Off-road Equipment Mitigation -

## Tolay Lake Regional Park - Grading - Bay Area AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	4.00	10.00
tblGrading	AcresOfGrading	5.00	2.00
tblLandUse	BuildingSpaceSquareFeet	0.00	87,120.00
tblLandUse	LandUseSquareFeet	0.00	87,120.00
tblLandUse	LotAcreage	0.00	2.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

## 2.0 Emissions Summary

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Tolay Lake Regional Park - Grading - Bay Area AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2017	3-31-2017	0.1327	0.1327
		Highest	0.1327	0.1327

2.2 Overall Operational

Unmitigated Operational

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
	tons/yr										MT/yr					
Area	7.4500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>1.0000e-005</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>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

Tolay Lake Regional Park - Grading - Bay Area AQMD Air District, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.4500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>1.0000e-005</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>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</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	Grading	Grading	1/1/2017	1/13/2017	5	10	

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

Tolay Lake Regional Park - Grading - Bay Area AQMD Air District, Annual

**Acres of Grading (Grading Phase): 2**

**Acres of Paving: 2**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

**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
Grading	4	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Tolay Lake Regional Park - Grading - Bay Area AQMD Air District, Annual

**3.2 Grading - 2017**

**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					0.0312	0.0000	0.0312	0.0167	0.0000	0.0167	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.1308	0.0539	1.0000e-004		6.4900e-003	6.4900e-003		5.9700e-003	5.9700e-003	0.0000	9.5807	9.5807	2.9400e-003	0.0000	9.6541
<b>Total</b>	<b>0.0116</b>	<b>0.1308</b>	<b>0.0539</b>	<b>1.0000e-004</b>	<b>0.0312</b>	<b>6.4900e-003</b>	<b>0.0377</b>	<b>0.0167</b>	<b>5.9700e-003</b>	<b>0.0226</b>	<b>0.0000</b>	<b>9.5807</b>	<b>9.5807</b>	<b>2.9400e-003</b>	<b>0.0000</b>	<b>9.6541</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	2.3000e-004	1.8000e-004	1.7700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3790	0.3790	1.0000e-005	0.0000	0.3793
<b>Total</b>	<b>2.3000e-004</b>	<b>1.8000e-004</b>	<b>1.7700e-003</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3790</b>	<b>0.3790</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3793</b>

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**3.2 Grading - 2017**

**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					0.0140	0.0000	0.0140	7.5000e-003	0.0000	7.5000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.1308	0.0539	1.0000e-004		6.4900e-003	6.4900e-003		5.9700e-003	5.9700e-003	0.0000	9.5807	9.5807	2.9400e-003	0.0000	9.6541
<b>Total</b>	<b>0.0116</b>	<b>0.1308</b>	<b>0.0539</b>	<b>1.0000e-004</b>	<b>0.0140</b>	<b>6.4900e-003</b>	<b>0.0205</b>	<b>7.5000e-003</b>	<b>5.9700e-003</b>	<b>0.0135</b>	<b>0.0000</b>	<b>9.5807</b>	<b>9.5807</b>	<b>2.9400e-003</b>	<b>0.0000</b>	<b>9.6541</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	2.3000e-004	1.8000e-004	1.7700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3790	0.3790	1.0000e-005	0.0000	0.3793
<b>Total</b>	<b>2.3000e-004</b>	<b>1.8000e-004</b>	<b>1.7700e-003</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3790</b>	<b>0.3790</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3793</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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Parking	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Parking	14.70	6.60	6.60	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
User Defined Parking	0.570523	0.041853	0.194077	0.115893	0.018544	0.005373	0.016909	0.024079	0.002502	0.002562	0.005975	0.000872	0.000837





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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Parking	0	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>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Parking	0	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>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.4500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	7.4500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	1.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>1.0000e-005</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>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>1.0000e-005</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>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Parking	0 / 0	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>

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**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Parking	0 / 0	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>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000



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**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Parking	0	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>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Parking	0	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>

**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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Tolay Lake Regional Park - Equipment Shop - Bay Area AQMD Air District, Annual

**Tolay Lake Regional Park - Equipment Shop**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	4.00	1000sqft	0.09	4,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Rural	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4			<b>Operational Year</b>	2020
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<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 - PTG - Model Run for the 4,000 sq ft Equipment Shop

Land Use -

Construction Phase -

Construction Off-road Equipment Mitigation -

## Tolay Lake Regional Park - Equipment Shop - Bay Area AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	PhaseEndDate	6/20/2018	6/20/2017
tblConstructionPhase	PhaseEndDate	6/6/2018	6/6/2017
tblConstructionPhase	PhaseEndDate	1/12/2018	1/13/2017
tblConstructionPhase	PhaseEndDate	1/17/2018	1/17/2017
tblConstructionPhase	PhaseEndDate	6/13/2018	6/13/2017
tblConstructionPhase	PhaseEndDate	1/15/2018	1/13/2017
tblConstructionPhase	PhaseStartDate	6/14/2018	6/14/2017
tblConstructionPhase	PhaseStartDate	1/18/2018	1/18/2017
tblConstructionPhase	PhaseStartDate	1/1/2018	1/1/2017
tblConstructionPhase	PhaseStartDate	1/16/2018	1/16/2017
tblConstructionPhase	PhaseStartDate	6/7/2018	6/7/2017
tblConstructionPhase	PhaseStartDate	1/13/2018	1/13/2017
tblProjectCharacteristics	OperationalYear	2018	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

## 2.0 Emissions Summary

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Tolay Lake Regional Park - Equipment Shop - Bay Area AQMD Air District, Annual

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	0.0177	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.7000e-004	5.1900e-003	4.3600e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	15.4502	15.4502	5.5000e-004	2.0000e-004	15.5222
Mobile	7.6000e-003	0.0407	0.1026	3.6000e-004	0.0303	4.0000e-004	0.0307	8.1300e-003	3.7000e-004	8.5000e-003	0.0000	32.9837	32.9837	1.1800e-003	0.0000	33.0131
Waste						0.0000	0.0000		0.0000	0.0000	1.0068	0.0000	1.0068	0.0595	0.0000	2.4944
Water						0.0000	0.0000		0.0000	0.0000	0.2935	1.4561	1.7495	0.0302	7.3000e-004	2.7208
<b>Total</b>	<b>0.0259</b>	<b>0.0458</b>	<b>0.1070</b>	<b>3.9000e-004</b>	<b>0.0303</b>	<b>7.9000e-004</b>	<b>0.0311</b>	<b>8.1300e-003</b>	<b>7.6000e-004</b>	<b>8.8900e-003</b>	<b>1.3003</b>	<b>49.8900</b>	<b>51.1903</b>	<b>0.0914</b>	<b>9.3000e-004</b>	<b>53.7506</b>

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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0177	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.7000e-004	5.1900e-003	4.3600e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	15.4502	15.4502	5.5000e-004	2.0000e-004	15.5222
Mobile	7.6000e-003	0.0407	0.1026	3.6000e-004	0.0303	4.0000e-004	0.0307	8.1300e-003	3.7000e-004	8.5000e-003	0.0000	32.9837	32.9837	1.1800e-003	0.0000	33.0131
Waste						0.0000	0.0000		0.0000	0.0000	1.0068	0.0000	1.0068	0.0595	0.0000	2.4944
Water						0.0000	0.0000		0.0000	0.0000	0.2935	1.4561	1.7495	0.0302	7.3000e-004	2.7208
<b>Total</b>	<b>0.0259</b>	<b>0.0458</b>	<b>0.1070</b>	<b>3.9000e-004</b>	<b>0.0303</b>	<b>7.9000e-004</b>	<b>0.0311</b>	<b>8.1300e-003</b>	<b>7.6000e-004</b>	<b>8.8900e-003</b>	<b>1.3003</b>	<b>49.8900</b>	<b>51.1903</b>	<b>0.0914</b>	<b>9.3000e-004</b>	<b>53.7506</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**

## Tolay Lake Regional Park - Equipment Shop - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/13/2017	5	10	
2	Site Preparation	Site Preparation	1/13/2017	1/13/2017	5	1	
3	Grading	Grading	1/16/2017	1/17/2017	5	2	
4	Building Construction	Building Construction	1/18/2017	6/6/2017	5	100	
5	Paving	Paving	6/7/2017	6/13/2017	5	5	
6	Architectural Coating	Architectural Coating	6/14/2017	6/20/2017	5	5	

**Acres of Grading (Site Preparation Phase): 0.5**

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 6,000; Non-Residential Outdoor: 2,000; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**



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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	2.00	1.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

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**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2017**

**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	6.0500e-003	0.0525	0.0396	6.0000e-005		3.6600e-003	3.6600e-003		3.4900e-003	3.4900e-003	0.0000	5.3493	5.3493	1.0500e-003	0.0000	5.3755
<b>Total</b>	<b>6.0500e-003</b>	<b>0.0525</b>	<b>0.0396</b>	<b>6.0000e-005</b>		<b>3.6600e-003</b>	<b>3.6600e-003</b>		<b>3.4900e-003</b>	<b>3.4900e-003</b>	<b>0.0000</b>	<b>5.3493</b>	<b>5.3493</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>5.3755</b>

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**3.2 Demolition - 2017**

**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	2.3000e-004	1.8000e-004	1.7700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3790	0.3790	1.0000e-005	0.0000	0.3793
<b>Total</b>	<b>2.3000e-004</b>	<b>1.8000e-004</b>	<b>1.7700e-003</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3790</b>	<b>0.3790</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3793</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	6.0500e-003	0.0525	0.0396	6.0000e-005		3.6600e-003	3.6600e-003		3.4900e-003	3.4900e-003	0.0000	5.3492	5.3492	1.0500e-003	0.0000	5.3755
<b>Total</b>	<b>6.0500e-003</b>	<b>0.0525</b>	<b>0.0396</b>	<b>6.0000e-005</b>		<b>3.6600e-003</b>	<b>3.6600e-003</b>		<b>3.4900e-003</b>	<b>3.4900e-003</b>	<b>0.0000</b>	<b>5.3492</b>	<b>5.3492</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>5.3755</b>

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**3.2 Demolition - 2017**

**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	2.3000e-004	1.8000e-004	1.7700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3790	0.3790	1.0000e-005	0.0000	0.3793
<b>Total</b>	<b>2.3000e-004</b>	<b>1.8000e-004</b>	<b>1.7700e-003</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3790</b>	<b>0.3790</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3793</b>

**3.3 Site Preparation - 2017**

**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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	5.2600e-003	2.1800e-003	0.0000		2.4000e-004	2.4000e-004		2.2000e-004	2.2000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
<b>Total</b>	<b>4.3000e-004</b>	<b>5.2600e-003</b>	<b>2.1800e-003</b>	<b>0.0000</b>	<b>2.7000e-004</b>	<b>2.4000e-004</b>	<b>5.1000e-004</b>	<b>3.0000e-005</b>	<b>2.2000e-004</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.4534</b>	<b>0.4534</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4569</b>

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**3.3 Site Preparation - 2017**

**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0190	0.0190	0.0000	0.0000	0.0190
<b>Total</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0190</b>	<b>0.0190</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0190</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					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	5.2600e-003	2.1800e-003	0.0000		2.4000e-004	2.4000e-004		2.2000e-004	2.2000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
<b>Total</b>	<b>4.3000e-004</b>	<b>5.2600e-003</b>	<b>2.1800e-003</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>2.4000e-004</b>	<b>3.6000e-004</b>	<b>1.0000e-005</b>	<b>2.2000e-004</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>0.4534</b>	<b>0.4534</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4569</b>

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**3.3 Site Preparation - 2017**

**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0190	0.0190	0.0000	0.0000	0.0190
<b>Total</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0190</b>	<b>0.0190</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0190</b>

**3.4 Grading - 2017**

**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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	0.0105	7.9200e-003	1.0000e-005		7.3000e-004	7.3000e-004		7.0000e-004	7.0000e-004	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751
<b>Total</b>	<b>1.2100e-003</b>	<b>0.0105</b>	<b>7.9200e-003</b>	<b>1.0000e-005</b>	<b>7.5000e-004</b>	<b>7.3000e-004</b>	<b>1.4800e-003</b>	<b>4.1000e-004</b>	<b>7.0000e-004</b>	<b>1.1100e-003</b>	<b>0.0000</b>	<b>1.0699</b>	<b>1.0699</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>1.0751</b>

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**3.4 Grading - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.5000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0758	0.0758	0.0000	0.0000	0.0759
<b>Total</b>	<b>5.0000e-005</b>	<b>4.0000e-005</b>	<b>3.5000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0758</b>	<b>0.0758</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0759</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					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	0.0105	7.9200e-003	1.0000e-005		7.3000e-004	7.3000e-004		7.0000e-004	7.0000e-004	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751
<b>Total</b>	<b>1.2100e-003</b>	<b>0.0105</b>	<b>7.9200e-003</b>	<b>1.0000e-005</b>	<b>3.4000e-004</b>	<b>7.3000e-004</b>	<b>1.0700e-003</b>	<b>1.9000e-004</b>	<b>7.0000e-004</b>	<b>8.9000e-004</b>	<b>0.0000</b>	<b>1.0699</b>	<b>1.0699</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>1.0751</b>

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**3.4 Grading - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.5000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0758	0.0758	0.0000	0.0000	0.0759
<b>Total</b>	<b>5.0000e-005</b>	<b>4.0000e-005</b>	<b>3.5000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0758</b>	<b>0.0758</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0759</b>

**3.5 Building Construction - 2017**

**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	0.0641	0.6380	0.4035	5.7000e-004		0.0430	0.0430		0.0395	0.0395	0.0000	52.8851	52.8851	0.0162	0.0000	53.2902
<b>Total</b>	<b>0.0641</b>	<b>0.6380</b>	<b>0.4035</b>	<b>5.7000e-004</b>		<b>0.0430</b>	<b>0.0430</b>		<b>0.0395</b>	<b>0.0395</b>	<b>0.0000</b>	<b>52.8851</b>	<b>52.8851</b>	<b>0.0162</b>	<b>0.0000</b>	<b>53.2902</b>



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**3.5 Building Construction - 2017**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-004	6.7800e-003	1.9200e-003	1.0000e-005	3.0000e-004	6.0000e-005	3.6000e-004	9.0000e-005	6.0000e-005	1.4000e-004	0.0000	1.2264	1.2264	8.0000e-005	0.0000	1.2284
Worker	4.5000e-004	3.5000e-004	3.5300e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7581	0.7581	2.0000e-005	0.0000	0.7587
<b>Total</b>	<b>7.3000e-004</b>	<b>7.1300e-003</b>	<b>5.4500e-003</b>	<b>2.0000e-005</b>	<b>1.0900e-003</b>	<b>7.0000e-005</b>	<b>1.1600e-003</b>	<b>3.0000e-004</b>	<b>7.0000e-005</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>1.9845</b>	<b>1.9845</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.9871</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	0.0641	0.6380	0.4035	5.7000e-004		0.0430	0.0430		0.0395	0.0395	0.0000	52.8850	52.8850	0.0162	0.0000	53.2901
<b>Total</b>	<b>0.0641</b>	<b>0.6380</b>	<b>0.4035</b>	<b>5.7000e-004</b>		<b>0.0430</b>	<b>0.0430</b>		<b>0.0395</b>	<b>0.0395</b>	<b>0.0000</b>	<b>52.8850</b>	<b>52.8850</b>	<b>0.0162</b>	<b>0.0000</b>	<b>53.2901</b>

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**3.5 Building Construction - 2017**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-004	6.7800e-003	1.9200e-003	1.0000e-005	3.0000e-004	6.0000e-005	3.6000e-004	9.0000e-005	6.0000e-005	1.4000e-004	0.0000	1.2264	1.2264	8.0000e-005	0.0000	1.2284
Worker	4.5000e-004	3.5000e-004	3.5300e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7581	0.7581	2.0000e-005	0.0000	0.7587
<b>Total</b>	<b>7.3000e-004</b>	<b>7.1300e-003</b>	<b>5.4500e-003</b>	<b>2.0000e-005</b>	<b>1.0900e-003</b>	<b>7.0000e-005</b>	<b>1.1600e-003</b>	<b>3.0000e-004</b>	<b>7.0000e-005</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>1.9845</b>	<b>1.9845</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.9871</b>

**3.6 Paving - 2017**

**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	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>2.6300e-003</b>	<b>0.0249</b>	<b>0.0184</b>	<b>3.0000e-005</b>		<b>1.5200e-003</b>	<b>1.5200e-003</b>		<b>1.4100e-003</b>	<b>1.4100e-003</b>	<b>0.0000</b>	<b>2.4610</b>	<b>2.4610</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>2.4781</b>

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**3.6 Paving - 2017**

**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	2.0000e-004	1.6000e-004	1.5900e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3411	0.3411	1.0000e-005	0.0000	0.3414
<b>Total</b>	<b>2.0000e-004</b>	<b>1.6000e-004</b>	<b>1.5900e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3411</b>	<b>0.3411</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3414</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	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>2.6300e-003</b>	<b>0.0249</b>	<b>0.0184</b>	<b>3.0000e-005</b>		<b>1.5200e-003</b>	<b>1.5200e-003</b>		<b>1.4100e-003</b>	<b>1.4100e-003</b>	<b>0.0000</b>	<b>2.4610</b>	<b>2.4610</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>2.4781</b>

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**3.6 Paving - 2017**

**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	2.0000e-004	1.6000e-004	1.5900e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3411	0.3411	1.0000e-005	0.0000	0.3414
<b>Total</b>	<b>2.0000e-004</b>	<b>1.6000e-004</b>	<b>1.5900e-003</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3411</b>	<b>0.3411</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3414</b>

**3.7 Architectural Coating - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400
<b>Total</b>	<b>0.0217</b>	<b>5.4600e-003</b>	<b>4.6700e-003</b>	<b>1.0000e-005</b>		<b>4.3000e-004</b>	<b>4.3000e-004</b>		<b>4.3000e-004</b>	<b>4.3000e-004</b>	<b>0.0000</b>	<b>0.6383</b>	<b>0.6383</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.6400</b>

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**3.7 Architectural Coating - 2017**

**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					
Archit. Coating	0.0209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400
<b>Total</b>	<b>0.0217</b>	<b>5.4600e-003</b>	<b>4.6700e-003</b>	<b>1.0000e-005</b>		<b>4.3000e-004</b>	<b>4.3000e-004</b>		<b>4.3000e-004</b>	<b>4.3000e-004</b>	<b>0.0000</b>	<b>0.6383</b>	<b>0.6383</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.6400</b>

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**3.7 Architectural Coating - 2017**

**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**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.6000e-003	0.0407	0.1026	3.6000e-004	0.0303	4.0000e-004	0.0307	8.1300e-003	3.7000e-004	8.5000e-003	0.0000	32.9837	32.9837	1.1800e-003	0.0000	33.0131
Unmitigated	7.6000e-003	0.0407	0.1026	3.6000e-004	0.0303	4.0000e-004	0.0307	8.1300e-003	3.7000e-004	8.5000e-003	0.0000	32.9837	32.9837	1.1800e-003	0.0000	33.0131

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	27.88	5.28	2.72	81,354	81,354
Total	27.88	5.28	2.72	81,354	81,354

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.573139	0.040894	0.193976	0.114604	0.017740	0.005371	0.017133	0.024527	0.002545	0.002442	0.005942	0.000877	0.000812

5.0 Energy Detail

Historical Energy Use: N

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**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	9.7979	9.7979	4.4000e-004	9.0000e-005	9.8363
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.7979	9.7979	4.4000e-004	9.0000e-005	9.8363
NaturalGas Mitigated	5.7000e-004	5.1900e-003	4.3600e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6523	5.6523	1.1000e-004	1.0000e-004	5.6859
NaturalGas Unmitigated	5.7000e-004	5.1900e-003	4.3600e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6523	5.6523	1.1000e-004	1.0000e-004	5.6859

**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					
General Light Industry	105920	5.7000e-004	5.1900e-003	4.3600e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6523	5.6523	1.1000e-004	1.0000e-004	5.6859
<b>Total</b>		<b>5.7000e-004</b>	<b>5.1900e-003</b>	<b>4.3600e-003</b>	<b>3.0000e-005</b>		<b>3.9000e-004</b>	<b>3.9000e-004</b>		<b>3.9000e-004</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>5.6523</b>	<b>5.6523</b>	<b>1.1000e-004</b>	<b>1.0000e-004</b>	<b>5.6859</b>



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**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	105920	5.7000e-004	5.1900e-003	4.3600e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6523	5.6523	1.1000e-004	1.0000e-004	5.6859
<b>Total</b>		<b>5.7000e-004</b>	<b>5.1900e-003</b>	<b>4.3600e-003</b>	<b>3.0000e-005</b>		<b>3.9000e-004</b>	<b>3.9000e-004</b>		<b>3.9000e-004</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>5.6523</b>	<b>5.6523</b>	<b>1.1000e-004</b>	<b>1.0000e-004</b>	<b>5.6859</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	33680	9.7979	4.4000e-004	9.0000e-005	9.8363
<b>Total</b>		<b>9.7979</b>	<b>4.4000e-004</b>	<b>9.0000e-005</b>	<b>9.8363</b>

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**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	33680	9.7979	4.4000e-004	9.0000e-005	9.8363
<b>Total</b>		<b>9.7979</b>	<b>4.4000e-004</b>	<b>9.0000e-005</b>	<b>9.8363</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	tons/yr										MT/yr					
Mitigated	0.0177	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Unmitigated	0.0177	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

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**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	2.0900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
<b>Total</b>	<b>0.0177</b>	<b>0.0000</b>	<b>4.0000e-005</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>7.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>8.0000e-005</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	2.0900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
<b>Total</b>	<b>0.0177</b>	<b>0.0000</b>	<b>4.0000e-005</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>7.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>8.0000e-005</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.7495	0.0302	7.3000e-004	2.7208
Unmitigated	1.7495	0.0302	7.3000e-004	2.7208

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.925 / 0	1.7495	0.0302	7.3000e-004	2.7208
<b>Total</b>		<b>1.7495</b>	<b>0.0302</b>	<b>7.3000e-004</b>	<b>2.7208</b>

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**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.925 / 0	1.7495	0.0302	7.3000e-004	2.7208
<b>Total</b>		<b>1.7495</b>	<b>0.0302</b>	<b>7.3000e-004</b>	<b>2.7208</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0068	0.0595	0.0000	2.4944
Unmitigated	1.0068	0.0595	0.0000	2.4944

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**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	4.96	1.0068	0.0595	0.0000	2.4944
<b>Total</b>		<b>1.0068</b>	<b>0.0595</b>	<b>0.0000</b>	<b>2.4944</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	4.96	1.0068	0.0595	0.0000	2.4944
<b>Total</b>		<b>1.0068</b>	<b>0.0595</b>	<b>0.0000</b>	<b>2.4944</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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**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	15.00	1000sqft	0.34	15,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4			<b>Operational Year</b>	2029
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<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 -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblProjectCharacteristics	OperationalYear	2018	2029

**2.0 Emissions Summary**





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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2027	3-31-2027	0.1959	0.1959
2	4-1-2027	6-30-2027	0.2482	0.2482
		Highest	0.2482	0.2482

**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	0.0664	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Energy	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	57.9382	57.9382	2.0700e-003	7.3000e-004	58.2082
Mobile	0.0145	0.0739	0.1755	8.0000e-004	0.0857	5.5000e-004	0.0863	0.0230	5.1000e-004	0.0235	0.0000	74.0468	74.0468	2.2700e-003	0.0000	74.1036
Waste						0.0000	0.0000		0.0000	0.0000	3.7756	0.0000	3.7756	0.2231	0.0000	9.3540
Water						0.0000	0.0000		0.0000	0.0000	1.1005	5.4602	6.5607	0.1133	2.7200e-003	10.2032
<b>Total</b>	<b>0.0831</b>	<b>0.0933</b>	<b>0.1920</b>	<b>9.2000e-004</b>	<b>0.0857</b>	<b>2.0300e-003</b>	<b>0.0878</b>	<b>0.0230</b>	<b>1.9900e-003</b>	<b>0.0250</b>	<b>4.8761</b>	<b>137.4455</b>	<b>142.3216</b>	<b>0.3408</b>	<b>3.4500e-003</b>	<b>151.8692</b>

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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0664	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Energy	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	57.9382	57.9382	2.0700e-003	7.3000e-004	58.2082
Mobile	0.0145	0.0739	0.1755	8.0000e-004	0.0857	5.5000e-004	0.0863	0.0230	5.1000e-004	0.0235	0.0000	74.0468	74.0468	2.2700e-003	0.0000	74.1036
Waste						0.0000	0.0000		0.0000	0.0000	3.7756	0.0000	3.7756	0.2231	0.0000	9.3540
Water						0.0000	0.0000		0.0000	0.0000	1.1005	5.4602	6.5607	0.1133	2.7200e-003	10.2032
<b>Total</b>	<b>0.0831</b>	<b>0.0933</b>	<b>0.1920</b>	<b>9.2000e-004</b>	<b>0.0857</b>	<b>2.0300e-003</b>	<b>0.0878</b>	<b>0.0230</b>	<b>1.9900e-003</b>	<b>0.0250</b>	<b>4.8761</b>	<b>137.4455</b>	<b>142.3216</b>	<b>0.3408</b>	<b>3.4500e-003</b>	<b>151.8692</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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/16/2027	6/22/2027	5	5	
2	Building Construction	Building Construction	1/20/2027	6/8/2027	5	100	
3	Demolition	Demolition	1/1/2027	1/14/2027	5	10	
4	Grading	Grading	1/16/2027	1/19/2027	5	2	
5	Paving	Paving	6/9/2027	6/15/2027	5	5	
6	Site Preparation	Site Preparation	1/15/2027	1/15/2027	5	1	

**Acres of Grading (Site Preparation Phase): 0.5**

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	6.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Architectural Coating - 2027**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0782					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392
<b>Total</b>	<b>0.0787</b>	<b>2.8600e-003</b>	<b>4.5200e-003</b>	<b>1.0000e-005</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.6383</b>	<b>0.6383</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.6392</b>

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**3.2 Architectural Coating - 2027**

**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	1.0000e-005	0.0000	4.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0133	0.0133	0.0000	0.0000	0.0133
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0133</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					
Archit. Coating	0.0782					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392
<b>Total</b>	<b>0.0787</b>	<b>2.8600e-003</b>	<b>4.5200e-003</b>	<b>1.0000e-005</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.6383</b>	<b>0.6383</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.6392</b>

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**3.2 Architectural Coating - 2027**

**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	1.0000e-005	0.0000	4.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0133	0.0133	0.0000	0.0000	0.0133
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0133</b>

**3.3 Building Construction - 2027**

**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	0.0276	0.2741	0.3514	5.7000e-004		0.0121	0.0121		0.0111	0.0111	0.0000	50.1479	50.1479	0.0162	0.0000	50.5533
<b>Total</b>	<b>0.0276</b>	<b>0.2741</b>	<b>0.3514</b>	<b>5.7000e-004</b>		<b>0.0121</b>	<b>0.0121</b>		<b>0.0111</b>	<b>0.0111</b>	<b>0.0000</b>	<b>50.1479</b>	<b>50.1479</b>	<b>0.0162</b>	<b>0.0000</b>	<b>50.5533</b>



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**3.3 Building Construction - 2027**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	7.2800e-003	1.9700e-003	3.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	2.4345	2.4345	1.0000e-004	0.0000	2.4369
Worker	6.4000e-004	3.5000e-004	4.2600e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.5915	1.5915	2.0000e-005	0.0000	1.5921
<b>Total</b>	<b>8.4000e-004</b>	<b>7.6300e-003</b>	<b>6.2300e-003</b>	<b>5.0000e-005</b>	<b>3.0300e-003</b>	<b>2.0000e-005</b>	<b>3.0400e-003</b>	<b>8.2000e-004</b>	<b>2.0000e-005</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>4.0260</b>	<b>4.0260</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>4.0290</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	0.0276	0.2741	0.3514	5.7000e-004		0.0121	0.0121		0.0111	0.0111	0.0000	50.1478	50.1478	0.0162	0.0000	50.5533
<b>Total</b>	<b>0.0276</b>	<b>0.2741</b>	<b>0.3514</b>	<b>5.7000e-004</b>		<b>0.0121</b>	<b>0.0121</b>		<b>0.0111</b>	<b>0.0111</b>	<b>0.0000</b>	<b>50.1478</b>	<b>50.1478</b>	<b>0.0162</b>	<b>0.0000</b>	<b>50.5533</b>

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**3.3 Building Construction - 2027**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	7.2800e-003	1.9700e-003	3.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	2.4345	2.4345	1.0000e-004	0.0000	2.4369
Worker	6.4000e-004	3.5000e-004	4.2600e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.5915	1.5915	2.0000e-005	0.0000	1.5921
<b>Total</b>	<b>8.4000e-004</b>	<b>7.6300e-003</b>	<b>6.2300e-003</b>	<b>5.0000e-005</b>	<b>3.0300e-003</b>	<b>2.0000e-005</b>	<b>3.0400e-003</b>	<b>8.2000e-004</b>	<b>2.0000e-005</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>4.0260</b>	<b>4.0260</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>4.0290</b>

**3.4 Demolition - 2027**

**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	2.8700e-003	0.0255	0.0368	6.0000e-005		1.0500e-003	1.0500e-003		1.0000e-003	1.0000e-003	0.0000	5.2123	5.2123	9.3000e-004	0.0000	5.2357
<b>Total</b>	<b>2.8700e-003</b>	<b>0.0255</b>	<b>0.0368</b>	<b>6.0000e-005</b>		<b>1.0500e-003</b>	<b>1.0500e-003</b>		<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>0.0000</b>	<b>5.2123</b>	<b>5.2123</b>	<b>9.3000e-004</b>	<b>0.0000</b>	<b>5.2357</b>

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**3.4 Demolition - 2027**

**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	1.1000e-004	6.0000e-005	7.1000e-004	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2652	0.2652	0.0000	0.0000	0.2653
<b>Total</b>	<b>1.1000e-004</b>	<b>6.0000e-005</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.2652</b>	<b>0.2652</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.2653</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	2.8700e-003	0.0255	0.0368	6.0000e-005		1.0500e-003	1.0500e-003		1.0000e-003	1.0000e-003	0.0000	5.2123	5.2123	9.3000e-004	0.0000	5.2357
<b>Total</b>	<b>2.8700e-003</b>	<b>0.0255</b>	<b>0.0368</b>	<b>6.0000e-005</b>		<b>1.0500e-003</b>	<b>1.0500e-003</b>		<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>0.0000</b>	<b>5.2123</b>	<b>5.2123</b>	<b>9.3000e-004</b>	<b>0.0000</b>	<b>5.2357</b>

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**3.4 Demolition - 2027**

**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	1.1000e-004	6.0000e-005	7.1000e-004	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2652	0.2652	0.0000	0.0000	0.2653
<b>Total</b>	<b>1.1000e-004</b>	<b>6.0000e-005</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.2652</b>	<b>0.2652</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.2653</b>

**3.5 Grading - 2027**

**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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7000e-004	5.1000e-003	7.3600e-003	1.0000e-005		2.1000e-004	2.1000e-004		2.0000e-004	2.0000e-004	0.0000	1.0425	1.0425	1.9000e-004	0.0000	1.0471
<b>Total</b>	<b>5.7000e-004</b>	<b>5.1000e-003</b>	<b>7.3600e-003</b>	<b>1.0000e-005</b>	<b>7.5000e-004</b>	<b>2.1000e-004</b>	<b>9.6000e-004</b>	<b>4.1000e-004</b>	<b>2.0000e-004</b>	<b>6.1000e-004</b>	<b>0.0000</b>	<b>1.0425</b>	<b>1.0425</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.0471</b>

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**3.5 Grading - 2027**

**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	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0531	0.0531	0.0000	0.0000	0.0531
<b>Total</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0531</b>	<b>0.0531</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0531</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					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7000e-004	5.1000e-003	7.3600e-003	1.0000e-005		2.1000e-004	2.1000e-004		2.0000e-004	2.0000e-004	0.0000	1.0425	1.0425	1.9000e-004	0.0000	1.0471
<b>Total</b>	<b>5.7000e-004</b>	<b>5.1000e-003</b>	<b>7.3600e-003</b>	<b>1.0000e-005</b>	<b>3.4000e-004</b>	<b>2.1000e-004</b>	<b>5.5000e-004</b>	<b>1.9000e-004</b>	<b>2.0000e-004</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.0425</b>	<b>1.0425</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.0471</b>

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**3.5 Grading - 2027**

**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	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0531	0.0531	0.0000	0.0000	0.0531
<b>Total</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0531</b>	<b>0.0531</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0531</b>

**3.6 Paving - 2027**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4100e-003	0.0123	0.0176	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.3502	2.3502	6.8000e-004	0.0000	2.3673
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.4100e-003</b>	<b>0.0123</b>	<b>0.0176</b>	<b>3.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>2.3502</b>	<b>2.3502</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>2.3673</b>

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**3.6 Paving - 2027**

**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	1.0000e-004	5.0000e-005	6.4000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2387	0.2387	0.0000	0.0000	0.2388
<b>Total</b>	<b>1.0000e-004</b>	<b>5.0000e-005</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2387</b>	<b>0.2387</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.2388</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	1.4100e-003	0.0123	0.0176	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.3502	2.3502	6.8000e-004	0.0000	2.3673
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.4100e-003</b>	<b>0.0123</b>	<b>0.0176</b>	<b>3.0000e-005</b>		<b>5.5000e-004</b>	<b>5.5000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>2.3502</b>	<b>2.3502</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>2.3673</b>

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**3.6 Paving - 2027**

**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	1.0000e-004	5.0000e-005	6.4000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2387	0.2387	0.0000	0.0000	0.2388
<b>Total</b>	<b>1.0000e-004</b>	<b>5.0000e-005</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2387</b>	<b>0.2387</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.2388</b>

**3.7 Site Preparation - 2027**

**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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2000e-004	2.4000e-003	1.9100e-003	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.4274	0.4274	1.4000e-004	0.0000	0.4309
<b>Total</b>	<b>2.2000e-004</b>	<b>2.4000e-003</b>	<b>1.9100e-003</b>	<b>0.0000</b>	<b>2.7000e-004</b>	<b>8.0000e-005</b>	<b>3.5000e-004</b>	<b>3.0000e-005</b>	<b>8.0000e-005</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.4274</b>	<b>0.4274</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4309</b>



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**3.7 Site Preparation - 2027**

**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	1.0000e-005	0.0000	4.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0133	0.0133	0.0000	0.0000	0.0133
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0133</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					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2000e-004	2.4000e-003	1.9100e-003	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.4274	0.4274	1.4000e-004	0.0000	0.4309
<b>Total</b>	<b>2.2000e-004</b>	<b>2.4000e-003</b>	<b>1.9100e-003</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>8.0000e-005</b>	<b>2.0000e-004</b>	<b>1.0000e-005</b>	<b>8.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.4274</b>	<b>0.4274</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4309</b>

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**3.7 Site Preparation - 2027**

**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	1.0000e-005	0.0000	4.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0133	0.0133	0.0000	0.0000	0.0133
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0133</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0145	0.0739	0.1755	8.0000e-004	0.0857	5.5000e-004	0.0863	0.0230	5.1000e-004	0.0235	0.0000	74.0468	74.0468	2.2700e-003	0.0000	74.1036
Unmitigated	0.0145	0.0739	0.1755	8.0000e-004	0.0857	5.5000e-004	0.0863	0.0230	5.1000e-004	0.0235	0.0000	74.0468	74.0468	2.2700e-003	0.0000	74.1036

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	104.55	19.80	10.20	230,537	230,537
Total	104.55	19.80	10.20	230,537	230,537

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682

5.0 Energy Detail

Historical Energy Use: N

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**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	36.7421	36.7421	1.6600e-003	3.4000e-004	36.8861
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	36.7421	36.7421	1.6600e-003	3.4000e-004	36.8861
NaturalGas Mitigated	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1961	21.1961	4.1000e-004	3.9000e-004	21.3221
NaturalGas Unmitigated	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1961	21.1961	4.1000e-004	3.9000e-004	21.3221

**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					
General Light Industry	397200	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1961	21.1961	4.1000e-004	3.9000e-004	21.3221
<b>Total</b>		<b>2.1400e-003</b>	<b>0.0195</b>	<b>0.0164</b>	<b>1.2000e-004</b>		<b>1.4800e-003</b>	<b>1.4800e-003</b>		<b>1.4800e-003</b>	<b>1.4800e-003</b>	<b>0.0000</b>	<b>21.1961</b>	<b>21.1961</b>	<b>4.1000e-004</b>	<b>3.9000e-004</b>	<b>21.3221</b>

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**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	397200	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1961	21.1961	4.1000e-004	3.9000e-004	21.3221
<b>Total</b>		<b>2.1400e-003</b>	<b>0.0195</b>	<b>0.0164</b>	<b>1.2000e-004</b>		<b>1.4800e-003</b>	<b>1.4800e-003</b>		<b>1.4800e-003</b>	<b>1.4800e-003</b>	<b>0.0000</b>	<b>21.1961</b>	<b>21.1961</b>	<b>4.1000e-004</b>	<b>3.9000e-004</b>	<b>21.3221</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	126300	36.7421	1.6600e-003	3.4000e-004	36.8861
<b>Total</b>		<b>36.7421</b>	<b>1.6600e-003</b>	<b>3.4000e-004</b>	<b>36.8861</b>

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**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	126300	36.7421	1.6600e-003	3.4000e-004	36.8861
<b>Total</b>		<b>36.7421</b>	<b>1.6600e-003</b>	<b>3.4000e-004</b>	<b>36.8861</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	tons/yr										MT/yr					
Mitigated	0.0664	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Unmitigated	0.0664	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004

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**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	7.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0586					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
<b>Total</b>	<b>0.0664</b>	<b>0.0000</b>	<b>1.4000e-004</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>2.7000e-004</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.9000e-004</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	7.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0586					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
<b>Total</b>	<b>0.0664</b>	<b>0.0000</b>	<b>1.4000e-004</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>2.7000e-004</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.9000e-004</b>

**7.0 Water Detail**

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### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.5607	0.1133	2.7200e-003	10.2032
Unmitigated	6.5607	0.1133	2.7200e-003	10.2032

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	3.46875 / 0	6.5607	0.1133	2.7200e-003	10.2032
<b>Total</b>		<b>6.5607</b>	<b>0.1133</b>	<b>2.7200e-003</b>	<b>10.2032</b>



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**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	3.46875 / 0	6.5607	0.1133	2.7200e-003	10.2032
<b>Total</b>		<b>6.5607</b>	<b>0.1133</b>	<b>2.7200e-003</b>	<b>10.2032</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.7756	0.2231	0.0000	9.3540
Unmitigated	3.7756	0.2231	0.0000	9.3540

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**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	18.6	3.7756	0.2231	0.0000	9.3540
<b>Total</b>		<b>3.7756</b>	<b>0.2231</b>	<b>0.0000</b>	<b>9.3540</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	18.6	3.7756	0.2231	0.0000	9.3540
<b>Total</b>		<b>3.7756</b>	<b>0.2231</b>	<b>0.0000</b>	<b>9.3540</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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Tolay Lake Parks Master Plan (Phase 2 Causeway) - Bay Area AQMD Air District, Annual

**Tolay Lake Parks Master Plan (Phase 2 Causeway)**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<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 - PTG - Restoration Activities Occuring in P2.

Land Use - PTG - basic model run to determine hauling emissions from restoration activities.

Construction Phase - PTG - model updated to reflect soil import over 42 days as opposed to 2 (two months).

Off-road Equipment - PTG - model updated to reflect equipment that may be used during soil import and distribution.

Grading - PTG - Soil for import added to raise the causeway.

Construction Off-road Equipment Mitigation -

Off-road Equipment - PTG - Model updated to reflect two backhoes and one grader used for the restoration activities.

## Tolay Lake Parks Master Plan (Phase 2 Causeway) - Bay Area AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	100.00	60.00
tblConstructionPhase	NumDays	2.00	42.00
tblConstructionPhase	PhaseEndDate	1/19/2022	3/16/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	3/17/2022
tblGrading	AcresOfGrading	15.75	1.00
tblGrading	AcresOfGrading	0.19	0.50
tblGrading	MaterialImported	0.00	6,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2018	2024

## 2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.5416	0.5416
2	4-3-2022	7-2-2022	0.3804	0.3804
		Highest	0.5416	0.5416

**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	4.1000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.4500e-003	6.5600e-003	0.0160	6.0000e-005	5.5500e-003	5.0000e-005	5.6000e-003	1.4900e-003	5.0000e-005	1.5400e-003	0.0000	5.5689	5.5689	1.9000e-004	0.0000	5.5737
Waste						0.0000	0.0000		0.0000	0.0000	0.0183	0.0000	0.0183	1.0800e-003	0.0000	0.0453
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.2132	1.2132	5.0000e-005	1.0000e-005	1.2179
<b>Total</b>	<b>1.8600e-003</b>	<b>6.5600e-003</b>	<b>0.0160</b>	<b>6.0000e-005</b>	<b>5.5500e-003</b>	<b>5.0000e-005</b>	<b>5.6000e-003</b>	<b>1.4900e-003</b>	<b>5.0000e-005</b>	<b>1.5400e-003</b>	<b>0.0183</b>	<b>6.7821</b>	<b>6.8003</b>	<b>1.3200e-003</b>	<b>1.0000e-005</b>	<b>6.8369</b>

Tolay Lake Parks Master Plan (Phase 2 Causeway) - Bay Area AQMD Air District, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.1000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.4500e-003	6.5600e-003	0.0160	6.0000e-005	5.5500e-003	5.0000e-005	5.6000e-003	1.4900e-003	5.0000e-005	1.5400e-003	0.0000	5.5689	5.5689	1.9000e-004	0.0000	5.5737
Waste						0.0000	0.0000		0.0000	0.0000	0.0183	0.0000	0.0183	1.0800e-003	0.0000	0.0453
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.2132	1.2132	5.0000e-005	1.0000e-005	1.2179
<b>Total</b>	<b>1.8600e-003</b>	<b>6.5600e-003</b>	<b>0.0160</b>	<b>6.0000e-005</b>	<b>5.5500e-003</b>	<b>5.0000e-005</b>	<b>5.6000e-003</b>	<b>1.4900e-003</b>	<b>5.0000e-005</b>	<b>1.5400e-003</b>	<b>0.0183</b>	<b>6.7821</b>	<b>6.8003</b>	<b>1.3200e-003</b>	<b>1.0000e-005</b>	<b>6.8369</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**



## Tolay Lake Parks Master Plan (Phase 2 Causeway) - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	3/16/2022	5	42	
4	Building Construction	Building Construction	3/17/2022	6/8/2022	5	60	
5	Paving	Paving	6/9/2022	6/15/2022	5	5	
6	Architectural Coating	Architectural Coating	6/16/2022	6/22/2022	5	5	

**Acres of Grading (Site Preparation Phase): 0.5**

**Acres of Grading (Grading Phase): 1**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	3.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Tolay Lake Parks Master Plan (Phase 2 Causeway) - Bay Area AQMD Air District, Annual

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	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	750.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	18.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2022**

**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	8.4400e-003	0.0831	0.0698	1.2000e-004		4.1900e-003	4.1900e-003		3.9100e-003	3.9100e-003	0.0000	10.5388	10.5388	2.6900e-003	0.0000	10.6060
<b>Total</b>	<b>8.4400e-003</b>	<b>0.0831</b>	<b>0.0698</b>	<b>1.2000e-004</b>		<b>4.1900e-003</b>	<b>4.1900e-003</b>		<b>3.9100e-003</b>	<b>3.9100e-003</b>	<b>0.0000</b>	<b>10.5388</b>	<b>10.5388</b>	<b>2.6900e-003</b>	<b>0.0000</b>	<b>10.6060</b>

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**3.2 Demolition - 2022**

**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	1.9000e-004	1.2000e-004	1.3400e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4183	0.4183	1.0000e-005	0.0000	0.4185
<b>Total</b>	<b>1.9000e-004</b>	<b>1.2000e-004</b>	<b>1.3400e-003</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.2000e-004</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4183</b>	<b>0.4183</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.4185</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	8.4400e-003	0.0831	0.0698	1.2000e-004		4.1900e-003	4.1900e-003		3.9100e-003	3.9100e-003	0.0000	10.5388	10.5388	2.6900e-003	0.0000	10.6060
<b>Total</b>	<b>8.4400e-003</b>	<b>0.0831</b>	<b>0.0698</b>	<b>1.2000e-004</b>		<b>4.1900e-003</b>	<b>4.1900e-003</b>		<b>3.9100e-003</b>	<b>3.9100e-003</b>	<b>0.0000</b>	<b>10.5388</b>	<b>10.5388</b>	<b>2.6900e-003</b>	<b>0.0000</b>	<b>10.6060</b>

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**3.2 Demolition - 2022**

**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	1.9000e-004	1.2000e-004	1.3400e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4183	0.4183	1.0000e-005	0.0000	0.4185
<b>Total</b>	<b>1.9000e-004</b>	<b>1.2000e-004</b>	<b>1.3400e-003</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.2000e-004</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.4183</b>	<b>0.4183</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.4185</b>

**3.3 Site Preparation - 2022**

**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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-004	2.2400e-003	2.0000e-003	0.0000		1.0000e-004	1.0000e-004		9.0000e-005	9.0000e-005	0.0000	0.3140	0.3140	1.0000e-004	0.0000	0.3166
<b>Total</b>	<b>2.0000e-004</b>	<b>2.2400e-003</b>	<b>2.0000e-003</b>	<b>0.0000</b>	<b>2.7000e-004</b>	<b>1.0000e-004</b>	<b>3.7000e-004</b>	<b>3.0000e-005</b>	<b>9.0000e-005</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.3140</b>	<b>0.3140</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3166</b>

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**3.3 Site Preparation - 2022**

**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	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0257	0.0257	0.0000	0.0000	0.0258
<b>Total</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0257</b>	<b>0.0257</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0258</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					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-004	2.2400e-003	2.0000e-003	0.0000		1.0000e-004	1.0000e-004		9.0000e-005	9.0000e-005	0.0000	0.3140	0.3140	1.0000e-004	0.0000	0.3166
<b>Total</b>	<b>2.0000e-004</b>	<b>2.2400e-003</b>	<b>2.0000e-003</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>1.0000e-004</b>	<b>2.2000e-004</b>	<b>1.0000e-005</b>	<b>9.0000e-005</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3140</b>	<b>0.3140</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3166</b>

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**3.3 Site Preparation - 2022**

**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	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0257	0.0257	0.0000	0.0000	0.0258
<b>Total</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0257</b>	<b>0.0257</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0258</b>

**3.4 Grading - 2022**

**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					0.0957	0.0000	0.0957	0.0522	0.0000	0.0522	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2521	0.1247	3.0000e-004		0.0109	0.0109		9.9900e-003	9.9900e-003	0.0000	26.0010	26.0010	8.4100e-003	0.0000	26.2113
<b>Total</b>	<b>0.0228</b>	<b>0.2521</b>	<b>0.1247</b>	<b>3.0000e-004</b>	<b>0.0957</b>	<b>0.0109</b>	<b>0.1066</b>	<b>0.0522</b>	<b>9.9900e-003</b>	<b>0.0622</b>	<b>0.0000</b>	<b>26.0010</b>	<b>26.0010</b>	<b>8.4100e-003</b>	<b>0.0000</b>	<b>26.2113</b>

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**3.4 Grading - 2022**

**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	2.7900e-003	0.0930	0.0212	2.9000e-004	6.3300e-003	2.7000e-004	6.6000e-003	1.7400e-003	2.6000e-004	2.0000e-003	0.0000	27.9840	27.9840	1.4100e-003	0.0000	28.0193
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	4.8000e-004	3.2000e-004	3.4600e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0811	1.0811	2.0000e-005	0.0000	1.0816
<b>Total</b>	<b>3.2700e-003</b>	<b>0.0933</b>	<b>0.0246</b>	<b>3.0000e-004</b>	<b>7.6600e-003</b>	<b>2.8000e-004</b>	<b>7.9400e-003</b>	<b>2.0900e-003</b>	<b>2.7000e-004</b>	<b>2.3600e-003</b>	<b>0.0000</b>	<b>29.0651</b>	<b>29.0651</b>	<b>1.4300e-003</b>	<b>0.0000</b>	<b>29.1010</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					
Fugitive Dust					0.0431	0.0000	0.0431	0.0235	0.0000	0.0235	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2521	0.1247	3.0000e-004		0.0109	0.0109		9.9900e-003	9.9900e-003	0.0000	26.0010	26.0010	8.4100e-003	0.0000	26.2112
<b>Total</b>	<b>0.0228</b>	<b>0.2521</b>	<b>0.1247</b>	<b>3.0000e-004</b>	<b>0.0431</b>	<b>0.0109</b>	<b>0.0539</b>	<b>0.0235</b>	<b>9.9900e-003</b>	<b>0.0335</b>	<b>0.0000</b>	<b>26.0010</b>	<b>26.0010</b>	<b>8.4100e-003</b>	<b>0.0000</b>	<b>26.2112</b>



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**3.4 Grading - 2022**

**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	2.7900e-003	0.0930	0.0212	2.9000e-004	6.3300e-003	2.7000e-004	6.6000e-003	1.7400e-003	2.6000e-004	2.0000e-003	0.0000	27.9840	27.9840	1.4100e-003	0.0000	28.0193
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	4.8000e-004	3.2000e-004	3.4600e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0811	1.0811	2.0000e-005	0.0000	1.0816
<b>Total</b>	<b>3.2700e-003</b>	<b>0.0933</b>	<b>0.0246</b>	<b>3.0000e-004</b>	<b>7.6600e-003</b>	<b>2.8000e-004</b>	<b>7.9400e-003</b>	<b>2.0900e-003</b>	<b>2.7000e-004</b>	<b>2.3600e-003</b>	<b>0.0000</b>	<b>29.0651</b>	<b>29.0651</b>	<b>1.4300e-003</b>	<b>0.0000</b>	<b>29.1010</b>

**3.5 Building Construction - 2022**

**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	0.0495	0.3751	0.3818	6.6000e-004		0.0177	0.0177		0.0171	0.0171	0.0000	54.4731	54.4731	9.4900e-003	0.0000	54.7103
<b>Total</b>	<b>0.0495</b>	<b>0.3751</b>	<b>0.3818</b>	<b>6.6000e-004</b>		<b>0.0177</b>	<b>0.0177</b>		<b>0.0171</b>	<b>0.0171</b>	<b>0.0000</b>	<b>54.4731</b>	<b>54.4731</b>	<b>9.4900e-003</b>	<b>0.0000</b>	<b>54.7103</b>

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**3.5 Building Construction - 2022**

**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	6.2000e-004	0.0208	5.1500e-003	6.0000e-005	1.3800e-003	4.0000e-005	1.4200e-003	4.0000e-004	4.0000e-005	4.4000e-004	0.0000	5.3928	5.3928	2.6000e-004	0.0000	5.3992
Worker	1.5400e-003	1.0300e-003	0.0111	4.0000e-005	4.2700e-003	3.0000e-005	4.2900e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.4749	3.4749	7.0000e-005	0.0000	3.4767
<b>Total</b>	<b>2.1600e-003</b>	<b>0.0218</b>	<b>0.0163</b>	<b>1.0000e-004</b>	<b>5.6500e-003</b>	<b>7.0000e-005</b>	<b>5.7100e-003</b>	<b>1.5400e-003</b>	<b>7.0000e-005</b>	<b>1.6000e-003</b>	<b>0.0000</b>	<b>8.8677</b>	<b>8.8677</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>8.8759</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	0.0495	0.3751	0.3818	6.6000e-004		0.0177	0.0177		0.0171	0.0171	0.0000	54.4730	54.4730	9.4900e-003	0.0000	54.7102
<b>Total</b>	<b>0.0495</b>	<b>0.3751</b>	<b>0.3818</b>	<b>6.6000e-004</b>		<b>0.0177</b>	<b>0.0177</b>		<b>0.0171</b>	<b>0.0171</b>	<b>0.0000</b>	<b>54.4730</b>	<b>54.4730</b>	<b>9.4900e-003</b>	<b>0.0000</b>	<b>54.7102</b>

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**3.5 Building Construction - 2022**

**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	6.2000e-004	0.0208	5.1500e-003	6.0000e-005	1.3800e-003	4.0000e-005	1.4200e-003	4.0000e-004	4.0000e-005	4.4000e-004	0.0000	5.3928	5.3928	2.6000e-004	0.0000	5.3992
Worker	1.5400e-003	1.0300e-003	0.0111	4.0000e-005	4.2700e-003	3.0000e-005	4.2900e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.4749	3.4749	7.0000e-005	0.0000	3.4767
<b>Total</b>	<b>2.1600e-003</b>	<b>0.0218</b>	<b>0.0163</b>	<b>1.0000e-004</b>	<b>5.6500e-003</b>	<b>7.0000e-005</b>	<b>5.7100e-003</b>	<b>1.5400e-003</b>	<b>7.0000e-005</b>	<b>1.6000e-003</b>	<b>0.0000</b>	<b>8.8677</b>	<b>8.8677</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>8.8759</b>

**3.6 Paving - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7200e-003	0.0169	0.0220	3.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	2.9424	2.9424	9.3000e-004	0.0000	2.9657
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.7200e-003</b>	<b>0.0169</b>	<b>0.0220</b>	<b>3.0000e-005</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>2.9424</b>	<b>2.9424</b>	<b>9.3000e-004</b>	<b>0.0000</b>	<b>2.9657</b>

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**3.6 Paving - 2022**

**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	9.0000e-005	6.0000e-005	6.7000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2091	0.2091	0.0000	0.0000	0.2093
<b>Total</b>	<b>9.0000e-005</b>	<b>6.0000e-005</b>	<b>6.7000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.2091</b>	<b>0.2091</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.2093</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	1.7200e-003	0.0169	0.0220	3.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	2.9424	2.9424	9.3000e-004	0.0000	2.9657
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.7200e-003</b>	<b>0.0169</b>	<b>0.0220</b>	<b>3.0000e-005</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>2.9424</b>	<b>2.9424</b>	<b>9.3000e-004</b>	<b>0.0000</b>	<b>2.9657</b>

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**3.6 Paving - 2022**

**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	9.0000e-005	6.0000e-005	6.7000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2091	0.2091	0.0000	0.0000	0.2093
<b>Total</b>	<b>9.0000e-005</b>	<b>6.0000e-005</b>	<b>6.7000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.2091</b>	<b>0.2091</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.2093</b>

**3.7 Architectural Coating - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
<b>Total</b>	<b>5.1000e-004</b>	<b>3.5200e-003</b>	<b>4.5300e-003</b>	<b>1.0000e-005</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.6383</b>	<b>0.6383</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6394</b>

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**3.7 Architectural Coating - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0644	0.0644	0.0000	0.0000	0.0644
<b>Total</b>	<b>3.0000e-005</b>	<b>2.0000e-005</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0644</b>	<b>0.0644</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0644</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					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
<b>Total</b>	<b>5.1000e-004</b>	<b>3.5200e-003</b>	<b>4.5300e-003</b>	<b>1.0000e-005</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>		<b>2.0000e-004</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.6383</b>	<b>0.6383</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6394</b>

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**3.7 Architectural Coating - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0644	0.0644	0.0000	0.0000	0.0644
<b>Total</b>	<b>3.0000e-005</b>	<b>2.0000e-005</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0644</b>	<b>0.0644</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0644</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4500e-003	6.5600e-003	0.0160	6.0000e-005	5.5500e-003	5.0000e-005	5.6000e-003	1.4900e-003	5.0000e-005	1.5400e-003	0.0000	5.5689	5.5689	1.9000e-004	0.0000	5.5737
Unmitigated	1.4500e-003	6.5600e-003	0.0160	6.0000e-005	5.5500e-003	5.0000e-005	5.6000e-003	1.4900e-003	5.0000e-005	1.5400e-003	0.0000	5.5689	5.5689	1.9000e-004	0.0000	5.5737

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.89	22.75	16.74	14,926	14,926
Total	1.89	22.75	16.74	14,926	14,926

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732

5.0 Energy Detail

Historical Energy Use: N





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**5.2 Energy by Land Use - Natural Gas**

**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					
City Park	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>0.0000</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>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

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**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

**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	4.1000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	4.1000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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**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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>1.0000e-005</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>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>1.0000e-005</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>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.2132	5.0000e-005	1.0000e-005	1.2179
Unmitigated	1.2132	5.0000e-005	1.0000e-005	1.2179

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.19148	1.2132	5.0000e-005	1.0000e-005	1.2179
<b>Total</b>		<b>1.2132</b>	<b>5.0000e-005</b>	<b>1.0000e-005</b>	<b>1.2179</b>

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**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.19148	1.2132	5.0000e-005	1.0000e-005	1.2179
<b>Total</b>		<b>1.2132</b>	<b>5.0000e-005</b>	<b>1.0000e-005</b>	<b>1.2179</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0183	1.0800e-003	0.0000	0.0453
Unmitigated	0.0183	1.0800e-003	0.0000	0.0453

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**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.09	0.0183	1.0800e-003	0.0000	0.0453
<b>Total</b>		<b>0.0183</b>	<b>1.0800e-003</b>	<b>0.0000</b>	<b>0.0453</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.09	0.0183	1.0800e-003	0.0000	0.0453
<b>Total</b>		<b>0.0183</b>	<b>1.0800e-003</b>	<b>0.0000</b>	<b>0.0453</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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Tolay Lake Parks Master Plan (Causeway) - Bay Area AQMD Air District, Annual

**Tolay Lake Parks Master Plan (Causeway)**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4			<b>Operational Year</b>	2029
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<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 - PTG - basic model run to determine hauling emissions from restoration activities.

Off-road Equipment - PTG - model updated to reflect equipment that may be used during soil import and distribution.

Construction Phase - PTG - model updated to reflect soil import over 42 days as opposed to 2 (two months).

Grading - PTG - Soil for import added to raise the causeway.

Construction Off-road Equipment Mitigation -

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	2.00	42.00
tblConstructionPhase	PhaseEndDate	1/19/2027	3/16/2027
tblGrading	MaterialImported	0.00	6,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	6.00	3.00
tblProjectCharacteristics	OperationalYear	2018	2029

## 2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2027	3-31-2027	0.5264	0.5264
2	4-1-2027	6-30-2027	0.3217	0.3217
		Highest	0.5264	0.5264

**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	4.1000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.1300e-003	5.7200e-003	0.0122	5.0000e-005	5.5500e-003	4.0000e-005	5.5900e-003	1.4900e-003	3.0000e-005	1.5200e-003	0.0000	4.9101	4.9101	1.6000e-004	0.0000	4.9141
Waste						0.0000	0.0000		0.0000	0.0000	0.0183	0.0000	0.0183	1.0800e-003	0.0000	0.0453
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.2132	1.2132	5.0000e-005	1.0000e-005	1.2179
<b>Total</b>	<b>1.5400e-003</b>	<b>5.7200e-003</b>	<b>0.0123</b>	<b>5.0000e-005</b>	<b>5.5500e-003</b>	<b>4.0000e-005</b>	<b>5.5900e-003</b>	<b>1.4900e-003</b>	<b>3.0000e-005</b>	<b>1.5200e-003</b>	<b>0.0183</b>	<b>6.1233</b>	<b>6.1416</b>	<b>1.2900e-003</b>	<b>1.0000e-005</b>	<b>6.1773</b>

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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.1000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.1300e-003	5.7200e-003	0.0122	5.0000e-005	5.5500e-003	4.0000e-005	5.5900e-003	1.4900e-003	3.0000e-005	1.5200e-003	0.0000	4.9101	4.9101	1.6000e-004	0.0000	4.9141
Waste						0.0000	0.0000		0.0000	0.0000	0.0183	0.0000	0.0183	1.0800e-003	0.0000	0.0453
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.2132	1.2132	5.0000e-005	1.0000e-005	1.2179
<b>Total</b>	<b>1.5400e-003</b>	<b>5.7200e-003</b>	<b>0.0123</b>	<b>5.0000e-005</b>	<b>5.5500e-003</b>	<b>4.0000e-005</b>	<b>5.5900e-003</b>	<b>1.4900e-003</b>	<b>3.0000e-005</b>	<b>1.5200e-003</b>	<b>0.0183</b>	<b>6.1233</b>	<b>6.1416</b>	<b>1.2900e-003</b>	<b>1.0000e-005</b>	<b>6.1773</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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2027	1/14/2027	5	10	
2	Site Preparation	Site Preparation	1/15/2027	1/15/2027	5	1	
3	Grading	Grading	1/16/2027	3/16/2027	5	42	
4	Building Construction	Building Construction	1/20/2027	6/8/2027	5	100	
5	Paving	Paving	6/9/2027	6/15/2027	5	5	
6	Architectural Coating	Architectural Coating	6/16/2027	6/22/2027	5	5	

**Acres of Grading (Site Preparation Phase): 0.5**

**Acres of Grading (Grading Phase): 7.88**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	3.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

**Trips and VMT**

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	18.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	750.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Demolition - 2027**

**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	6.7000e-003	0.0645	0.0667	1.2000e-004		2.7300e-003	2.7300e-003		2.5500e-003	2.5500e-003	0.0000	10.5496	10.5496	2.6600e-003	0.0000	10.6161
<b>Total</b>	<b>6.7000e-003</b>	<b>0.0645</b>	<b>0.0667</b>	<b>1.2000e-004</b>		<b>2.7300e-003</b>	<b>2.7300e-003</b>		<b>2.5500e-003</b>	<b>2.5500e-003</b>	<b>0.0000</b>	<b>10.5496</b>	<b>10.5496</b>	<b>2.6600e-003</b>	<b>0.0000</b>	<b>10.6161</b>



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**3.2 Demolition - 2027**

**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	1.4000e-004	8.0000e-005	9.2000e-004	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3448	0.3448	1.0000e-005	0.0000	0.3450
<b>Total</b>	<b>1.4000e-004</b>	<b>8.0000e-005</b>	<b>9.2000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.2000e-004</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.3448</b>	<b>0.3448</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3450</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	6.7000e-003	0.0645	0.0667	1.2000e-004		2.7300e-003	2.7300e-003		2.5500e-003	2.5500e-003	0.0000	10.5496	10.5496	2.6600e-003	0.0000	10.6161
<b>Total</b>	<b>6.7000e-003</b>	<b>0.0645</b>	<b>0.0667</b>	<b>1.2000e-004</b>		<b>2.7300e-003</b>	<b>2.7300e-003</b>		<b>2.5500e-003</b>	<b>2.5500e-003</b>	<b>0.0000</b>	<b>10.5496</b>	<b>10.5496</b>	<b>2.6600e-003</b>	<b>0.0000</b>	<b>10.6161</b>

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**3.2 Demolition - 2027**

**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	1.4000e-004	8.0000e-005	9.2000e-004	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3448	0.3448	1.0000e-005	0.0000	0.3450
<b>Total</b>	<b>1.4000e-004</b>	<b>8.0000e-005</b>	<b>9.2000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.2000e-004</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.3448</b>	<b>0.3448</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3450</b>

**3.3 Site Preparation - 2027**

**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					2.9000e-003	0.0000	2.9000e-003	1.4800e-003	0.0000	1.4800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	5.3000e-003	3.2200e-003	1.0000e-005		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.7556	0.7556	2.4000e-004	0.0000	0.7617
<b>Total</b>	<b>5.1000e-004</b>	<b>5.3000e-003</b>	<b>3.2200e-003</b>	<b>1.0000e-005</b>	<b>2.9000e-003</b>	<b>2.1000e-004</b>	<b>3.1100e-003</b>	<b>1.4800e-003</b>	<b>1.9000e-004</b>	<b>1.6700e-003</b>	<b>0.0000</b>	<b>0.7556</b>	<b>0.7556</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.7617</b>

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**3.3 Site Preparation - 2027**

**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	1.0000e-005	0.0000	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0212	0.0212	0.0000	0.0000	0.0212
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0212</b>	<b>0.0212</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0212</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					
Fugitive Dust					1.3000e-003	0.0000	1.3000e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	5.3000e-003	3.2200e-003	1.0000e-005		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.7556	0.7556	2.4000e-004	0.0000	0.7617
<b>Total</b>	<b>5.1000e-004</b>	<b>5.3000e-003</b>	<b>3.2200e-003</b>	<b>1.0000e-005</b>	<b>1.3000e-003</b>	<b>2.1000e-004</b>	<b>1.5100e-003</b>	<b>6.6000e-004</b>	<b>1.9000e-004</b>	<b>8.5000e-004</b>	<b>0.0000</b>	<b>0.7556</b>	<b>0.7556</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.7617</b>

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**3.3 Site Preparation - 2027**

**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	1.0000e-005	0.0000	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0212	0.0212	0.0000	0.0000	0.0212
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0212</b>	<b>0.0212</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0212</b>

**3.4 Grading - 2027**

**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					4.5200e-003	0.0000	4.5200e-003	5.0000e-004	0.0000	5.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6100e-003	0.0693	0.0828	1.5000e-004		2.5800e-003	2.5800e-003		2.3700e-003	2.3700e-003	0.0000	13.2056	13.2056	4.2700e-003	0.0000	13.3123
<b>Total</b>	<b>6.6100e-003</b>	<b>0.0693</b>	<b>0.0828</b>	<b>1.5000e-004</b>	<b>4.5200e-003</b>	<b>2.5800e-003</b>	<b>7.1000e-003</b>	<b>5.0000e-004</b>	<b>2.3700e-003</b>	<b>2.8700e-003</b>	<b>0.0000</b>	<b>13.2056</b>	<b>13.2056</b>	<b>4.2700e-003</b>	<b>0.0000</b>	<b>13.3123</b>

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**3.4 Grading - 2027**

**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	1.8200e-003	0.0571	0.0195	2.7000e-004	6.3400e-003	1.0000e-004	6.4400e-003	1.7400e-003	1.0000e-004	1.8400e-003	0.0000	26.1768	26.1768	1.2500e-003	0.0000	26.2081
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	3.6000e-004	2.0000e-004	2.3900e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	0.8912	0.8912	1.0000e-005	0.0000	0.8916
<b>Total</b>	<b>2.1800e-003</b>	<b>0.0573</b>	<b>0.0219</b>	<b>2.8000e-004</b>	<b>7.6700e-003</b>	<b>1.1000e-004</b>	<b>7.7700e-003</b>	<b>2.0900e-003</b>	<b>1.1000e-004</b>	<b>2.2000e-003</b>	<b>0.0000</b>	<b>27.0680</b>	<b>27.0680</b>	<b>1.2600e-003</b>	<b>0.0000</b>	<b>27.0997</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					
Fugitive Dust					2.0300e-003	0.0000	2.0300e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6100e-003	0.0693	0.0828	1.5000e-004		2.5800e-003	2.5800e-003		2.3700e-003	2.3700e-003	0.0000	13.2056	13.2056	4.2700e-003	0.0000	13.3123
<b>Total</b>	<b>6.6100e-003</b>	<b>0.0693</b>	<b>0.0828</b>	<b>1.5000e-004</b>	<b>2.0300e-003</b>	<b>2.5800e-003</b>	<b>4.6100e-003</b>	<b>2.3000e-004</b>	<b>2.3700e-003</b>	<b>2.6000e-003</b>	<b>0.0000</b>	<b>13.2056</b>	<b>13.2056</b>	<b>4.2700e-003</b>	<b>0.0000</b>	<b>13.3123</b>

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**3.4 Grading - 2027**

**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	1.8200e-003	0.0571	0.0195	2.7000e-004	6.3400e-003	1.0000e-004	6.4400e-003	1.7400e-003	1.0000e-004	1.8400e-003	0.0000	26.1768	26.1768	1.2500e-003	0.0000	26.2081
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	3.6000e-004	2.0000e-004	2.3900e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	0.8912	0.8912	1.0000e-005	0.0000	0.8916
<b>Total</b>	<b>2.1800e-003</b>	<b>0.0573</b>	<b>0.0219</b>	<b>2.8000e-004</b>	<b>7.6700e-003</b>	<b>1.1000e-004</b>	<b>7.7700e-003</b>	<b>2.0900e-003</b>	<b>1.1000e-004</b>	<b>2.2000e-003</b>	<b>0.0000</b>	<b>27.0680</b>	<b>27.0680</b>	<b>1.2600e-003</b>	<b>0.0000</b>	<b>27.0997</b>

**3.5 Building Construction - 2027**

**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	0.0662	0.5206	0.6220	1.1000e-003		0.0196	0.0196		0.0189	0.0189	0.0000	90.8161	90.8161	0.0148	0.0000	91.1868
<b>Total</b>	<b>0.0662</b>	<b>0.5206</b>	<b>0.6220</b>	<b>1.1000e-003</b>		<b>0.0196</b>	<b>0.0196</b>		<b>0.0189</b>	<b>0.0189</b>	<b>0.0000</b>	<b>90.8161</b>	<b>90.8161</b>	<b>0.0148</b>	<b>0.0000</b>	<b>91.1868</b>

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**3.5 Building Construction - 2027**

**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	7.0000e-004	0.0255	6.8900e-003	9.0000e-005	2.3000e-003	3.0000e-005	2.3200e-003	6.6000e-004	3.0000e-005	6.9000e-004	0.0000	8.5208	8.5208	3.4000e-004	0.0000	8.5292
Worker	1.9300e-003	1.0600e-003	0.0128	5.0000e-005	7.1100e-003	4.0000e-005	7.1500e-003	1.8900e-003	4.0000e-005	1.9300e-003	0.0000	4.7743	4.7743	7.0000e-005	0.0000	4.7762
<b>Total</b>	<b>2.6300e-003</b>	<b>0.0265</b>	<b>0.0197</b>	<b>1.4000e-004</b>	<b>9.4100e-003</b>	<b>7.0000e-005</b>	<b>9.4700e-003</b>	<b>2.5500e-003</b>	<b>7.0000e-005</b>	<b>2.6200e-003</b>	<b>0.0000</b>	<b>13.2951</b>	<b>13.2951</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>13.3054</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	0.0662	0.5206	0.6220	1.1000e-003		0.0196	0.0196		0.0189	0.0189	0.0000	90.8160	90.8160	0.0148	0.0000	91.1867
<b>Total</b>	<b>0.0662</b>	<b>0.5206</b>	<b>0.6220</b>	<b>1.1000e-003</b>		<b>0.0196</b>	<b>0.0196</b>		<b>0.0189</b>	<b>0.0189</b>	<b>0.0000</b>	<b>90.8160</b>	<b>90.8160</b>	<b>0.0148</b>	<b>0.0000</b>	<b>91.1867</b>

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**3.5 Building Construction - 2027**

**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	7.0000e-004	0.0255	6.8900e-003	9.0000e-005	2.3000e-003	3.0000e-005	2.3200e-003	6.6000e-004	3.0000e-005	6.9000e-004	0.0000	8.5208	8.5208	3.4000e-004	0.0000	8.5292
Worker	1.9300e-003	1.0600e-003	0.0128	5.0000e-005	7.1100e-003	4.0000e-005	7.1500e-003	1.8900e-003	4.0000e-005	1.9300e-003	0.0000	4.7743	4.7743	7.0000e-005	0.0000	4.7762
<b>Total</b>	<b>2.6300e-003</b>	<b>0.0265</b>	<b>0.0197</b>	<b>1.4000e-004</b>	<b>9.4100e-003</b>	<b>7.0000e-005</b>	<b>9.4700e-003</b>	<b>2.5500e-003</b>	<b>7.0000e-005</b>	<b>2.6200e-003</b>	<b>0.0000</b>	<b>13.2951</b>	<b>13.2951</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>13.3054</b>

**3.6 Paving - 2027**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4300e-003	0.0133	0.0220	3.0000e-005		6.2000e-004	6.2000e-004		5.7000e-004	5.7000e-004	0.0000	2.9434	2.9434	9.3000e-004	0.0000	2.9667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.4300e-003</b>	<b>0.0133</b>	<b>0.0220</b>	<b>3.0000e-005</b>		<b>6.2000e-004</b>	<b>6.2000e-004</b>		<b>5.7000e-004</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>2.9434</b>	<b>2.9434</b>	<b>9.3000e-004</b>	<b>0.0000</b>	<b>2.9667</b>



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**3.6 Paving - 2027**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	4.0000e-005	4.6000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1724	0.1724	0.0000	0.0000	0.1725
<b>Total</b>	<b>7.0000e-005</b>	<b>4.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.1724</b>	<b>0.1724</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1725</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	1.4300e-003	0.0133	0.0220	3.0000e-005		6.2000e-004	6.2000e-004		5.7000e-004	5.7000e-004	0.0000	2.9434	2.9434	9.3000e-004	0.0000	2.9667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.4300e-003</b>	<b>0.0133</b>	<b>0.0220</b>	<b>3.0000e-005</b>		<b>6.2000e-004</b>	<b>6.2000e-004</b>		<b>5.7000e-004</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>2.9434</b>	<b>2.9434</b>	<b>9.3000e-004</b>	<b>0.0000</b>	<b>2.9667</b>

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**3.6 Paving - 2027**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	4.0000e-005	4.6000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1724	0.1724	0.0000	0.0000	0.1725
<b>Total</b>	<b>7.0000e-005</b>	<b>4.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.1724</b>	<b>0.1724</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1725</b>

**3.7 Architectural Coating - 2027**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392
<b>Total</b>	<b>4.3000e-004</b>	<b>2.8600e-003</b>	<b>4.5200e-003</b>	<b>1.0000e-005</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.6383</b>	<b>0.6383</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.6392</b>

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**3.7 Architectural Coating - 2027**

**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	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0531	0.0531	0.0000	0.0000	0.0531
<b>Total</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0531</b>	<b>0.0531</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0531</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					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	2.8600e-003	4.5200e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.6383	0.6383	3.0000e-005	0.0000	0.6392
<b>Total</b>	<b>4.3000e-004</b>	<b>2.8600e-003</b>	<b>4.5200e-003</b>	<b>1.0000e-005</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.6383</b>	<b>0.6383</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.6392</b>

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**3.7 Architectural Coating - 2027**

**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	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0531	0.0531	0.0000	0.0000	0.0531
<b>Total</b>	<b>2.0000e-005</b>	<b>1.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0531</b>	<b>0.0531</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0531</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1300e-003	5.7200e-003	0.0122	5.0000e-005	5.5500e-003	4.0000e-005	5.5900e-003	1.4900e-003	3.0000e-005	1.5200e-003	0.0000	4.9101	4.9101	1.6000e-004	0.0000	4.9141
Unmitigated	1.1300e-003	5.7200e-003	0.0122	5.0000e-005	5.5500e-003	4.0000e-005	5.5900e-003	1.4900e-003	3.0000e-005	1.5200e-003	0.0000	4.9101	4.9101	1.6000e-004	0.0000	4.9141

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.89	22.75	16.74	14,926	14,926
Total	1.89	22.75	16.74	14,926	14,926

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682

5.0 Energy Detail

Historical Energy Use: N



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**5.2 Energy by Land Use - Natural Gas**

**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					
City Park	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>0.0000</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>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

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**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	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>

**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	4.1000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	4.1000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005



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**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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>1.0000e-005</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>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>1.0000e-005</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>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

Tolay Lake Parks Master Plan (Causeway) - Bay Area AQMD Air District, Annual

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.2132	5.0000e-005	1.0000e-005	1.2179
Unmitigated	1.2132	5.0000e-005	1.0000e-005	1.2179

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.19148	1.2132	5.0000e-005	1.0000e-005	1.2179
<b>Total</b>		<b>1.2132</b>	<b>5.0000e-005</b>	<b>1.0000e-005</b>	<b>1.2179</b>

Tolay Lake Parks Master Plan (Causeway) - Bay Area AQMD Air District, Annual

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.19148	1.2132	5.0000e-005	1.0000e-005	1.2179
<b>Total</b>		<b>1.2132</b>	<b>5.0000e-005</b>	<b>1.0000e-005</b>	<b>1.2179</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0183	1.0800e-003	0.0000	0.0453
Unmitigated	0.0183	1.0800e-003	0.0000	0.0453

Tolay Lake Parks Master Plan (Causeway) - Bay Area AQMD Air District, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.09	0.0183	1.0800e-003	0.0000	0.0453
<b>Total</b>		<b>0.0183</b>	<b>1.0800e-003</b>	<b>0.0000</b>	<b>0.0453</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.09	0.0183	1.0800e-003	0.0000	0.0453
<b>Total</b>		<b>0.0183</b>	<b>1.0800e-003</b>	<b>0.0000</b>	<b>0.0453</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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Tolay Lake Parks Master Plan (Causeway) - Bay Area AQMD Air District, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Cannon Road Construction				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (lbs/day)
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	
Grubbing/Land Clearing	2.2	13.5	17.1	3.3	0.8	2.5	1.2	0.7	0.5	2,467.1
Grading/Excavation	5.4	32.2	50.0	4.9	2.4	2.5	2.7	2.2	0.5	6,514.1
Drainage/Utilities/Sub-Grade	0.2	2.5	0.8	2.6	0.1	2.5	0.6	0.0	0.5	834.9
Paving	2.4	15.7	16.3	1.0	1.0	-	0.9	0.9	-	2,696.3
<b>Maximum (pounds/day)</b>	<b>5.4</b>	<b>32.2</b>	<b>50.0</b>	<b>4.9</b>	<b>2.4</b>	<b>2.5</b>	<b>2.7</b>	<b>2.2</b>	<b>0.5</b>	<b>6,514.1</b>
<b>Total (tons/construction project)</b>	<b>0.2</b>	<b>1.2</b>	<b>1.6</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>234.2</b>

Notes: Project Start Year -> 2018  
 Project Length (months) -> 6  
 Total Project Area (acres) -> 5  
 Maximum Area Disturbed/Day (acres) -> 0  
 Total Soil Imported/Exported (yd<sup>3</sup>/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Cannon Road Construction				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (kgs/day)
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	
Grubbing/Land Clearing	1.0	6.1	7.8	1.5	0.4	1.1	0.6	0.3	0.2	1,121.4
Grading/Excavation	2.5	14.6	22.7	2.2	1.1	1.1	1.2	1.0	0.2	2,960.9
Drainage/Utilities/Sub-Grade	0.1	1.1	0.4	1.2	0.0	1.1	0.3	0.0	0.2	379.5
Paving	1.1	7.1	7.4	0.5	0.5	-	0.4	0.4	-	1,225.6
<b>Maximum (kilograms/day)</b>	<b>2.5</b>	<b>14.6</b>	<b>22.7</b>	<b>2.2</b>	<b>1.1</b>	<b>1.1</b>	<b>1.2</b>	<b>1.0</b>	<b>0.2</b>	<b>2,960.9</b>
<b>Total (megagrams/construction project)</b>	<b>0.2</b>	<b>1.0</b>	<b>1.5</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>212.5</b>

Notes: Project Start Year -> 2018  
 Project Length (months) -> 6  
 Total Project Area (hectares) -> 2  
 Maximum Area Disturbed/Day (hectares) -> 0  
 Total Soil Imported/Exported (meters<sup>3</sup>/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

## Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Cannon Road Construction (600ft)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	1.5	9.2	15.1	3.2	0.7	2.5	1.1	0.6	0.5	1,849.5	
Grading/Excavation	5.2	28.1	53.4	5.1	2.6	2.5	2.8	2.3	0.5	5,898.4	
Drainage/Utilities/Sub-Grade	0.2	2.2	0.9	2.6	0.1	2.5	0.6	0.0	0.5	689.0	
Paving	1.8	11.5	14.6	0.9	0.9	-	0.8	0.8	-	2,076.0	
Maximum (pounds/day)	5.2	28.1	53.4	5.1	2.6	2.5	2.8	2.3	0.5	5,898.4	
Total (tons/construction project)	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	34.1	

Notes: Project Start Year -> 2017  
 Project Length (months) -> 1  
 Total Project Area (acres) -> 0  
 Maximum Area Disturbed/Day (acres) -> 0  
 Total Soil Imported/Exported (yd<sup>3</sup>/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Cannon Road Construction (600ft)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	0.7	4.2	6.9	1.4	0.3	1.1	0.5	0.3	0.2	840.7	
Grading/Excavation	2.3	12.8	24.3	2.3	1.2	1.1	1.3	1.1	0.2	2,681.1	
Drainage/Utilities/Sub-Grade	0.1	1.0	0.4	1.2	0.0	1.1	0.3	0.0	0.2	313.2	
Paving	0.8	5.2	6.6	0.4	0.4	-	0.4	0.4	-	943.6	
Maximum (kilograms/day)	2.3	12.8	24.3	2.3	1.2	1.1	1.3	1.1	0.2	2,681.1	
Total (megagrams/construction project)	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	30.9	

Notes: Project Start Year -> 2017  
 Project Length (months) -> 1  
 Total Project Area (hectares) -> 0  
 Maximum Area Disturbed/Day (hectares) -> 0  
 Total Soil Imported/Exported (meters<sup>3</sup>/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

## Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Tolay Lake General Trail Construction											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	1.0	6.9	11.4	5.5	0.5	5.0	1.5	0.4	1.0	1,531.7	
Grading/Excavation	3.8	21.8	40.8	6.9	1.9	5.0	2.7	1.7	1.0	4,788.3	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
<b>Maximum (pounds/day)</b>	<b>3.8</b>	<b>21.8</b>	<b>40.8</b>	<b>6.9</b>	<b>1.9</b>	<b>5.0</b>	<b>2.7</b>	<b>1.7</b>	<b>1.0</b>	<b>4,788.3</b>	
<b>Total (tons/construction project)</b>	<b>0.1</b>	<b>0.6</b>	<b>1.0</b>	<b>0.2</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>122.2</b>	

Notes: Project Start Year -> 2017  
 Project Length (months) -> 3  
 Total Project Area (acres) -> 3  
 Maximum Area Disturbed/Day (acres) -> 1  
 Total Soil Imported/Exported (yd<sup>3</sup>/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Tolay Lake General Trail Construction											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	0.4	3.1	5.2	2.5	0.2	2.3	0.7	0.2	0.5	696.2	
Grading/Excavation	1.7	9.9	18.5	3.1	0.8	2.3	1.2	0.8	0.5	2,176.5	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
<b>Maximum (kilograms/day)</b>	<b>1.7</b>	<b>9.9</b>	<b>18.5</b>	<b>3.1</b>	<b>0.8</b>	<b>2.3</b>	<b>1.2</b>	<b>0.8</b>	<b>0.5</b>	<b>2,176.5</b>	
<b>Total (megagrams/construction project)</b>	<b>0.1</b>	<b>0.5</b>	<b>0.9</b>	<b>0.2</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>110.8</b>	

Notes: Project Start Year -> 2017  
 Project Length (months) -> 3  
 Total Project Area (hectares) -> 1  
 Maximum Area Disturbed/Day (hectares) -> 0  
 Total Soil Imported/Exported (meters<sup>3</sup>/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.



## Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Tolay Lake General Trail Construction P2+										
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	0.7	6.5	6.8	5.3	0.3	5.0	1.3	0.3	1.0	1,518.3
Grading/Excavation	2.4	20.7	22.4	6.0	1.0	5.0	2.0	0.9	1.0	4,772.7
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
<b>Maximum (pounds/day)</b>	<b>2.4</b>	<b>20.7</b>	<b>22.4</b>	<b>6.0</b>	<b>1.0</b>	<b>5.0</b>	<b>2.0</b>	<b>0.9</b>	<b>1.0</b>	<b>4,772.7</b>
<b>Total (tons/construction project)</b>	<b>0.1</b>	<b>0.5</b>	<b>0.6</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>121.7</b>

Notes: Project Start Year -> 2022  
 Project Length (months) -> 3  
 Total Project Area (acres) -> 3  
 Maximum Area Disturbed/Day (acres) -> 1  
 Total Soil Imported/Exported (yd<sup>3</sup>/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Tolay Lake General Trail Construction P2+										
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	0.3	2.9	3.1	2.4	0.1	2.3	0.6	0.1	0.5	690.1
Grading/Excavation	1.1	9.4	10.2	2.7	0.5	2.3	0.9	0.4	0.5	2,169.4
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
<b>Maximum (kilograms/day)</b>	<b>1.1</b>	<b>9.4</b>	<b>10.2</b>	<b>2.7</b>	<b>0.5</b>	<b>2.3</b>	<b>0.9</b>	<b>0.4</b>	<b>0.5</b>	<b>2,169.4</b>
<b>Total (megagrams/construction project)</b>	<b>0.1</b>	<b>0.5</b>	<b>0.5</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>110.4</b>

Notes: Project Start Year -> 2022  
 Project Length (months) -> 3  
 Total Project Area (hectares) -> 1  
 Maximum Area Disturbed/Day (hectares) -> 0  
 Total Soil Imported/Exported (meters<sup>3</sup>/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

## **Appendix C**

### **Phase I ESA**

**DISCLAIMER:** Due to the nature and length of this appendix, this document is not available as an accessible document. If you need assistance accessing the contents of this document, please contact Victoria Willard, ADA Coordinator for Sonoma County, at (707) 565-2331, or through the California Relay Service by dialing 711. For an explanation of the contents of this document, please direct inquiries to Karen Davis-Brown, Park Planner II, Sonoma County Regional Parks Department at (707) 565-2041.

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C: MC/SM/AC PARKS  
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September 8, 2004

Mr. Stuart Martin  
Sonoma County Agricultural & Open Space District  
747 Mendocino Avenue, Suite 100  
Santa Rosa, California 95401

**SUBJECT: REPORT OF INVESTIGATION  
TOLAY LAKE RANCH  
PETALUMA, CALIFORNIA  
EBA PROJECT NO. 03-1050 (8)**

Dear Mr. Martin:

The following presents the results of site investigation activities at the Tolay Lake Ranch located in Petaluma, California (Figure 1, Appendix A). The additional site investigation activities were initiated to supplement the findings and recommendations of the *Phase I Environmental Site Assessment* (EBA 2004) prepared for the project site. The following presents the scope of work conducted at the project site and our findings and recommendations.

### SITE HISTORY

The Tolay Lake Ranch is a historic property in southern Sonoma County that has been occupied and used for agricultural purposes since the 1800's. The site appears to originally been part of the Petaluma Rancho. Between 1822 and 1846, more than 800 California land grants were made to individuals by the Mexican government and Rancho Petaluma was one of those grants. Rancho Petaluma originally consisted of about 44,000 acres and in 1844 was enlarged by an additional land grant to bring the total acreage to more than 66,000 acres. The rancho then stretched eastward from Petaluma Creek over the hills and down to Sonoma Creek, including all land that lay between those two waterways from the edge of San Francisco Bay to approximately the present site of Glen Ellen.

In the 1860's, the rancho started to be split into smaller land holdings. Historical evidence indicates the project site was in part created in the 1860's. Mr. Marvin Cardoza, the current property owner, indicated the project site was originally developed as the Fair Ranch that was over 10,000 acres in size. The property was later sold to the Donahue family who was involved with the Santa Rosa and Petaluma Railroad. In the late 1800's the Foster family purchased the

property and held it for about 50 years. The Cardoza family then purchased the site in the early 1940's and has operated since that time as a working ranch and farm. The primary use of the project site has been for agricultural production which has included the application and use of agricultural chemicals.

The Phase I Environmental Site Investigation documented and recommended specific site investigation activities as follow-up measures to better determine if impacts to the project site have occurred from current and historic site uses.

## SCOPE OF WORK

The following scope of work was implemented to investigate the project site:

- Collect soil samples from the agricultural areas of the property located within the Tolay Lake basin and selected drainage courses for chemical analysis for residual pesticides and herbicides.
- Collect water samples from the potable water system for the analysis of microscopic contaminants and general water quality constituents.
- Collect soil samples for the analysis of lead from the area of the project site formerly used for the hunting of waterfowl.
- Conduct a metal detection survey and collect soil samples for chemical samples in the area indicated as formerly having an underground fuel storage tank.

The following presents information specific information regarding the implementation of aforementioned scope of work and the protocols used for sample collection as well as analytical testing and analysis.

### Soil Sampling – Agricultural Lands

Soil samples were collected from the areas of the project site currently or historically used for agricultural production and located within the expected seasonal high water zone of Tolay Lake. Soil samples were collected at a rate of one sample per 10 acres of land. A total of 50 soil samples were collected from the agricultural lands and composited 10 to 1 by the laboratory.

The soil samples were collected at depths of approximately six inches below the ground surface in laboratory supplied containers. Upon collection, the sample containers were capped, sealed, labeled and placed under refrigerated conditions pending transport to a North Coast Laboratories located in Arcata, California for chemical analysis.

At the time of soil collection, each location was geo-referenced to latitude and longitude coordinate basis using a Global Positioning System device. The GPS coordinates were then used to map each sampling location as shown on Figure 3, Appendix A.

Soil samples were transported under Chain-of-Custody procedures to North Coast Laboratories located in Arcata, California for the analysis of selected herbicides and pesticides including Carbamate and Urea Pesticides using EPA Test Method 632 Modified, Chlorinated Herbicides using EPA Test Method 8151A, Organophosphate Pesticides using EPA Test Method 8141A and Triazine Pesticides using EPA Test Method 619 Modified. The selection of the constituents of concern were based on agricultural chemicals observed at the project site during the Phase I Environmental Site Assessment investigation activities as well as pesticide use reports on file with the Sonoma County Agricultural Commissioners Office and those constituents recently disclosed as historically being used by the owners of the project site.

### **Agricultural Lands – Drainages**

Discrete soil sediment samples were collected from five locations of the surface water drainage courses located within the project site. The soil sampling protocols and analytical testing requirements were consistent with those described in the agricultural lands section presented above. Please refer to Figure 4, Appendix A for the sampling locations.

### **Potable Water Sampling and Analysis**

As documented in the Phase I Environmental Site Assessment, potable water at the project site is provided by two developed springs located on the eastern side of the project site. The collected spring water is transmitted through piping to a central concrete storage tank located on the western portion of the project site in the proximity of the houses and associated outbuildings. It is our understanding the collected water is used without treatment for all domestic use at the project site.

Water collected from the concrete storage tank was pumped through a laboratory-supplied filter for a Microscopic Particulate Analysis that included water contaminants including Cryptosporidium, Giardia and other water borne contaminants. The filter was enclosed within a sterile filter housing, pressure reducer and flow totalizer provided by the analytical laboratory. The filter was placed within the potable water system and left in place for approximately six hours of time in which a total of 539 gallons of water was run through the filter. Upon completion, the filter and housing were transported under Chain-of-Custody procedures to Biovir Laboratories located in Benicia, California for examination and analysis.

Potable water samples were also collected directly from the water supply stream feeding into the storage tank for the analysis of general water quality parameters including fecal and total coliform using EPA Test Method SM9223, nitrates using EPA Test Method 300.0, metals including iron, manganese and sodium using Test Method using EPA Test Method 200.7, and general chemistry parameters including hardness using EPA Test Method SM2340B, pH using EPA Test Method 150.1, specific conductance and total dissolved solids using EPA Test Method 120.1. The samples were collected in laboratory supplied sterile containers that were then sealed and placed under refrigerated conditions pending transport to Alpha Analytical Laboratory located in Ukiah, California for chemical analysis

### **Soil Sampling – Duck Hunting Area**

A total of eight soil samples were collected from the constructed earthen pond located on the eastern portion of the project site for the analysis of lead. Please refer to Figure 5, Appendix A for the sampling locations. Soil samples were collected at depths of six to twelve inches below the ground surface in brass tubes. Upon collection, the samples were sealed, capped, labeled and placed under refrigerated conditions pending transport to Alpha Analytical Laboratories located in Ukiah, California for the analysis of total lead using EPA Test Method 6010.

Please note at the time of the sampling, the pond was dry. Mr. Marvin Cardoza indicated the pond had been used as a hunting club for approximately four years in the 1960's. A total of four soil samples were collected from within the pond area. Four additional samples were collected from the area surrounding the perimeter of the pond. In addition, one background soil sample was collected from the central portion of the project site as a background sample that was used as a background sample to compare the lead levels in and around the area of the pond.

### **Soil Sampling – Former UST Location**

Recent disclosures by the current owners of the project site include a site survey dated 1944 that indicates many of the existing and historic buildings and structures located at the project site. The survey also includes a depiction of a gasoline pump and underground fuel storage tank (UST) located on the western side of the large barn located on the western side of the project site. Investigation activities and inspections conducted during the Phase I Environmental Site Assessment did not indicate the presence of a UST at the project site. In addition, no indication of a UST was indicated in regulatory agency records or a comprehensive review of Local, State and Federal environmental databases during the Phase I investigation. Lastly, Marvin Cardoza, the owner of the project site who has occupied the site for at least 40 years indicated that he had no knowledge of the use or presence of a UST at the project site.

Site investigation activities in the area of the former UST included performing a magnetic survey in the area indicated on the survey map as the location of the former UST. The surveyed area was extended approximately in a radius of 30 feet to each side of the location of the former UST and a magnetic survey was conducted on a grid pattern. Two locations within the area of investigation indicated positive detections of ferrous metal objects and were flagged or further investigation. Three areas were then explored using a power auger and hand auger including the area of the former UST and the two areas of positive detection of buried ferrous objects. Please refer to Figure 6, Appendix A for the sampling locations.

Three soil borings were extended to depths between six to seven feet below the ground surface for the purpose of observing soil conditions for the presence of petroleum hydrocarbons and the collection of soil samples for chemical analysis.

Two small buried metal objects consisting of an automotive spark plug and a piece of metal rebar were encountered at depths of less than two feet below the ground surface in the area surveyed. The area of the former UST did not indicate the presence of odors, soil staining or visible sheen indicative of petroleum hydrocarbon contamination in soil.

Three soil samples were collected from each boring at depths of six to seven feet below the ground surface in brass tubes. Upon collection, the samples were sealed, capped, labeled and placed under refrigerated conditions pending transport to Alpha Analytical Laboratories located in Ukiah, California for the analysis of petroleum hydrocarbons including Total Petroleum Hydrocarbons as gasoline (TPH-g), TPH as diesel (TPH-d), TPH as motor oil (TPH-mo) using EPA Test Method 8015 Modified and the constituents benzene, ethylbenzene, toluene and xylenes (BTEX) using EPA Test Method 8260B.

Upon completion, the borings were backfilled to grade with the soil removed from the borings.

## FINDINGS

Findings from the site investigation activities are presented below.

### **Agricultural Lands – Soil Sampling**

Soil samples collected and analyzed from the agricultural lands at the project site were all below the laboratory detection limit (ND) for all herbicides and pesticides tested. Tabulated analytical results of the soil sampling are presented in Table 1-5 in Appendix B. A copy of the certified analytical report is presented in Appendix C.

### **Agricultural Lands – Drainages**

Soil samples collected and analyzed from the drainages located within the agricultural lands at the project site were ND for all herbicides and pesticides tested. Tabulated analytical results of the soil sampling are presented in Tables 6-10 in Appendix B. A copy of the certified analytical report is presented in Appendix C.

### **Potable Water Sampling and Analysis**

The analysis of the potable water samples collected at the project site were ND for both Giardia and Cryptosporidium. Other primary microscopic contaminants including diatoms, algae, insect larvae, rotifers and plant debris were also not detected. Secondary microscopic contaminants including plant pollen, Crustacea, Amoeba, Ciliates and Flagellates, and other organisms were also not detected. Nematodes were detected at 12 particulates per 100 gallons of water tested.

Analytical results for bacteriological and general water quality parameters indicate the presence of both total and fecal coliform bacteria. General water parameters appear to be within applicable regulatory requirements as defined by Title 22 of the California Code of Regulations.

Tabulated analytical results of the soil sampling are presented in Table 11 in Appendix B. A copy of the certified analytical report is presented in Appendix C.

### **Soil Sampling – Duck Hunting Area**

The eight soil samples collected from in and around the former waterfowl hunting area indicated total lead levels ranging from 11 to 20 milligrams to kilogram (mg/kg). The background soil sample collected from the outlying areas of the project site indicated total at 9 mg/kg. Tabulated analytical results of the soil sampling are presented in Table 12 in Appendix B. A copy of the certified analytical report is presented in Appendix C.

### **Soil Sampling – Former UST Location**

Investigative activities performed in the area of the former UST did not indicate the current or historic presence of a UST at the project site. While two areas within the area investigated indicated the presence of ferrous objects, upon active investigation two small metal objects were encountered at relatively shallow depths. No other indications of buried ferrous objects were indicated during the field screening in the area investigated.

In addition, no indication of soil staining, odors or visible sheen were observed during the installation of three soil borings within the area of investigation. Further, soil samples collected from each of the three soil borings were all ND for all petroleum hydrocarbon constituents tested with the exception of TPH-mo at a level of 2.2 mg/kg in soil boring B-2@6.5 feet. Tabulated analytical results of the soil sampling are presented Table 13 in Appendix B. A copy of the certified analytical report is presented in Appendix C.

## **CONCLUSIONS**

Based on the findings as presented in the previous sections of this report, it appears that minimal environmental impacts exist at the project site from previous and/or historic site uses. No indication of residual herbicides or pesticides were indicated from the collection of soil samples collected from the historically and current farmed areas or the drainage courses at the project site. In addition, total lead levels in the area of the former waterfowl hunting area appear to be generally low in concentration and within the range of the background lead level collected from other areas of the project site.

Water samples collected from the potable water system indicated the presence of both total and fecal coliform bacteria. As documented in the Phase I Environmental Site Assessment, a spring is a place on the earth's surface where groundwater emerges naturally. The water source of most springs is rainfall that seeps into the ground uphill from the spring outlet. Spring water moves downhill through soil or cracks in rock until it is forced out of the ground by natural pressure. Water obtained from springs is similar to water pumped from shallow groundwater wells. Like shallow wells, springs may be contaminated by surface water or other sources on or below the ground surface. Springs are susceptible to contamination because the water feeding them typically flows through the ground for only a short distance, limiting the amount of natural filtering that can occur. Based on the fact that the springs are located within portions of the project site that have are used for the grazing of cattle, it is probable that the bacterial contamination is the result of the livestock located within the watershed of the springs.



The investigation of the area of the project site depicted on the 1944 survey map as having had a UST did not indicate the presence of a UST nor the presence of petroleum hydrocarbons in soil samples collected for analytical testing. Mr. Marvin Cardoza has occupied the site since the mid 1950's indicated there was no UST in place at the site during his occupancy at the property. It appears the UST was likely removed sometime in the late 1940's or early 1950's. While there was a detection of low levels of TPH-mo at 2.2 mg/kg in one soil boring, it is probable the detection of this constituent is unrelated to the former UST. Based on the investigation activities performed in the area of the former UST at the project site, it appears the UST has been removed and impacts are not present.

## RECOMMENDATIONS

Based on findings and conclusions from the environmental investigations performed at the project site, EBA recommends the following:

- Further investigation of the potable water system and specifically the source of the bacteriological contamination should be investigated and treated to ensure the suitability of the water for human consumption. Periodic testing should be performed to ensure the water system remains free of contaminants.
- No further investigation activities are recommended.

## LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental geological practice in California at the time this investigation was performed. No soil engineering or geotechnical references are implied or should be inferred. Evaluation of the geologic conditions at the site for the purpose of this investigation is made from a limited number of observation points. Subsurface conditions may vary away from the data points available. Additional work, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation. This report has been prepared solely for the client and any reliance on this report by third parties shall be at such party's sole risk.

EBA makes no warranty, expressed or implied, except that our services have been performed in accordance with generally accepted existing environmental engineering, health and safety principles, and applicable regulations at the time and location of the study. EBA has analyzed the available information using currently applicable engineering techniques.


Please be advised that the recommendations presented herein are based partly on information made available to EBA by others, and includes professional interpretations based on limited research and data. Based on these circumstances, the decision to conduct additional investigative work to substantiate the findings and conclusions presented herein is the sole responsibility of the Client.

## REFERENCES

EBA Engineering - *Phase I Environmental Site Assessment – Tolay Lake Ranch, Petaluma, California*. Dated February 2004.

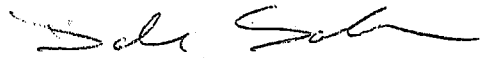
I trust this provides the information you require at this time. If you have any comments or questions, please call (707) 544-0784.

Sincerely,  
**EBA ENGINEERING**



David Noren, Manager  
Environmental Services

*Reviewed by*

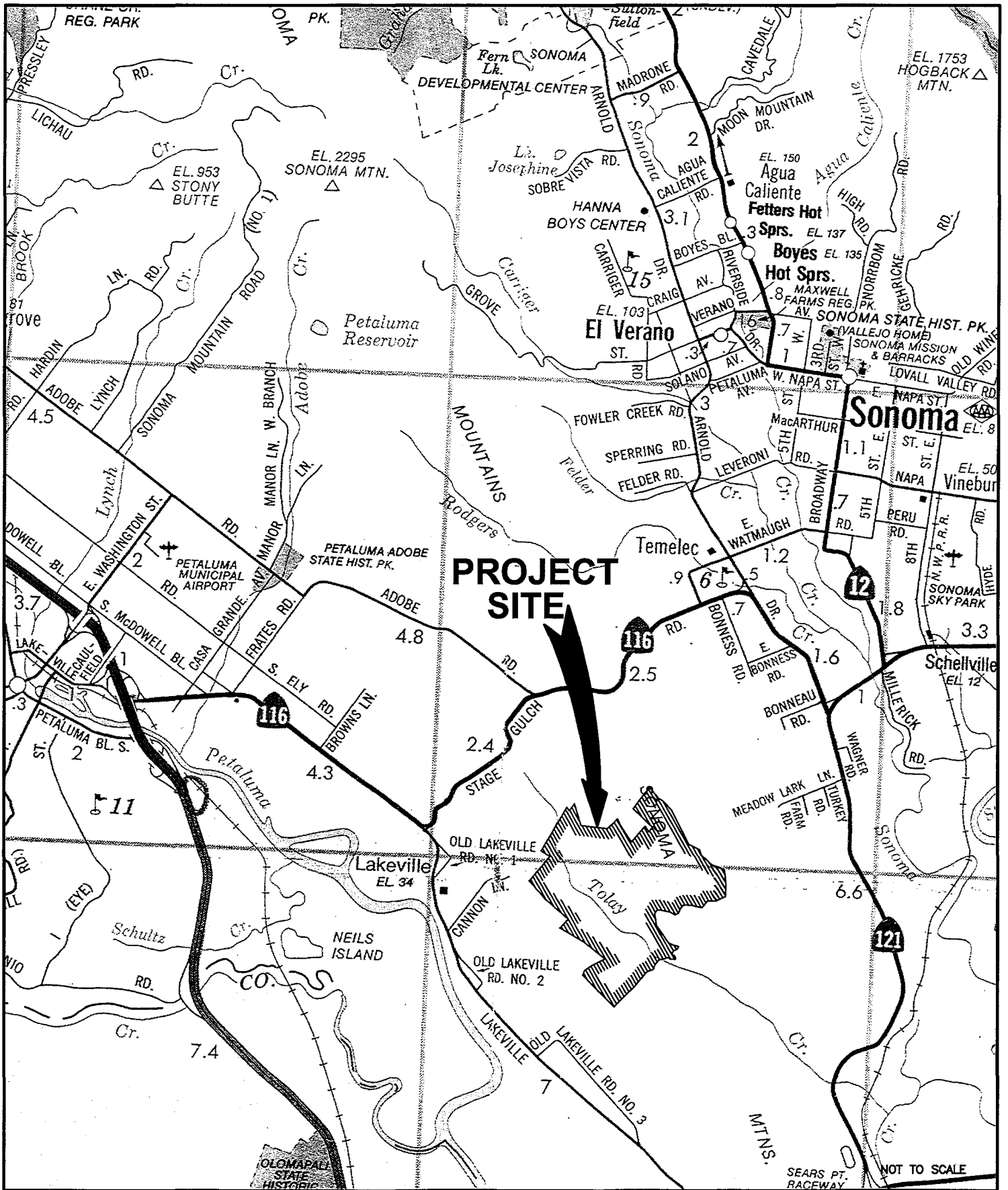


Dale Solheim, P.E. #30888  
Principal Engineer

Enclosures: Appendix A – Figures  
Appendix B – Tables  
Appendix C – Certified Analytical Reports

**APPENDIX A**

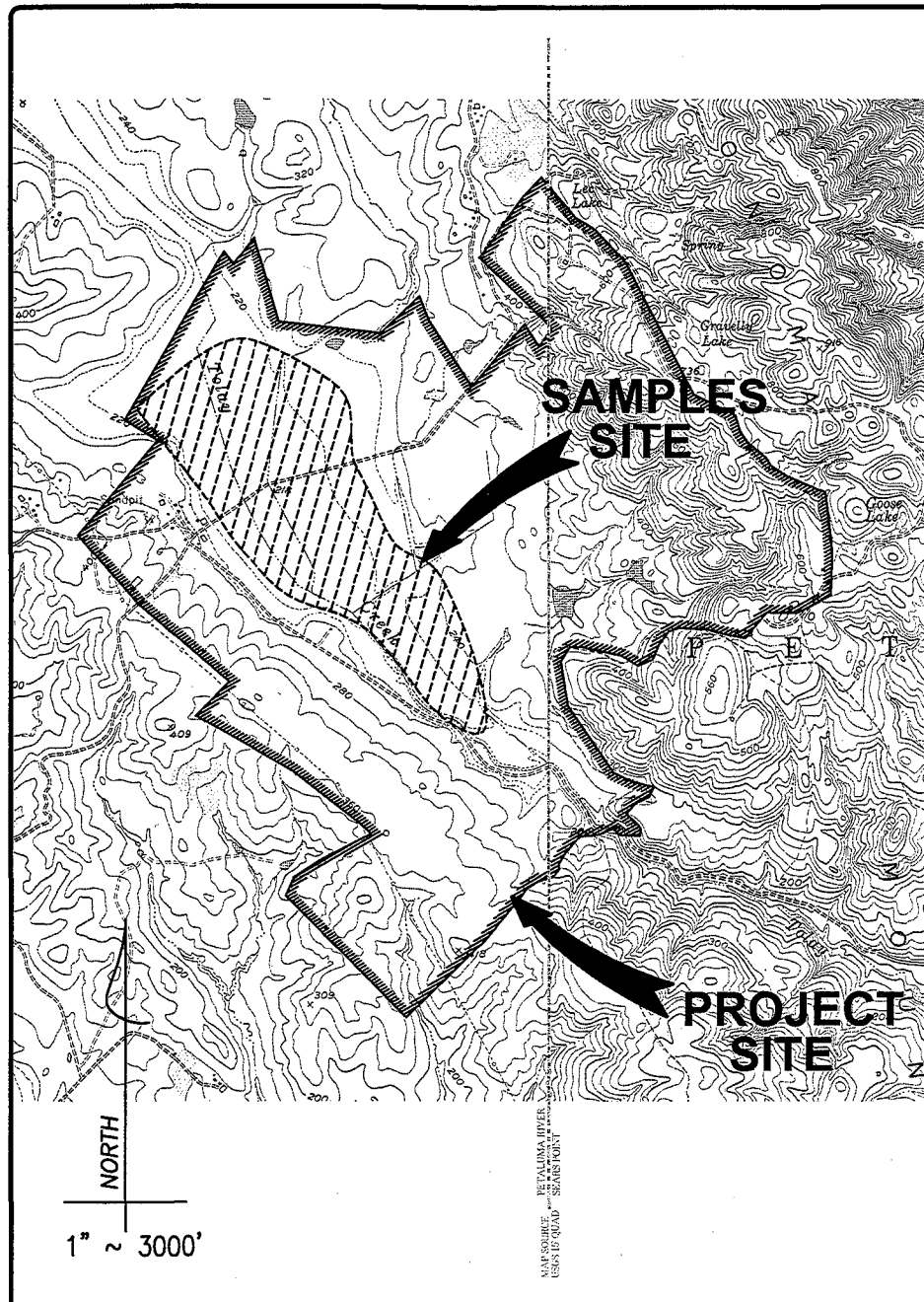
**FIGURES**



**LOCATION MAP**  
TOLAY RANCH  
PETALUMA, CALIFORNIA

FIGURE  
**1**  
01-1050





**LEGEND**

SAMPLE LOCATION

NOTE: AERIAL PHOTO DATED 7/10/93



**AGRICULTURAL LANDS SOIL SAMPLE LOCATIONS**

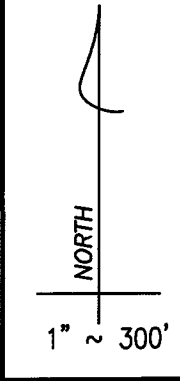
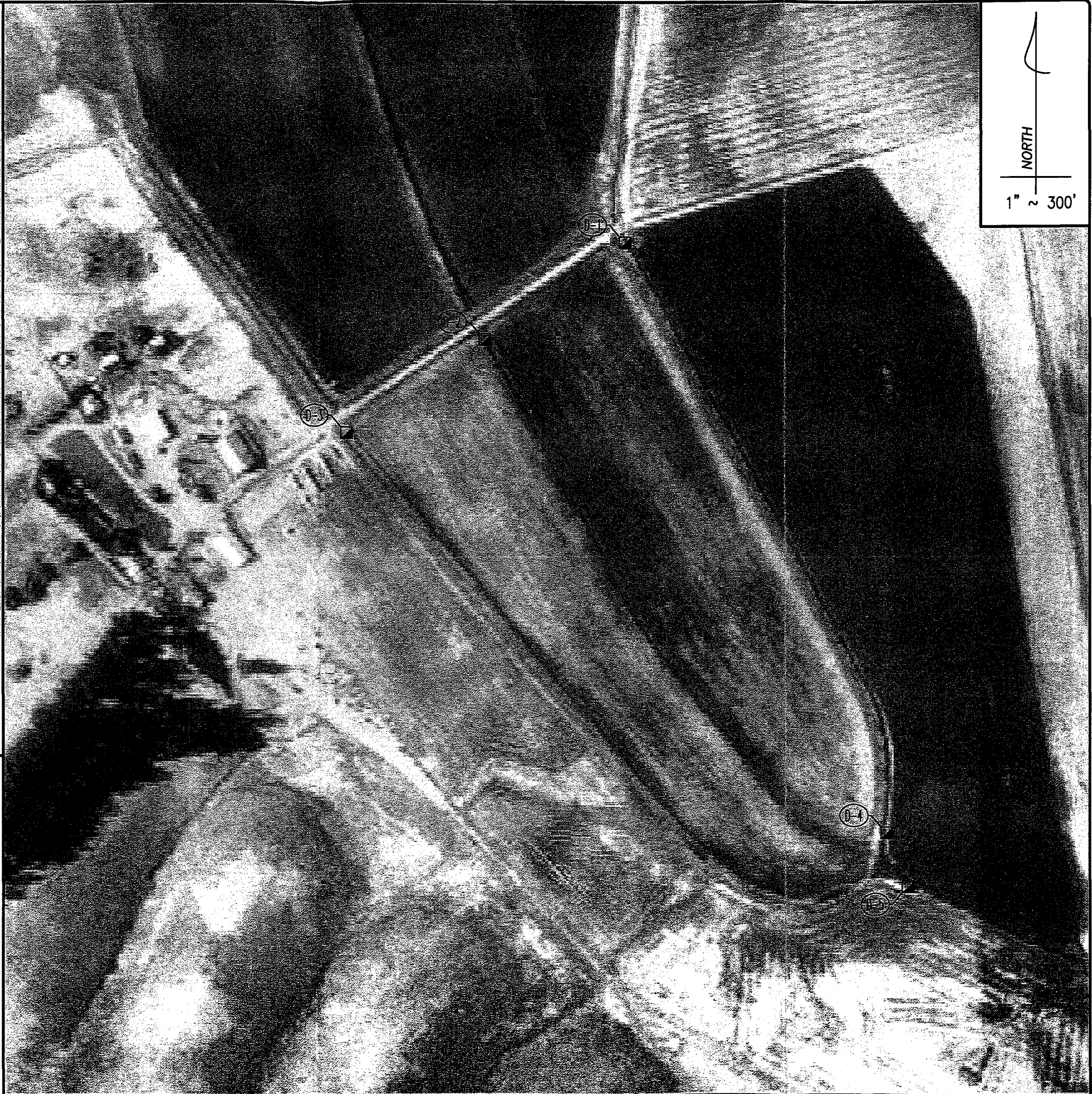
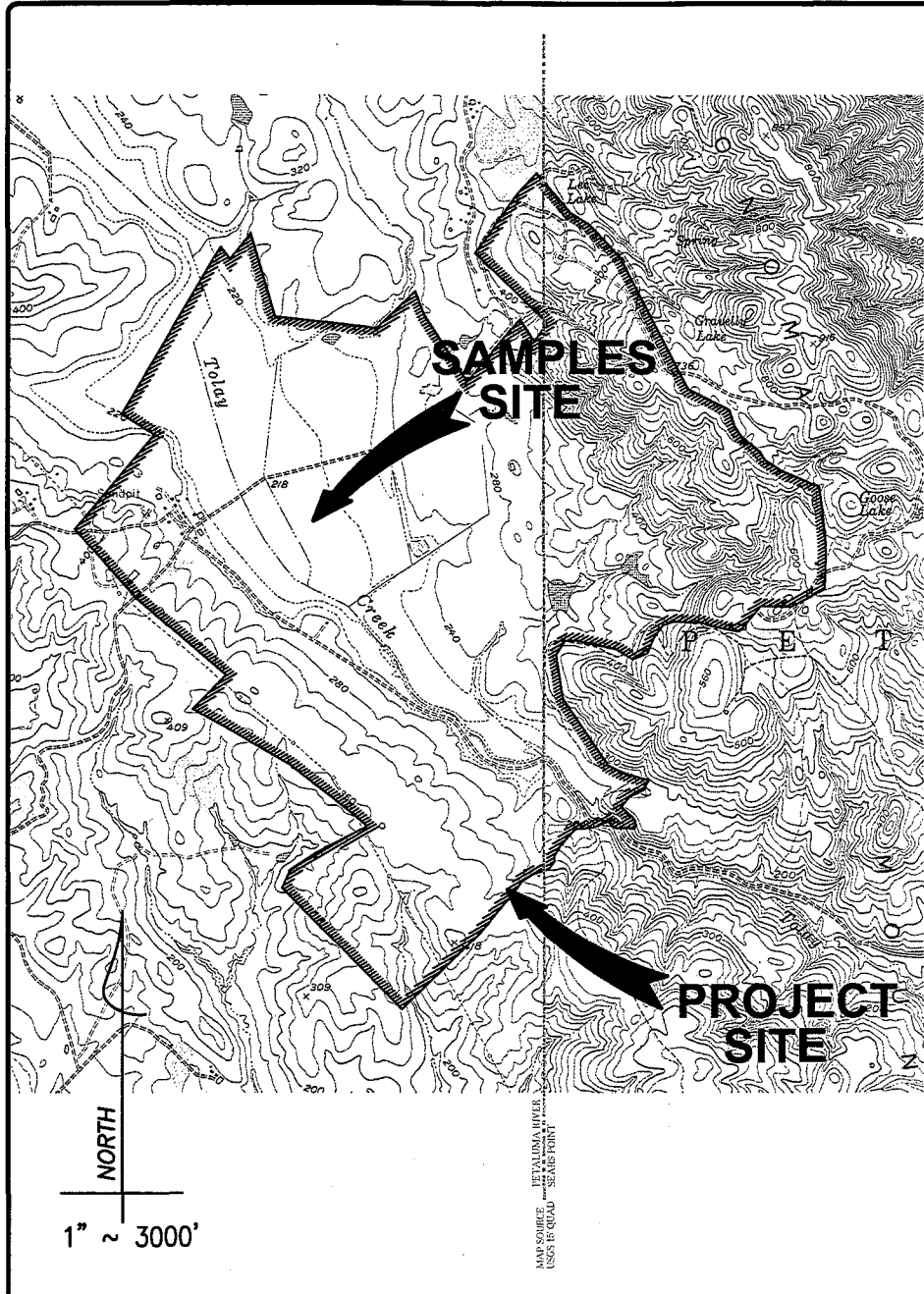
TOLAY LAKE RANCH  
PETALUMA, CALIFORNIA

FIGURE

**3**

03-1050





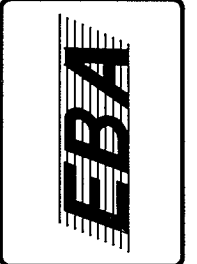
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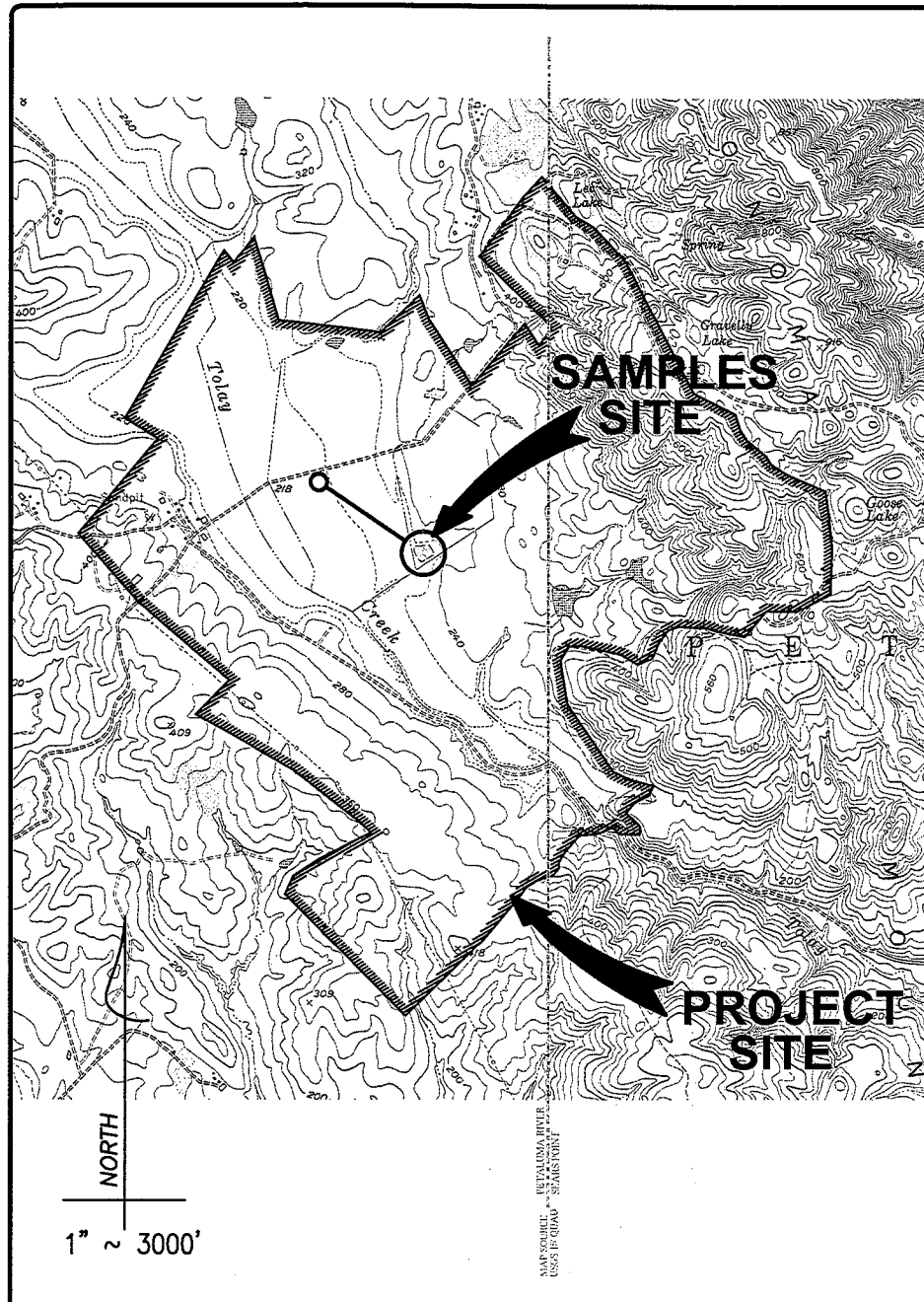


NOTE: AERIAL PHOTO DATED 7/10/93

FIGURE  
**4**  
05-1050

**DITCH SAMPLE LOCATIONS**  
TOLAY LAKE RANCH  
PETALUMA, CALIFORNIA





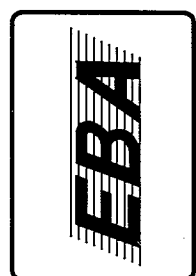
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 SAMPLE LOCATION

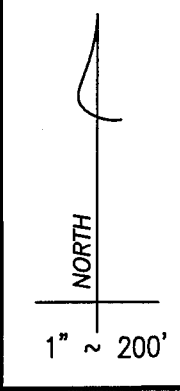
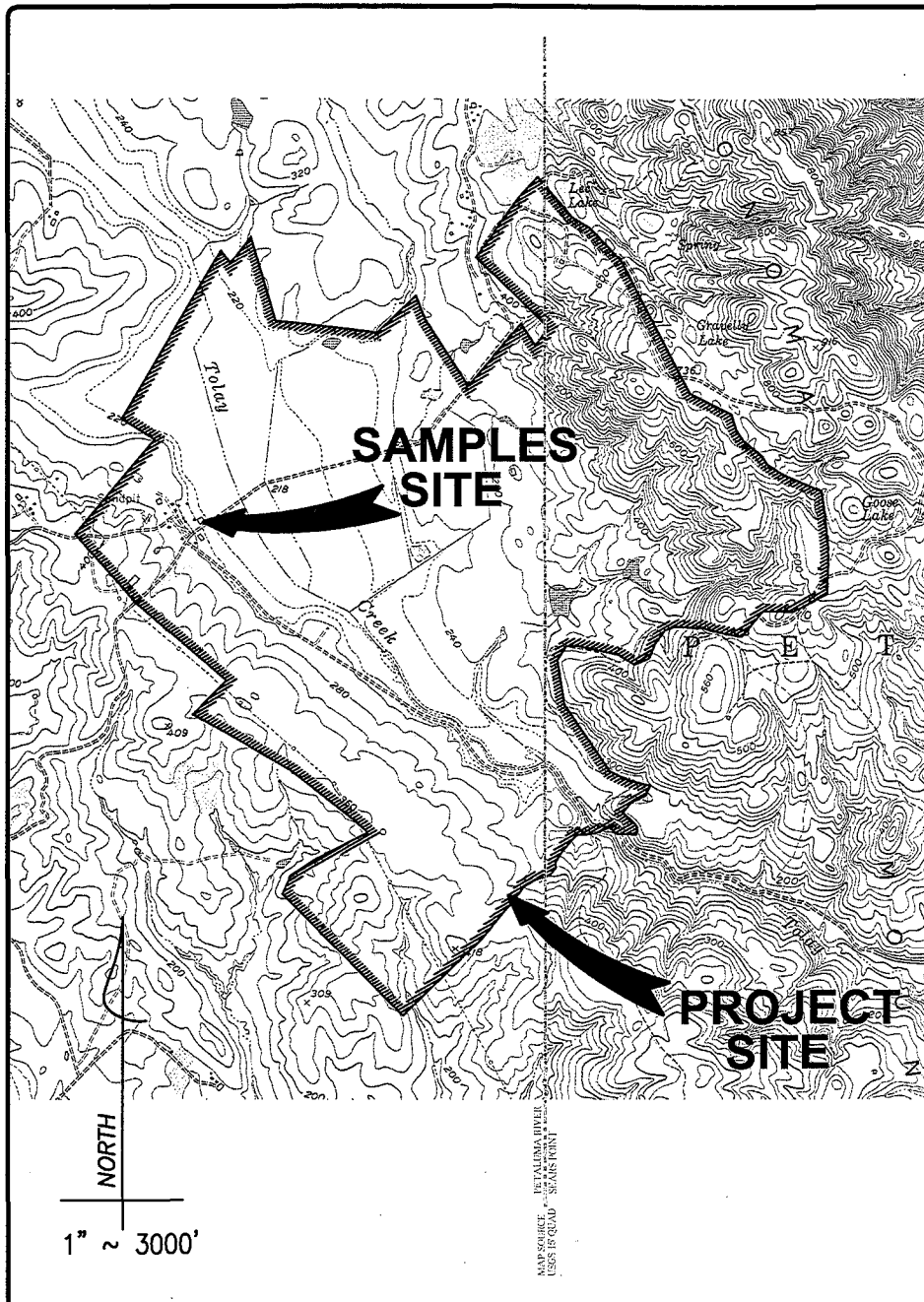
NOTE: AERIAL PHOTO DATED 7/10/93

FIGURE  
**5**  
03-1050

**LEAD SAMPLE LOCATIONS**  
TOLAY LAKE RANCH  
PETALUMA, CALIFORNIA







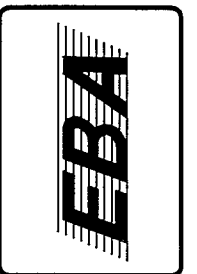
**LEGEND**


 SAMPLE LOCATION

NOTE: AERIAL PHOTO DATED 7/10/93

FIGURE  
**6**  
03-1050

**UST SAMPLE LOCATIONS**  
TOLAY LAKE RANCH  
PETALUMA, CALIFORNIA



**APPENDIX B**

**TABULATED ANALYTICAL RESULTS**

**TABLE 1**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS**  
**CARBAMATE AND UREA PESTICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	S1-S10	S11-S20	S21-S30	S31-S40	S41-S50
Carbaryl	8/18/2004	ug/g	ND	ND	ND	ND	ND
Diruon	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram

ND = Not detected above the laboratory detection limit



**TABLE 2**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS**  
**CHLORINATED HERBICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	S1-S10	S11-S20	S21-S30	S31-S40	S41-S50
Dalapon	8/18/2004	ug/g	ND	ND	ND	ND	ND
Dicamba	8/18/2004	ug/g	ND	ND	ND	ND	ND
Dichloroprop	8/18/2004	ug/g	ND	ND	ND	ND	ND
2,4-D	8/18/2004	ug/g	ND	ND	ND	ND	ND
2,4,5-TP	8/18/2004	ug/g	ND	ND	ND	ND	ND
2,4,6-T	8/18/2004	ug/g	ND	ND	ND	ND	ND
2,4-DB	8/18/2004	ug/g	ND	ND	ND	ND	ND
Dinoseb	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram

ND = Not detected above the laboratory detection limit



**TABLE 3**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS**  
**ORGANOPHOSPHATE PESTICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	S1-S10	S11-S20	S21-S30	S31-S40	S41-S50
Dichlorvos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Mevinphos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Ethoprophos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Phorate	8/18/2004	ug/g	ND	ND	ND	ND	ND
Demeton-S	8/18/2004	ug/g	ND	ND	ND	ND	ND
Diazinon	8/18/2004	ug/g	ND	ND	ND	ND	ND
Disulfoton	8/18/2004	ug/g	ND	ND	ND	ND	ND
Dimethoate	8/18/2004	ug/g	ND	ND	ND	ND	ND
Ronnel	8/18/2004	ug/g	ND	ND	ND	ND	ND
Methyl Parathion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Chlorpyrifos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Malathion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Parathion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Fenthion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Tetrachlovinphos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Ethion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Fensulfothion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Azinphos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Coumaphos	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram  
 ND = Not detected above the laboratory detection limit

**TABLE 4**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS**  
**TRIAZINE PESTICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	S1-S10	S11-S20	S21-S30	S31-S40	S41-S50
Atraton	8/18/2004	ug/g	ND	ND	ND	ND	ND
Simazine	8/18/2004	ug/g	ND	ND	ND	ND	ND
Prometon	8/18/2004	ug/g	ND	ND	ND	ND	ND
Atrazine	8/18/2004	ug/g	ND	ND	ND	ND	ND
Propazine	8/18/2004	ug/g	ND	ND	ND	ND	ND
Simetryn	8/18/2004	ug/g	ND	ND	ND	ND	ND
Ametryn	8/18/2004	ug/g	ND	ND	ND	ND	ND
Prometryn	8/18/2004	ug/g	ND	ND	ND	ND	ND
Terbutryn	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram

ND = Not detected above the laboratory detection limit



**TABLE 5**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS**  
**CARBAMATE AND UREA PESTICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	S1-S10	S11-S20	S21-S30	S31-S40	S41-S50
Carbaryl	8/18/2004	ug/g	ND	ND	ND	ND	ND
Diruon	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram

ND = Not detected above the laboratory detection limit



**TABLE 6**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS - DRAINAGES**  
**CARBAMATE AND UREA PESTICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	D-1	D-2	D-3	D-4	D-5
Carbaryl	8/18/2004	ug/g	ND	ND	ND	ND	ND
Diruon	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram

ND = Not detected above the laboratory detection limit

**EBA** ENGINEERING



**TABLE 7**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS - DRAINAGES**  
**CHLORINATED HERBICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

<b>Analysis</b>	<b>Date</b>	<b>Units</b>	<b>D-1</b>	<b>D-2</b>	<b>D-3</b>	<b>D-4</b>	<b>D-5</b>
Dalapon	8/18/2004	ug/g	ND	ND	ND	ND	ND
Dicamba	8/18/2004	ug/g	ND	ND	ND	ND	ND
Dichloroprop	8/18/2004	ug/g	ND	ND	ND	ND	ND
2,4-D	8/18/2004	ug/g	ND	ND	ND	ND	ND
2,4,5-TP	8/18/2004	ug/g	ND	ND	ND	ND	ND
2,4,6-T	8/18/2004	ug/g	ND	ND	ND	ND	ND
2,4-DB	8/18/2004	ug/g	ND	ND	ND	ND	ND
Dinoseb	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram

ND = Not detected above the laboratory detection limit



**TABLE 8**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS - DRAINAGES**  
**ORGANOPHOSPHATE PESTICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	D-1	D-2	D-3	D-4	D-5
Dichlorvos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Mevinphos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Ethoprophos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Phorate	8/18/2004	ug/g	ND	ND	ND	ND	ND
Demeton-S	8/18/2004	ug/g	ND	ND	ND	ND	ND
Diazinon	8/18/2004	ug/g	ND	ND	ND	ND	ND
Disulfoton	8/18/2004	ug/g	ND	ND	ND	ND	ND
Dimethoate	8/18/2004	ug/g	ND	ND	ND	ND	ND
Ronnel	8/18/2004	ug/g	ND	ND	ND	ND	ND
Methyl Parathion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Chlorpyrifos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Malathion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Parathion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Fenthion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Tetrachlovinphos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Ethion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Fensulfothion	8/18/2004	ug/g	ND	ND	ND	ND	ND
Azinphos	8/18/2004	ug/g	ND	ND	ND	ND	ND
Coumaphos	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram  
 ND = Not detected above the laboratory detection limit

**TABLE 9**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS - DRAINAGES**  
**TRIAZINE PESTICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

<b>Analysis</b>	<b>Date</b>	<b>Units</b>	<b>D-1</b>	<b>D-2</b>	<b>D-3</b>	<b>D-4</b>	<b>D-5</b>
Atraton	8/18/2004	ug/g	ND	ND	ND	ND	ND
Simazine	8/18/2004	ug/g	ND	ND	ND	ND	ND
Prometon	8/18/2004	ug/g	ND	ND	ND	ND	ND
Atrazine	8/18/2004	ug/g	ND	ND	ND	ND	ND
Propazine	8/18/2004	ug/g	ND	ND	ND	ND	ND
Simetryn	8/18/2004	ug/g	ND	ND	ND	ND	ND
Ametryn	8/18/2004	ug/g	ND	ND	ND	ND	ND
Prometryn	8/18/2004	ug/g	ND	ND	ND	ND	ND
Terbutryn	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram

ND = Not detected above the laboratory detection limit



**TABLE 10**  
**TABULATED ANALYTICAL RESULTS**  
**AGRICULTURAL LANDS - DRAINAGES**  
**CARBAMATE AND UREA PESTICIDES**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	D-1	D-2	D-3	D-4	D-5
Carbaryl	8/18/2004	ug/g	ND	ND	ND	ND	ND
Diruon	8/18/2004	ug/g	ND	ND	ND	ND	ND

ug/g = micrograms per gram

ND = Not detected above the laboratory detection limit

**EBA** ENGINEERING

**TABLE 11**  
**TABULATED ANALYTICAL RESULTS**  
**POTABLE WATER SYSTEM**  
**WATER QUALITY PARAMETERS**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Units	Date	Water Tank
Iron	mg/L	8/25/2004	ND
Manganese	mg/L	8/25/2004	ND
Sodium	mg/L	8/25/2004	22
Hardness, Total	mg/L	8/25/2004	140
pH	pH Units	8/25/2004	7.7
Specific Conductance	umhos/cm	8/25/2004	440
Total Dissolved Solids	mg/L	8/25/2004	220
Nitrate as NO3	mg/L	8/25/2004	13
Total Coliforms	Present/Absent	8/25/2004	Present
Fecal Coliforms	Present/Absent	8/25/2004	Present

mg/L = milligrams per Liter

ND = Not detected above the laboratory detection limit

umhos/cm = micromhos per centimeter

**EBA** ENGINEERING

**TABLE 12**  
**TABULATED ANALYTICAL RESULTS**  
**FORMER WATERFOWL HUNTING AREA**  
**TOTAL LEAD**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9B
Lead	8/25/2004	mg/kg	16	16	14	20	11	17	19	15	9

mg/kg = milligrams per kilogram  
 ND = Not detected above the laboratory detection limit



**TABLE 13**  
**TABULATED ANALYTICAL RESULTS**  
**FORMER UST LOCATION**  
**PETROLEUM HYDROCARBONS & BTEX/MtBE**  
**TOLAY LAKE PROPERTY**  
**PETALUMA, CALIFORNIA**

Analysis	Date	Units	TPH-gas	TPH-d	TPH-mo	Benzene	Toluene	Ethylbenzene	Xylenes
B-1@7'	8/25/2004	mg/kg	ND	ND	ND	ND	ND	ND	ND
B-2@6.5'	8/25/2004	mg/kg	ND	ND	2.2	ND	ND	ND	ND
B-3@6'	8/25/2004	mg/kg	ND	ND	ND	ND	ND	ND	ND

mg/kg = milligrams per kilogram

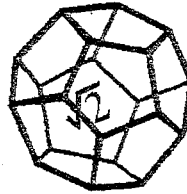
ND = Not detected above the laboratory detection limit

**EBA** ENGINEERING

**APPENDIX C**

**CERTIFIED ANALYTICAL RESULTS**





**NORTH COAST  
LABORATORIES LTD.**

September 13, 2004

EBA Engineering  
825 Sonoma Avenue  
Santa Rosa, CA 95404

Order No.: 0408484

Invoice No.: 44648

PO No.:

ELAP No. 1247-Expires July 2004

Attn: David Noren

RE: 03-1050, Tolay Lake Property

**SAMPLE IDENTIFICATION**

Fraction	Client Sample Description
01A	S-1,2,3,4,5,6,7,8,9,10 COMPOSITE
02A	S-11,12,13,14,15,16,17,18,19,20 COMPOSIT
03A	S-21,22,23,24,25,26,27,28,29,30 COMPOSIT
04A	S-31,32,33,34,35,36,37,38,39,40 COMPOSIT
05A	S-41,42,43,44,45,46,47,48,49,50 COMPOSIT
06A	D-1
07A	D-2
08A	D-3
09A	D-4
10A	D-5

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

**REPORT CERTIFIED BY**

Laboratory Supervisor(s)

QA Unit

Jesse G. Chaney, Jr.  
Laboratory Director

CLIENT: EBA Engineering  
Project: 03-1050, Tolay Lake Property  
Lab Order: 0408484

CASE NARRATIVE

EPA 8151A:

The surrogate recoveries for all of the samples were outside of the acceptance limits. The surrogate recoveries for the quality control samples were within the acceptance limits. This indicates that the low surrogate recoveries may be due to matrix effects from the samples.

The matrix spike (MS) recoveries were outside of the acceptance limits for all of the analytes. The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were within the acceptance limits for all of the analytes indicating that the low recoveries may be due to matrix effects.

The reporting limits for all analytes were raised due to poor matrix spike and surrogate recoveries.

EPA 632:

Samples D-2, D-3 and D-5 were diluted due to matrix interference.

EPA 8081A:

The reporting limits were raised for samples S-41,42,43,44,45,46,47,48,49,50 COMPOSITE, D-3 and D-4 due to sample matrix.

Samples D-2 and D-5 were diluted and the surrogate recoveries were not quantifiable (NQ) due to the sample matrix.

The surrogate recovery for sample S-41,42,43,44,45,46,47,48,49,50 COMPOSITE was outside of the acceptance limits. The surrogate recoveries for the quality control samples were within acceptance limits. This indicates that the high surrogate recovery may be due to matrix effects from the sample.

Sample S-41,42,43,44,45,46,47,48,49,50 COMPOSITE was originally extracted within the 14 day holding time. Due to a laboratory error, the sample had to be re-extracted. The sample was re-extracted 1 day past the 14 day holding time.

The LCS/LCSD, extracted on 9/2/04, have recoveries that were below the lower acceptance limits for several analytes. The reporting limits were raised for the sample associated with these LCS/LCSD.

EPA 619:

The relative percent difference (RPD) for the laboratory control samples was above the upper acceptance limit for simazine. This indicates that the results could be variable. Since there were no detectable levels of the analyte in the samples, the data were accepted.

EPA 8141A:

The surrogate recovery for the LCS extracted on 8/27/04 was below the lower acceptance limit. All of

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**CLIENT:** EBA Engineering  
**Project:** 03-1050, Tolay Lake Property  
**Lab Order:** 0408484

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**CASE NARRATIVE**

the analyte recoveries were within the acceptance limits; therefore, the data were accepted.

Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: S-1,2,3,4,5,6,7,8,9,10 COMPOSITE

Received: 8/20/04

Collected: 8/18/04 0:00

Lab ID: 0408484-01A

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	0.50	µg/g	1.0	8/26/04	8/31/04
Diuron	ND	0.20	µg/g	1.0	8/26/04	8/31/04
Surrogate: Simazine	66.9	52.3-119	% Rec	1.0	8/26/04	8/31/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	10.7	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.020	µg/g	1.0	8/30/04	9/3/04
beta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Lindane	ND	0.020	µg/g	1.0	8/30/04	9/3/04
delta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Heptachlor	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Aldrin	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Heptachlor Epoxide	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Endosulfan I	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Dieldrin	ND	0.020	µg/g	1.0	8/30/04	9/3/04
4,4'-DDE	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Endrin	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Endosulfan II	ND	0.020	µg/g	1.0	8/30/04	9/3/04
4,4'-DDD	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Endrin Aldehyde	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Endosulfan sulfate	ND	0.020	µg/g	1.0	8/30/04	9/3/04
4,4'-DDT	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Methoxychlor	ND	0.020	µg/g	1.0	8/30/04	9/3/04
Chlordane	ND	1.0	µg/g	1.0	8/30/04	9/3/04
Toxaphene	ND	10	µg/g	1.0	8/30/04	9/3/04
Surrogate: Chloroneb	81.3	27-160	% Rec	1.0	8/30/04	9/3/04

Date: 13-Sep-04

# ANALYTICAL REPORT

WorkOrder: 0408484

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfothion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	81.9	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (Surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	139	28.4-149	% Rec	1.0	8/27/04	9/2/04

Date: 13-Sep-04  
WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: S-11,12,13,14,15,16,17,18,19,20 COMPOS Received: 8/20/04  
Lab ID: 0408484-02A

Collected: 8/18/04 0:00

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	0.50	µg/g	1.0	8/26/04	9/1/04
Diuron	ND	0.20	µg/g	1.0	8/26/04	9/1/04
Surrogate: Simazine	76.5	52.3-119	% Rec	1.0	8/26/04	9/1/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	11.1	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.020	µg/g	1.0	8/30/04	9/7/04
beta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Lindane	ND	0.020	µg/g	1.0	8/30/04	9/7/04
delta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Heptachlor	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Aldrin	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Heptachlor Epoxide	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endosulfan I	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Dieldrin	ND	0.020	µg/g	1.0	8/30/04	9/7/04
4,4'-DDE	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endrin	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endosulfan II	ND	0.020	µg/g	1.0	8/30/04	9/7/04
4,4'-DDD	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endrin Aldehyde	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endosulfan sulfate	ND	0.020	µg/g	1.0	8/30/04	9/7/04
4,4'-DDT	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Methoxychlor	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Chlordane	ND	1.0	µg/g	1.0	8/30/04	9/7/04
Toxaphene	ND	10	µg/g	1.0	8/30/04	9/7/04
Surrogate: Chlorobenzene	58.9	27-160	% Rec	1.0	8/30/04	9/7/04

Date: 13-Sep-04

# ANALYTICAL REPORT

WorkOrder: 0408484

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfothion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	77.4	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	146	28.4-149	% Rec	1.0	8/27/04	9/2/04

Date: 13-Sep-04  
WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: S-21,22,23,24,25,26,27,28,29,30 COMPOS Received: 8/20/04  
Lab ID: 0408484-03A

Collected: 8/18/04 0:00

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	0.50	µg/g	1.0	8/26/04	8/31/04
Diuron	ND	0.20	µg/g	1.0	8/26/04	8/31/04
Surrogate: Simazine	70.8	52.3-119	% Rec	1.0	8/26/04	8/31/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	9.88	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.020	µg/g	1.0	8/30/04	9/7/04
beta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Lindane	ND	0.020	µg/g	1.0	8/30/04	9/7/04
delta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Heptachlor	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Aldrin	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Heptachlor Epoxide	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endosulfan I	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Dieldrin	ND	0.020	µg/g	1.0	8/30/04	9/7/04
4,4'-DDE	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endrin	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endosulfan II	ND	0.020	µg/g	1.0	8/30/04	9/7/04
4,4'-DDD	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endrin-Aldehyde	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Endosulfan sulfate	ND	0.020	µg/g	1.0	8/30/04	9/7/04
4,4'-DDT	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Methoxychlor	ND	0.020	µg/g	1.0	8/30/04	9/7/04
Chlordane	ND	1.0	µg/g	1.0	8/30/04	9/7/04
Toxaphene	ND	10	µg/g	1.0	8/30/04	9/7/04
Surrogate: Chlorobenz	56.4	27-160	% Rec	1.0	8/30/04	9/7/04



Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfothion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	66.3	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	139	28.4-149	% Rec	1.0	8/27/04	9/2/04

Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: S-31,32,33,34,35,36,37,38,39,40 COMPOS Received: 8/20/04

Collected: 8/18/04 0:00

Lab ID: 0408484-04A

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	0.50	µg/g	1.0	8/26/04	8/31/04
Diuron	ND	0.20	µg/g	1.0	8/26/04	8/31/04
Surrogate: Simazine	74.5	52.3-119	% Rec	1.0	8/26/04	8/31/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	9.24	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.020	µg/g	1.0	8/30/04	9/8/04
beta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Lindane	ND	0.020	µg/g	1.0	8/30/04	9/8/04
delta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Heptachlor	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Aldrin	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Heptachlor Epoxide	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endosulfan I	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Dieldrin	ND	0.020	µg/g	1.0	8/30/04	9/8/04
4,4'-DDE	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endrin	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endosulfan II	ND	0.020	µg/g	1.0	8/30/04	9/8/04
4,4'-DDD	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endrin Aldehyde	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endosulfan sulfate	ND	0.020	µg/g	1.0	8/30/04	9/8/04
4,4'-DDT	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Methoxychlor	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Chlordane	ND	1.0	µg/g	1.0	8/30/04	9/8/04
Toxaphene	ND	10	µg/g	1.0	8/30/04	9/8/04
Surrogate: Chlorobenz	79.1	27-160	% Rec	1.0	8/30/04	9/8/04

Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfthion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	80.5	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	135	28.4-149	% Rec	1.0	8/27/04	9/2/04

Date: 13-Sep-04  
 WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: S-41,42,43,44,45,46,47,48,49,50 COMPOS Received: 8/20/04  
 Lab ID: 0408484-05A

Collected: 8/18/04 0:00

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	0.50	µg/g	1.0	8/26/04	9/1/04
Diuron	ND	0.20	µg/g	1.0	8/26/04	9/1/04
Surrogate: Simazine	75.4	52.3-119	% Rec	1.0	8/26/04	9/1/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	11.1	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.040	µg/g	1.0	9/2/04	9/8/04
beta-BHC	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Lindane	ND	0.040	µg/g	1.0	9/2/04	9/8/04
delta-BHC	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Heptachlor	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Aldrin	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Heptachlor Epoxide	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Endosulfan I	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Dieldrin	ND	0.040	µg/g	1.0	9/2/04	9/8/04
4,4'-DDE	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Endrin	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Endosulfan II	ND	0.040	µg/g	1.0	9/2/04	9/8/04
4,4'-DDD	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Endrin Aldehyde	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Endosulfan sulfate	ND	0.040	µg/g	1.0	9/2/04	9/8/04
4,4'-DDT	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Methoxychlor	ND	0.040	µg/g	1.0	9/2/04	9/8/04
Chlordane	ND	2.0	µg/g	1.0	9/2/04	9/8/04
Toxaphene	ND	20	µg/g	1.0	9/2/04	9/8/04
Surrogate: Chlorobenz	190	27-160	% Rec	1.0	9/2/04	9/8/04

Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Mevinphos	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ethoprophos	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Phorate	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Demeton-S	ND	2.0	µg/g	1.0	8/27/04	9/2/04
Diazinon	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Disulfoton	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Dimethoate	ND	2.0	µg/g	1.0	8/27/04	9/2/04
Ronnel	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Malathion	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Parathion	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Fenthion	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Ethion	ND	0.50	µg/g	1.0	8/27/04	9/2/04
Fensulfthion	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Azinphos	ND	2.5	µg/g	1.0	8/27/04	9/2/04
Coumaphos	ND	2.5	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	73.9	29.9-137	% Rec	1.0	8/27/04	9/2/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	139	28.4-149	% Rec	1.0	8/27/04	9/2/04

Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: D-1

Received: 8/20/04

Collected: 8/18/04 17:05

Lab ID: 0408484-06A

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	0.50	µg/g	1.0	8/26/04	8/31/04
Diuron	ND	0.20	µg/g	1.0	8/26/04	8/31/04
Surrogate: Simazine	81.0	52.3-119	% Rec	1.0	8/26/04	8/31/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	16.9	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.020	µg/g	1.0	8/30/04	9/8/04
beta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Lindane	ND	0.020	µg/g	1.0	8/30/04	9/8/04
delta-BHC	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Heptachlor	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Aldrin	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Heptachlor Epoxide	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endosulfan I	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Dieldrin	ND	0.020	µg/g	1.0	8/30/04	9/8/04
4,4'-DDE	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endrin	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endosulfan II	ND	0.020	µg/g	1.0	8/30/04	9/8/04
4,4'-DDD	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endrin Aldehyde	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Endosulfan sulfate	ND	0.020	µg/g	1.0	8/30/04	9/8/04
4,4'-DDT	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Methoxychlor	ND	0.020	µg/g	1.0	8/30/04	9/8/04
Chlordane	ND	1.0	µg/g	1.0	8/30/04	9/8/04
Toxaphene	ND	10	µg/g	1.0	8/30/04	9/8/04
Surrogate: Chloroneb	135	27-160	% Rec	1.0	8/30/04	9/8/04

Date: 13-Sep-04

# ANALYTICAL REPORT

WorkOrder: 0408484

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfothion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	77.8	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/25/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	142	28.4-149	% Rec	1.0	8/27/04	9/2/04

Date: 13-Sep-04  
 WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: D-2  
 Lab ID: 0408484-07A

Received: 8/20/04

Collected: 8/18/04 17:15

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	5.0	µg/g	10	8/26/04	8/31/04
Diuron	ND	2.0	µg/g	10	8/26/04	8/31/04
Surrogate: Simazine	65.5	52.3-119	% Rec	10	8/26/04	8/31/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	18.4	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.40	µg/g	20	8/30/04	9/8/04
beta-BHC	ND	0.40	µg/g	20	8/30/04	9/8/04
Lindane	ND	0.40	µg/g	20	8/30/04	9/8/04
delta-BHC	ND	0.40	µg/g	20	8/30/04	9/8/04
Heptachlor	ND	0.40	µg/g	20	8/30/04	9/8/04
Aldrin	ND	0.40	µg/g	20	8/30/04	9/8/04
Heptachlor Epoxide	ND	0.40	µg/g	20	8/30/04	9/8/04
Endosulfan I	ND	0.40	µg/g	20	8/30/04	9/8/04
Dieldrin	ND	0.40	µg/g	20	8/30/04	9/8/04
4,4'-DDE	ND	0.40	µg/g	20	8/30/04	9/8/04
Endrin	ND	0.40	µg/g	20	8/30/04	9/8/04
Endosulfan II	ND	0.40	µg/g	20	8/30/04	9/8/04
4,4'-DDD	ND	0.40	µg/g	20	8/30/04	9/8/04
Endrin Aldehyde	ND	0.40	µg/g	20	8/30/04	9/8/04
Endosulfan sulfate	ND	0.40	µg/g	20	8/30/04	9/8/04
4,4'-DDT	ND	0.40	µg/g	20	8/30/04	9/8/04
Methoxychlor	ND	0.40	µg/g	20	8/30/04	9/8/04
Chlordane	ND	20	µg/g	20	8/30/04	9/8/04
Toxaphene	ND	200	µg/g	20	8/30/04	9/8/04
Surrogate: Chloroneb	NQ	27-160	% Rec	20	8/30/04	9/8/04



Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfothion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	79.4	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	138	28.4-149	% Rec	1.0	8/27/04	9/2/04

Date: 13-Sep-04  
WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: D-3  
Lab ID: 0408484-08A

Received: 8/20/04

Collected: 8/18/04 17:20

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	5.0	µg/g	10	8/26/04	8/31/04
Diuron	ND	2.0	µg/g	10	8/26/04	8/31/04
Surrogate: Simazine	66.3	52.3-119	% Rec	10	8/26/04	8/31/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	16.0	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.040	µg/g	1.0	8/30/04	9/8/04
beta-BHC	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Lindane	ND	0.040	µg/g	1.0	8/30/04	9/8/04
delta-BHC	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Heptachlor	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Aldrin	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Heptachlor Epoxide	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endosulfan I	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Dieldrin	ND	0.040	µg/g	1.0	8/30/04	9/8/04
4,4'-DDE	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endrin	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endosulfan II	ND	0.040	µg/g	1.0	8/30/04	9/8/04
4,4'-DDD	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endrin Aldehyde	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endosulfan sulfate	ND	0.040	µg/g	1.0	8/30/04	9/8/04
4,4'-DDT	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Methoxychlor	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Chlordane	ND	2.0	µg/g	1.0	8/30/04	9/8/04
Toxaphene	ND	20	µg/g	1.0	8/30/04	9/8/04
Surrogate: Chlornoneb	65.0	27-160	% Rec	1.0	8/30/04	9/8/04

Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfothion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	78.3	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/2/04
Surrogate: Triphenylphosphate	148	28.4-149	% Rec	1.0	8/27/04	9/2/04

Date: 13-Sep-04  
WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: D-4  
Lab ID: 0408484-09A

Received: 8/20/04

Collected: 8/18/04 17:35

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	0.50	µg/g	1.0	8/26/04	8/31/04
Diuron	ND	0.20	µg/g	1.0	8/26/04	8/31/04
Surrogate: Simazine	80.6	52.3-119	% Rec	1.0	8/26/04	8/31/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	8.59	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.040	µg/g	1.0	8/30/04	9/8/04
beta-BHC	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Lindane	ND	0.040	µg/g	1.0	8/30/04	9/8/04
delta-BHC	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Heptachlor	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Aldrin	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Heptachlor Epoxide	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endosulfan I	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Dieldrin	ND	0.040	µg/g	1.0	8/30/04	9/8/04
4,4'-DDE	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endrin	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endosulfan II	ND	0.040	µg/g	1.0	8/30/04	9/8/04
4,4'-DDD	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endrin Aldehyde	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Endosulfan sulfate	ND	0.040	µg/g	1.0	8/30/04	9/8/04
4,4'-DDT	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Methoxychlor	ND	0.040	µg/g	1.0	8/30/04	9/8/04
Chlordane	ND	2.0	µg/g	1.0	8/30/04	9/8/04
Toxaphene	ND	20	µg/g	1.0	8/30/04	9/8/04
Surrogate: Chloroneb	126	27-160	% Rec	1.0	8/30/04	9/8/04

Date: 13-Sep-04

# ANALYTICAL REPORT

WorkOrder: 0408484

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfothion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	80.0	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Surrogate: Triphenylphosphate	145	28.4-149	% Rec	1.0	8/27/04	9/3/04

Date: 13-Sep-04  
WorkOrder: 0408484

# ANALYTICAL REPORT

Client Sample ID: D-5  
Lab ID: 0408484-10A

Received: 8/20/04

Collected: 8/18/04 17:30

Test Name: Carbamate and Urea Pesticides

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Carbaryl	ND	5.0	µg/g	10	8/26/04	8/31/04
Diuron	ND	2.0	µg/g	10	8/26/04	8/31/04
Surrogate: Simazine	80.5	52.3-119	% Rec	10	8/26/04	8/31/04

Test Name: Chlorinated Herbicides

Reference: EPA 8151A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dalapon	ND	10	µg/g	1.0	8/25/04	9/1/04
Dicamba	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Dichlorprop	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4-D	ND	10	µg/g	1.0	8/25/04	9/1/04
2,4,5-TP	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4,5-T	ND	1.0	µg/g	1.0	8/25/04	9/1/04
2,4-DB	ND	10	µg/g	1.0	8/25/04	9/1/04
Dinoseb	ND	2.0	µg/g	1.0	8/25/04	9/1/04
Surrogate: 2,3-D	11.6	44.2-99.9	% Rec	1.0	8/25/04	9/1/04

Test Name: Chlorsulfuron

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chlorsulfuron	ND	0.10	µg/g	1.0	8/31/04	9/1/04

Test Name: Organochlorine Pesticides

Reference: EPA 8081A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
alpha-BHC	ND	0.40	µg/g	20	8/30/04	9/8/04
beta-BHC	ND	0.40	µg/g	20	8/30/04	9/8/04
Lindane	ND	0.40	µg/g	20	8/30/04	9/8/04
delta-BHC	ND	0.40	µg/g	20	8/30/04	9/8/04
Heptachlor	ND	0.40	µg/g	20	8/30/04	9/8/04
Aldrin	ND	0.40	µg/g	20	8/30/04	9/8/04
Heptachlor Epoxide	ND	0.40	µg/g	20	8/30/04	9/8/04
Endosulfan I	ND	0.40	µg/g	20	8/30/04	9/8/04
Dieldrin	ND	0.40	µg/g	20	8/30/04	9/8/04
4,4'-DDE	ND	0.40	µg/g	20	8/30/04	9/8/04
Endrin	ND	0.40	µg/g	20	8/30/04	9/8/04
Endosulfan II	ND	0.40	µg/g	20	8/30/04	9/8/04
4,4'-DDD	ND	0.40	µg/g	20	8/30/04	9/8/04
Endrin Aldehyde	ND	0.40	µg/g	20	8/30/04	9/8/04
Endosulfan sulfate	ND	0.40	µg/g	20	8/30/04	9/8/04
4,4'-DDT	ND	0.40	µg/g	20	8/30/04	9/8/04
Methoxychlor	ND	0.40	µg/g	20	8/30/04	9/8/04
Chlordane	ND	20	µg/g	20	8/30/04	9/8/04
Toxaphene	ND	200	µg/g	20	8/30/04	9/8/04
Surrogate: Chloroneb	NQ	27-160	% Rec	20	8/30/04	9/8/04

Date: 13-Sep-04

WorkOrder: 0408484

# ANALYTICAL REPORT

Test Name: Organophosphorous Pesticides

Reference: EPA 8141A

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorvos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Mevinphos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Ethoprophos	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Phorate	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Demeton-S	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Diazinon	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Disulfoton	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Dimethoate	ND	2.0	µg/g	1.0	8/25/04	8/28/04
Ronnel	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Methyl Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Chlorpyrifos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Malathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Parathion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fenthion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Tetrachlorvinphos	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Ethion	ND	0.50	µg/g	1.0	8/25/04	8/28/04
Fensulfothion	ND	1.0	µg/g	1.0	8/25/04	8/28/04
Azinphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Coumaphos	ND	2.5	µg/g	1.0	8/25/04	8/28/04
Surrogate: Triphenylphosphate	57.7	29.9-137	% Rec	1.0	8/25/04	8/28/04

Test Name: Oryzalin (surflan)

Reference: EPA 632 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Oryzalin(Surflan)	ND	1.0	µg/g	1.0	8/26/04	8/31/04

Test Name: Triazine Pesticides

Reference: EPA 619 Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Atraton	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Simazine	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Prometon	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Atrazine	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Propazine	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Simetryn	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Ametryn	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Prometryn	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Terbutryn	ND	1.0	µg/g	1.0	8/27/04	9/3/04
Surrogate: Triphenylphosphate	139	28.4-149	% Rec	1.0	8/27/04	9/3/04

North Coast Laboratories, Ltd.

Date: 13-Sep-04

CLIENT: EBA Engineering  
 Work Order: 0408484  
 Project: 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Method Blank

Sample ID: MB-12002	Batch ID: 12002	Test Code: 619S	Units: µg/g	Analysis Date: 9/2/04 4:03:45 PM	Prep Date: 8/27/04						
Client ID:	Run ID: ORGC10_040902A			SeqNo: 446933							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Atraton	ND	1.0									
Simazine	ND	1.0									
Prometon	ND	1.0									
Atrazine	ND	1.0									
Propazine	ND	1.0									
Simetryn	ND	1.0									
Ametryn	0.1608	1.0									J
Prometryn	ND	1.0									
Terbutryn	ND	1.0									
Triphenylphosphate	1.16	0.10	1.00	0	116%	28	149	0			

Sample ID: MB-11996	Batch ID: 11996	Test Code: 632S	Units: µg/g	Analysis Date: 8/31/04 1:42:00 AM	Prep Date: 8/26/04						
Client ID:	Run ID: ORLC5_040830A			SeqNo: 446607							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbaryl	ND	0.50									
Diuron	ND	0.20									
Simazine	4.39	0.10	5.00	0	87.9%	52	119	0			

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank



**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Method Blank

**Sample ID:** MB-12011    **Batch ID:** 12011    **Test Code:** 8081S    **Units:** µg/g    **Analysis Date:** 9/2/04 11:02:32 PM    **Prep Date:** 8/30/04  
**Client ID:**    **Run ID:** ORGC4\_040902A    **SeqNo:** 448901

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-BHC	ND	0.020									
beta-BHC	ND	0.020									
Lindane	ND	0.020									
delta-BHC	ND	0.020									
Heptachlor	ND	0.020									
Aldrin	0.006778	0.020									J
Heptachlor Epoxide	ND	0.020									
Endosulfan I	ND	0.020									
Dieldrin	ND	0.020									
4,4'-DDE	ND	0.020									
Endrin	ND	0.020									
Endosulfan II	ND	0.020									
4,4'-DDD	ND	0.020									
Endrin Aldehyde	ND	0.020									
Endosulfan sulfate	ND	0.020									
4,4'-DDT	ND	0.020									
Methoxychlor	ND	0.020									
Chlordane	ND	1.0									J
Toxaphene	ND	10									J
Chloroneb	1.81	0.40	2.00	0	90.4%	27	160	0			

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Method Blank

**Sample ID:** MB-12047      **Batch ID:** 12047      **Test Code:** 8081S      **Units:** µg/g      **Analysis Date:** 9/8/04 4:27:50 AM      **Prep Date:** 9/2/04

**Client ID:**      **Run ID:** ORGC4\_040902A      **SeqNo:** 448936

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-BHC	ND	0.020									
beta-BHC	ND	0.020									
Lindane	ND	0.020									
delta-BHC	ND	0.020									
Heptachlor	ND	0.020									
Aldrin	ND	0.020									
Heptachlor Epoxide	ND	0.020									
Endosulfan I	ND	0.020									
Dieldrin	ND	0.020									
4,4'-DDE	ND	0.020									
Endrin	ND	0.020									
Endosulfan II	ND	0.020									
4,4'-DDD	ND	0.020									
Endrin Aldehyde	ND	0.020									
Endosulfan sulfate	ND	0.020									
4,4'-DDT	ND	0.020									
Methoxychlor	ND	0.020									
Chlordane	ND	1.0									J
Toxaphene	ND	10									J
Chloroneb	1.27	0.40	2.00	0	63.7%	27	160	0			

**Qualifiers:** ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**

Method Blank

Sample ID: MB-11988      Batch ID: 11988      Test Code: 8140S      Units: µg/g      Analysis Date: 8/28/04 11:50:28 AM      Prep Date: 8/25/04  
 Client ID:      Run ID: ORGC13\_040827A      SeqNo: 445609

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorvos	ND	0.50									
Mevinphos	ND	1.0									
Ethoprophos	ND	1.0									
Phorate	ND	1.0									
Demeton-S	ND	2.0									
Diazinon	ND	0.50									
Disulfoton	ND	0.50									
Dimethoate	ND	2.0									
Ronnel	ND	0.50									
Methyl Parathion	ND	0.50									
Chlorpyrifos	ND	0.50									
Malathion	ND	0.50									
Parathion	ND	0.50									
Fenthion	ND	0.50									
Tetrachlorvinphos	ND	0.50									
Ethion	ND	0.50									
Fensulfothion	ND	1.0									
Azinphos	ND	2.5									
Coumaphos	ND	2.5									
Triphenylphosphate	4.11	0.10	5.00	0	82.2%	30	137	0			

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Method Blank

Sample ID: MB-12003      Batch ID: 12003      Test Code: 8140S      Units: µg/g      Analysis Date: 9/2/04 10:08:14 PM      Prep Date: 8/27/04  
 Client ID:                      Run ID: ORGC13\_040902A                      SeqNo: 446959

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorvos	ND	0.50									
Mevinphos	ND	1.0									
Ethoprophos	ND	1.0									
Phorate	0.1741	1.0									J
Demeton-S	ND	2.0									
Diazinon	ND	0.50									
Disulfoton	ND	0.50									
Dimethoate	ND	2.0									
Ronnel	ND	0.50									
Methyl Parathion	ND	0.50									
Chlorpyrifos	ND	0.50									
Malathion	ND	0.50									
Parathion	ND	0.50									
Fenthion	ND	0.50									
Tetrachlorvinphos	ND	0.50									
Ethion	ND	0.50									
Fensulfothion	ND	1.0									
Azinphos	ND	2.5									
Coumaphos	ND	2.5									
Triphenylphosphate	4.23	0.10	5.00	0	84.5%	30	137	0			

**Qualifiers:**      ND - Not Detected at the Reporting Limit                      S - Spike Recovery outside accepted recovery limits                      B - Analyte detected in the associated Method Blank  
                             J - Analyte detected below quantitation limits                      R - RPD outside accepted recovery limits

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**

Method Blank

**Sample ID:** MB-11986    **Batch ID:** 11986    **Test Code:** 8150S    **Units:** µg/g    **Analysis Date:** 9/1/04 2:01:46 AM    **Prep Date:** 8/25/04  
**Client ID:**    **Run ID:** ORGC4\_040831A    **SeqNo:** 446542

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dalapon	ND	1.0									
Dicamba	ND	0.20									
Dichlorprop	ND	1.0									
2,4-D	ND	1.0									
2,4,5-TP	ND	0.10									
2,4,5-T	ND	0.10									
2,4-DB	ND	1.0									
Dinoseb	ND	0.20									
2,3-D	3.01	0.10	5.00	0	60.3%	44	100	0			

**Sample ID:** MB-12025    **Batch ID:** 12025    **Test Code:** CHLORSU    **Units:** µg/g    **Analysis Date:** 9/1/04 4:42:26 PM    **Prep Date:** 8/31/04  
**Client ID:**    **Run ID:** ORLC2\_040901A    **SeqNo:** 446752

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorsulfuron	ND	0.10									

**Sample ID:** MB-11995    **Batch ID:** 11995    **Test Code:** ORYZS    **Units:** µg/g    **Analysis Date:** 8/31/04 5:28:22 PM    **Prep Date:** 8/26/04  
**Client ID:**    **Run ID:** ORLC2\_040831A    **SeqNo:** 446125

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oryzalin(Surflan)	ND	1.0									

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: EBA Engineering  
 Work Order: 0408484  
 Project: 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Laboratory Control Spike

Sample ID: LCS-12002	Batch ID: 12002	Test Code: 619S	Units: µg/g	Analysis Date: 9/2/04 4:44:38 PM	Prep Date: 8/27/04						
Client ID:	Run ID: ORGC10_040902A	SeqNo: 446934									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Atraton	3.455	1.0	5.00	0	69.3%	38	129	0			
Simazine	3.246	1.0	5.00	0	64.9%	12	131	0			
Prometon	3.365	1.0	5.00	0	67.3%	36	134	0			
Atrazine	3.844	1.0	5.00	0	76.9%	37	135	0			
Propazine	4.012	1.0	5.00	0	80.2%	42	130	0			
Simetryn	3.499	1.0	5.00	0	70.0%	41	133	0			
Ametryn	3.519	1.0	5.00	0	70.4%	41	134	0			
Prometryn	3.568	1.0	5.00	0	71.4%	41	132	0			
Terbutryn	3.582	1.0	5.00	0	71.6%	40	135	0			

Sample ID: LCSD-12002	Batch ID: 12002	Test Code: 619S	Units: µg/g	Analysis Date: 9/2/04 5:25:40 PM	Prep Date: 8/27/04						
Client ID:	Run ID: ORGC10_040902A	SeqNo: 446935									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Atraton	3.751	1.0	5.00	0	75.0%	38	129	3.46	7.95%	15	
Simazine	3.948	1.0	5.00	0	79.0%	12	131	3.25	19.5%	15	R
Prometon	3.600	1.0	5.00	0	72.0%	36	134	3.36	6.73%	15	
Atrazine	4.191	1.0	5.00	0	83.8%	37	135	3.84	8.65%	15	
Propazine	4.310	1.0	5.00	0	86.2%	42	130	4.01	7.18%	15	
Simetryn	3.715	1.0	5.00	0	74.3%	41	133	3.50	5.98%	15	
Ametryn	3.723	1.0	5.00	0	74.5%	41	134	3.52	5.65%	15	
Prometryn	3.780	1.0	5.00	0	75.6%	41	132	3.57	5.77%	15	
Terbutryn	3.726	1.0	5.00	0	74.5%	40	135	3.58	3.94%	15	

Qualifiers: ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits      B - Analyte detected in the associated Method Blank  
 J - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Laboratory Control Spike

Sample ID: LCS-11996	Batch ID: 11996	Test Code: 632S	Units: µg/g	Analysis Date: 8/31/04 2:48:37 AM	Prep Date: 8/26/04						
Client ID:	Run ID: ORLC5_040830A	SeqNo: 446608									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbaryl	2.579	0.50	2.50	0	103%	80	108	0			
Diuron	0.8649	0.20	1.00	0	86.5%	74	105	0			
Simazine	4.56	0.10	5.00	0	91.1%	52	119	0			

Sample ID: LGSD-11996	Batch ID: 11996	Test Code: 632S	Units: µg/g	Analysis Date: 8/31/04 3:55:13 AM	Prep Date: 8/26/04						
Client ID:	Run ID: ORLC5_040830A	SeqNo: 446609									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbaryl	2.659	0.50	2.50	0	106%	80	108	2.58	3.05%	10	
Diuron	0.8447	0.20	1.00	0	84.5%	74	105	0.865	2.37%	10	
Simazine	4.53	0.10	5.00	0	90.5%	52	119	4.56	0.621%	10	

**Qualifiers:** ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits      B - Analyte detected in the associated Method Blank  
 J - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Laboratory Control Spike

Sample ID: LCS-12011	Batch ID: 12011	Test Code: 8081S	Units: µg/g	Analysis Date: 9/2/04 11:47:34 PM	Prep Date: 8/30/04						
Client ID:	Run ID: ORGC4_040902A	SeqNo: 448902									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-BHC	0.08062	0.020	0.100	0	80.6%	56	119	0			
beta-BHC	0.1045	0.020	0.100	0	105%	63	112	0			
Lindane	0.07973	0.020	0.100	0	79.7%	56	118	0			
delta-BHC	0.09051	0.020	0.100	0	90.5%	63	115	0			
Heptachlor	0.1025	0.020	0.100	0	102%	59	120	0			
Aldrin	0.08577	0.020	0.100	0.00678	79.0%	44	109	0			
Heptachlor Epoxide	0.09111	0.020	0.100	0	91.1%	58	115	0			
Endosulfan I	0.09708	0.020	0.100	0	97.1%	56	111	0			
Dieldrin	0.09842	0.020	0.100	0	98.4%	56	118	0			
4,4'-DDE	0.09550	0.020	0.100	0	95.5%	70	120	0			
Endrin	0.09539	0.020	0.100	0	95.4%	60	183	0			
Endosulfan II	0.1204	0.020	0.100	0	120%	33	161	0			
4,4'-DDD	0.09591	0.020	0.100	0	95.9%	70	120	0			
Endrin Aldehyde	0.08092	0.020	0.100	0	80.9%	29	125	0			
Endosulfan sulfate	0.08568	0.020	0.100	0	85.7%	70	120	0			
4,4'-DDT	0.09207	0.020	0.100	0	92.1%	70	120	0			
Methoxychlor	0.1018	0.020	0.100	0	102%	70	120	0			
Chloroneb	1.74	0.40	2.00	0	86.8%	27	160	0			

**Qualifiers:** ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits      B - Analyte detected in the associated Method Blank  
 J - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits



**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Laboratory Control Spike Duplicate

Sample ID: LCSD-12011      Batch ID: 12011      Test Code: 8081S      Units: µg/g      Analysis Date: 9/3/04 12:32:33 AM      Prep Date: 8/30/04  
 Client ID:      Run ID: ORGC4\_040902A      SeqNo: 448903

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-BHC	0.08187	0.020	0.100	0	81.9%	56	119	0.0806	1.54%	20	
beta-BHC	0.1089	0.020	0.100	0	109%	63	112	0.104	4.06%	20	
Lindane	0.08091	0.020	0.100	0	80.9%	56	118	0.0797	1.47%	55	
delta-BHC	0.09321	0.020	0.100	0	93.2%	63	115	0.0905	2.93%	20	
Heptachlor	0.1050	0.020	0.100	0	105%	59	120	0.102	2.44%	57	
Aldrin	0.09035	0.020	0.100	0.00678	83.6%	44	109	0.0858	5.20%	20	
Heptachlor Epoxide	0.09381	0.020	0.100	0	93.8%	58	115	0.0911	2.92%	20	
Endosulfan I	0.1005	0.020	0.100	0	100%	56	111	0.0971	3.45%	20	
Dieldrin	0.1025	0.020	0.100	0	102%	56	118	0.0984	4.05%	20	
4,4'-DDE	0.09875	0.020	0.100	0	98.8%	70	120	0.0955	3.35%	20	
Endrin	0.09775	0.020	0.100	0	97.8%	60	183	0.0954	2.44%	20	
Endosulfan II	0.1252	0.020	0.100	0	125%	33	161	0.120	3.88%	20	
4,4'-DDD	0.09933	0.020	0.100	0	99.3%	70	120	0.0959	3.51%	20	
Endrin Aldehyde	0.08446	0.020	0.100	0	84.5%	29	125	0.0809	4.28%	20	
Endosulfan sulfate	0.09006	0.020	0.100	0	90.1%	70	120	0.0857	4.98%	20	
4,4'-DDT	0.09808	0.020	0.100	0	98.1%	70	120	0.0921	6.32%	20	
Methoxychlor	0.1099	0.020	0.100	0	110%	70	120	0.102	7.61%	20	
Chloroneb	1.79	0.40	2.00	0	89.5%	27	160	1.74	3.02%	20	

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** BBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**

Laboratory Control Spike

Sample ID: LCS-12047	Batch ID: 12047	Test Code: 8081S	Units: µg/g	Analysis Date: 9/8/04 5:13:35 AM	Prep Date: 9/2/04						
Client ID:	Run ID: ORGC4_040902A	SeqNo: 448937									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-BHC	0.05789	0.020	0.100	0	57.9%	56	119	0			
beta-BHC	0.05538	0.020	0.100	0	55.4%	63	112	0			S
Lindane	0.05789	0.020	0.100	0	57.9%	56	118	0			
delta-BHC	0.05710	0.020	0.100	0	57.1%	63	115	0			S
Heptachlor	0.05908	0.020	0.100	0	59.1%	59	120	0			
Aldrin	0.05820	0.020	0.100	0	58.2%	44	109	0			
Heptachlor Epoxide	0.05640	0.020	0.100	0	56.4%	58	115	0			S
Endosulfan I	0.05662	0.020	0.100	0	56.6%	56	111	0			
Dieldrin	0.05800	0.020	0.100	0	58.0%	56	118	0			
4,4'-DDE	0.05631	0.020	0.100	0	56.3%	70	120	0			S
Endrin	0.05746	0.020	0.100	0	57.5%	60	183	0			S
Endosulfan II	0.07925	0.020	0.100	0	79.3%	33	161	0			
4,4'-DDD	0.06010	0.020	0.100	0	60.1%	70	120	0			S
Endrin Aldehyde	0.06038	0.020	0.100	0	60.4%	29	125	0			
Endosulfan sulfate	0.05657	0.020	0.100	0	56.6%	70	120	0			S
4,4'-DDT	0.05562	0.020	0.100	0	55.6%	70	120	0			S
Melthoxychlor	0.06641	0.020	0.100	0	66.4%	70	120	0			S
Chloroneb	1.43	0.40	2.00	0	71.3%	27	160	0			

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Laboratory Control Spike Duplicate

Sample ID: LCSD-12047	Batch ID: 12047	Test Code: 8081S	Units: µg/g	Analysis Date: 9/8/04 5:59:22 AM	Prep Date: 9/2/04						
Client ID:	Run ID: ORGC4_040902A	SeqNo: 448938									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-BHC	0.05723	0.020	0.100	0	57.2%	56	119	0.0579	1.16%	20	
beta-BHC	0.05809	0.020	0.100	0	56.1%	63	112	0.0554	1.28%	20	S
Lindane	0.05852	0.020	0.100	0	58.5%	56	118	0.0579	1.08%	55	
delta-BHC	0.05764	0.020	0.100	0	57.6%	63	115	0.0571	0.945%	20	S
Heptachlor	0.06021	0.020	0.100	0	60.2%	59	120	0.0591	1.90%	57	
Aldrin	0.05871	0.020	0.100	0	58.7%	44	109	0.0582	0.872%	20	
Heptachlor Epoxide	0.05731	0.020	0.100	0	57.3%	58	115	0.0564	1.60%	20	S
Endosulfan I	0.05973	0.020	0.100	0	59.7%	56	111	0.0566	5.35%	20	
Dieldrin	0.05908	0.020	0.100	0	59.1%	56	118	0.0580	1.86%	20	
4,4'-DDE	0.05764	0.020	0.100	0	57.6%	70	120	0.0563	2.33%	20	S
Endrin	0.05912	0.020	0.100	0	59.1%	60	183	0.0575	2.84%	20	S
Endosulfan II	0.08063	0.020	0.100	0	80.6%	33	161	0.0792	1.73%	20	
4,4'-DDD	0.05969	0.020	0.100	0	59.7%	70	120	0.0601	0.671%	20	S
Endrin Aldehyde	0.05645	0.020	0.100	0	56.5%	29	125	0.0604	6.72%	20	
Endosulfan sulfate	0.05761	0.020	0.100	0	57.6%	70	120	0.0566	1.84%	20	S
4,4'-DDT	0.05855	0.020	0.100	0	58.5%	70	120	0.0556	5.13%	20	S
Melthoxychlor	0.06661	0.020	0.100	0	66.6%	70	120	0.0664	0.303%	20	S
Chloroneb	1.44	0.40	2.00	0	71.8%	27	160	1.43	0.580%	20	

**Qualifiers:** ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits      B - Analyte detected in the associated Method Blank  
 J - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits



**CLIENT:** BBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Laboratory Control Spike Duplicate

**Sample ID:** LCSD-11988    **Batch ID:** 11988    **Test Code:** 81405    **Units:** µg/g    **Analysis Date:** 8/28/04 1:05:05 PM    **Prep Date:** 8/25/04  
**Client ID:**    **Run ID:** ORGC13\_040827A    **SeqNo:** 445611

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorvos	2.461	0.50	2.50	0	98.5%	46	145	2.49	1.08%	43	
Mevinphos	3.692	1.0	5.00	0	73.8%	32	131	3.74	1.19%	35	
Ethoprophos	3.446	1.0	5.00	0	68.9%	38	135	3.49	1.33%	25	
Phorate	1.932	1.0	2.50	0	77.3%	39	146	2.00	3.69%	34	
Demeton-S	7.251	2.0	10.0	0	72.5%	30	137	7.35	1.31%	33	
Diazinon	1.883	0.50	2.50	0	75.3%	42	132	1.91	1.42%	58	
Disulfoton	2.547	0.50	2.50	0	102%	37	139	2.56	0.416%	33	
Dimethoate	7.579	2.0	10.0	0	75.8%	17	134	7.66	1.04%	56	
Ronnel	1.810	0.50	2.50	0	72.4%	32	172	1.79	0.890%	30	
Methyl Parathion	1.777	0.50	2.50	0	71.1%	27	141	1.72	3.33%	37	
Chlorpyrifos	1.771	0.50	2.50	0	70.8%	37	150	1.78	0.271%	34	
Malathion	1.735	0.50	2.50	0	69.4%	48	139	1.74	0.315%	36	
Parathion	1.767	0.50	2.50	0	70.7%	28	152	1.76	0.293%	28	
Fenthion	1.848	0.50	2.50	0	73.9%	37	137	1.86	0.885%	32	
Tetrachlorvinphos	1.962	0.50	2.50	0	78.5%	44	135	1.96	0.224%	28	
Ethion	1.934	0.50	2.50	0	77.4%	51	128	1.96	1.37%	35	
Fensulfothion	4.164	1.0	5.00	0	83.3%	20	138	4.53	8.38%	52	
Azinphos	10.72	2.5	12.5	0	85.7%	38	146	10.5	2.30%	32	
Coumaphos	9.314	2.5	12.5	0	74.5%	39	143	9.36	0.533%	32	
Triphenylphosphate	3.91	0.10	5.00	0	78.2%	30	137	3.97	1.53%	31	

**Qualifiers:**    ND - Not Detected at the Reporting Limit    S - Spike Recovery outside accepted recovery limits    B - Analyte detected in the associated Method Blank  
                     J - Analyte detected below quantitation limits    R - RPD outside accepted recovery limits

**QC SUMMARY REPORT**

**Laboratory Control Spike**

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

Sample ID: LCS-12003	Batch ID: 12003	Test Code: 8140S	Units: µg/g	Analysis Date: 9/2/04 10:45:35 PM	Prep Date: 8/27/04						
Client ID:	Run ID: ORGC13_040902A	SeqNo: 446960									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorvos	1.996	0.50	2.50	0	79.8%	46	145	0			
Mevinphos	3.511	1.0	5.00	0	70.2%	32	131	0			
Ethoprophos	3.424	1.0	5.00	0	68.5%	38	135	0			
Phorate	1.277	1.0	2.50	0	51.1%	39	146	0			
Demeton-S	6.726	2.0	10.0	0	67.3%	30	137	0			
Diazinon	1.856	0.50	2.50	0	74.2%	42	132	0			
Disulfoton	2.066	0.50	2.50	0	82.6%	37	139	0			
Dimethoate	7.490	2.0	10.0	0	74.9%	17	134	0			
Ronnel	1.896	0.50	2.50	0	75.8%	32	172	0			
Methyl Parathion	1.926	0.50	2.50	0	77.1%	27	141	0			
Chlorpyrifos	1.812	0.50	2.50	0	72.5%	37	150	0			
Malathion	1.750	0.50	2.50	0	70.0%	48	139	0			
Parathion	1.806	0.50	2.50	0	72.3%	28	152	0			
Fenthion	1.924	0.50	2.50	0	77.0%	37	137	0			
Tetrachlorvinphos	1.978	0.50	2.50	0	79.1%	44	135	0			
Ethion	1.949	0.50	2.50	0	78.0%	51	128	0			
Fensulfothion	3.829	1.0	5.00	0	76.6%	20	138	0			
Azinphos	10.31	2.5	12.5	0	82.5%	38	146	0			
Coumaphos	9.861	2.5	12.5	0	78.9%	39	143	0			
Triphenylphosphate	0.311	0.10	5.00	0	6.23%	30	137	0			S

**Qualifiers:** ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits      B - Analyte detected in the associated Method Blank  
 I - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Laboratory Control Spike

Sample ID: LCS-11986		Batch ID: 11986		Test Code: 8150S		Units: µg/g		Analysis Date: 9/1/04 2:48:30 AM		Prep Date: 8/25/04	
Client ID:		Run ID: ORGC4_040831A		SeqNo: 446543							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dalapon	3.239	1.0	5.00	0	64.8%	35	99	0			
Dicamba	0.8357	0.20	1.00	0	83.6%	36	102	0			
Dichlorprop	3.852	1.0	5.00	0	77.0%	41	98	0			
2,4-D	3.824	1.0	5.00	0	76.5%	38	104	0			
2,4,5-TP	0.3833	0.10	0.500	0	76.7%	38	101	0			
2,4,5-T	0.3672	0.10	0.500	0	73.4%	36	106	0			
2,4-DB	3.738	1.0	5.00	0	74.8%	40	101	0			
Dinoseb	0.2909	0.20	1.00	0	29.1%	4	73	0			
2,3-D	3.78	0.10	5.00	0	75.6%	44	100	0			

Sample ID: LCSD-11986		Batch ID: 11986		Test Code: 8150S		Units: µg/g		Analysis Date: 9/1/04 3:35:11 AM		Prep Date: 8/25/04	
Client ID:		Run ID: ORGC4_040831A		SeqNo: 446544							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dalapon	3.397	1.0	5.00	0	67.9%	35	99	3.24	4.77%	15	
Dicamba	0.8761	0.20	1.00	0	87.6%	36	102	0.836	4.73%	15	
Dichlorprop	4.051	1.0	5.00	0	81.0%	41	98	3.85	5.04%	15	
2,4-D	4.025	1.0	5.00	0	80.5%	38	104	3.82	5.13%	15	
2,4,5-TP	0.3954	0.10	0.500	0	79.1%	38	101	0.383	3.10%	15	
2,4,5-T	0.4233	0.10	0.500	0	84.7%	36	106	0.367	14.2%	15	
2,4-DB	3.831	1.0	5.00	0	76.6%	40	101	3.74	2.47%	15	
Dinoseb	0.2859	0.20	1.00	0	28.6%	4	73	0.291	1.72%	15	
2,3-D	3.91	0.10	5.00	0	78.3%	44	100	3.78	3.45%	15	

Sample ID: LCS-12025		Batch ID: 12025		Test Code: CHLORSU		Units: µg/g		Analysis Date: 9/1/04 5:00:38 PM		Prep Date: 8/31/04	
Client ID:		Run ID: ORLC2_040901A		SeqNo: 446753							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorsulfuron	0.5001	0.10	0.500	0	100%	70	130	0			

**Qualifiers:** ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits      B - Analyte detected in the associated Method Blank  
 J - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits

**CLIENT:** EBA Engineering  
**Work Order:** 0408484  
**Project:** 03-1050, Tolay Lake Property

**QC SUMMARY REPORT**  
 Laboratory Control Spike Duplicate

Sample ID:	Batch ID:	Test Code:	Units:	Analysis Date:	Prep Date:						
LCSD-12025	12025	CHLORSU	µg/g	9/1/04 5:18:51 PM	8/31/04						
Client ID:		Run ID: ORLC2_040901A		SeqNo: 446754							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloisulfuron	0.4185	0.10	0.500	0	83.7%	70	130	0.500	17.8%	20	
Sample ID:	Batch ID:	Test Code:	Units:	Analysis Date:	Prep Date:						
LCS-11995	11995	ORYZS	µg/g	8/31/04 5:46:15 PM	8/26/04						
Client ID:		Run ID: ORLC2_040831A		SeqNo: 446126							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oryzalin(Surflan)	5.086	1.0	5.00	0	102%	70	120	0			
Sample ID:	Batch ID:	Test Code:	Units:	Analysis Date:	Prep Date:						
LCSD-11995	11995	ORYZS	µg/g	8/31/04 6:04:08 PM	8/26/04						
Client ID:		Run ID: ORLC2_040831A		SeqNo: 446127							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oryzalin(Surflan)	5.175	1.0	5.00	0	103%	70	120	5.09	1.73%	20	

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank





alpha

# WORK ORDER CHAIN OF CUSTODY RECORD

October 18, 2004

Alpha Analytical Laboratories Inc. • 208 Mason Street, Ukiah, CA 95482 • (707) 468-0401 • FAX (707) 468-5267

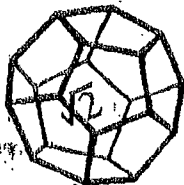
DATE 8/18/04 PAGE 1 OF 1

CLIENT'S NAME <u>EPA Engineering</u>	PROJECT MANAGER <u>David Noveck</u>	ANALYSES	SAMPLE CONDITION ON RECEIPT:
STREET ADDRESS <u>825 Sonoma Ave. JK</u>	CITY <u>CA</u>	STATE <u>CA</u>	ZIP <u>95408</u>
PHONE NUMBER <u>(707) 544-0784</u>	FAX NUMBER <u>(707) 544-0866</u>	COLD/ICED?	BUBBLES OR AIR SPACE?
PROJECT NAME <u>Blay Lake Project</u>	SITE CONTACT	WERE SAMPLES PRESERVED?	
SIGNATURE OF PERSON AUTHORIZING WORK UNDER TERMS STATED ON REVERSE SIDE OF THIS FORM		SAMPLED BY <u>David Noveck</u>	

1. ANALYSES CHARGES  
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SAMPLE NUMBER/IDENTIFICATION	DATE	TIME	LAB SAMPLE NUMBER	SAMPLE TYPE					NO. OF CONTS.	EXPLAIN IRREGULARITIES BELOW	
				LIQ	AIR	SOLID	COMP	GRAT			
D-1	8/18/04	1705			X	X	X	X	X	X	
D-2		1715									
D-3		1720									
D-4		1735									
D-5		1730									

RELINQUISHED BY: (SIGNATURE) <u>David Noveck</u>	RECEIVED BY: (SIGNATURE) <u>R. Thompson</u>	DATE <u>8/20/04</u>	TIME <u>11:00</u>	TURN AROUND TIME REQUESTED
RELINQUISHED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	DATE	TIME	
RELINQUISHED BY: (SIGNATURE)	RECEIVED FOR LABORATORY BY:	SAMPLE CONTROL OFFICER		
METHOD OF SHIPMENT	AUTHORIZED BY:	SAMPLE DISPOSITION:		
SPECIAL INSTRUCTIONS		1. STORAGE TIME REQUESTED _____ DAYS (SAMPLES WILL BE STORED FOR 30 DAYS WITHOUT ADDITIONAL CHARGES; THEREAFTER STORAGE CHARGES WILL BE BILLED AT THE PUBLISHED RATES.) 2. SAMPLE TO BE RETURNED TO CLIENT? <input type="checkbox"/> YES <input type="checkbox"/> NO HAZARDOUS MATERIALS ARE THE PROPERTY OF THE CLIENT. THE CLIENT IS RESPONSIBLE FOR PROPER DISPOSAL OF HAZARDOUS WASTES. CLIENTS NOT PICKING UP HAZARDOUS WASTES MAY BE ASSESSED AN APPROPRIATE FEE.		
DRIVING TIME	SITE TIME	TOTAL TIME		



# NORTH COAST LABORATORIES LTD.

5680 West End Road • Arcata • CA 95521-9202  
707-822-4649 Fax 707-822-6831

## Chain of Custody

P. 1 of 5

0408484

LABORATORY NUMBER: XXXXXXXXXX

Attention: David Neven  
 Results & Invoice to: EPA Engineering  
 Address: 825, SOMONA AVENUE  
SANTA ROSA, CALIFORNIA 95404  
 Phone: (707) 544-0784  
 Copies of Report to: \_\_\_\_\_  
 Sampler (Sign & Print): David Neven

TAT:  24 Hr  48 Hr  5 Day  5-7 Day  
 STD (2-3 Wk)  Other: \_\_\_\_\_  
 PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms   
 Preliminary: FAX  Verbal  By: hand  
 Final Report: FAX  Verbal  By: copy

CONTAINER CODES: 1—1/2 gal. pl; 2—250 ml pl;  
 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG;  
 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA;  
 10—125 ml VOA; 11—4 oz glass jar; T2—8 oz glass jar;  
 13—brass tube; 14—other  
 PRESERVATIVE CODES: a—HNO<sub>3</sub>; b—HCl; c—H<sub>2</sub>SO<sub>4</sub>;  
 d—Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>; e—NaOH; f—C<sub>2</sub>H<sub>3</sub>O<sub>2</sub>Cl; g—other

PROJECT INFORMATION  
 Project Number: 03-1050  
 Project Name: Tolay Lake Property  
 Purchase Order Number: \_\_\_\_\_

LAB ID	SAMPLE ID	DATE	TIME	MATRIX
5-1		8/17/04	1028	S
5-2			1038	
2-3			1045	
2-4			1050	
5-5			1100	
5-6			1110	
5-7			1117	
5-8			1125	
5-9			1135	
5-10			1140	

CONTAINER PRESERVATIVE	ANALYSIS	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Drinking water														
	Contaminated water														
	Contaminated herb														
	Organochlorines														
	Triazine - Fin Sam														

SAMPLE CONDITION/SPECIAL INSTRUCTIONS  
Laboratory to composite  
10/1  
Cooler temp = 15.1C

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
<u>David Neven</u>		<u>R. Thomas</u>	8/20/04 1100

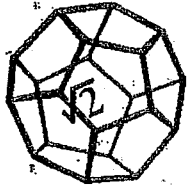
SAMPLE DISPOSAL  
 NCL Disposal of Non-Contaminated  
 Return  Pickup  
 CHAIN OF CUSTODY SEALS Y/N/NA XXXXXXXXXX  
 SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

\*MATRIX: DW=Drinking Water; Eff=Effluent; Inf=influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

### ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT







# NORTH COAST LABORATORIES LTD.

5680 West End Road • Arcata • CA 95521-9202  
707-822-4649 Fax 707-822-6831

## Chain of Custody

P. 4 of 5

0408485

LABORATORY NUMBER:  

TAT:  24 Hr  48 Hr  5 Day  5-7 Day  
 STD (2-3 Wk)  Other: \_\_\_\_\_

PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms   
Preliminary: FAX  Verbal  By:   /  /    
Final Report: FAX  Verbal  By:   /  /  

CONTAINER CODES: 1—1/2 gal. pl; 2—250 ml pl;  
3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG;  
6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA;  
10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar;  
13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO<sub>3</sub>; b—HCl; c—H<sub>2</sub>SO<sub>4</sub>;  
d—Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>; e—NaOH; f—C<sub>2</sub>H<sub>3</sub>O<sub>2</sub>Cl; g—other

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

Laboratory to composite  
10:1

SAMPLE DISPOSAL  
 NCL Disposal of Non-Contaminated  
 Return  Pickup

CHAIN OF CUSTODY SEALS Y/N/NA    
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

Attention: David Noren  
Results & Invoice to: FBA Engineering  
Address: 825 Sonoma Avenue  
Santa Rosa, CA 95404  
Phone: (707) 544-0784  
Copies of Report to: \_\_\_\_\_  
Sampler (Sign & Print): David Noren

PROJECT INFORMATION  
Project Number: 03-1050  
Project Name: Tolay Lake Project  
Purchase Order Number: \_\_\_\_\_

LAB ID	SAMPLE ID	DATE	TIME	MATRIX
237		8/18/04	1500	S
238			1505	
239			1510	
			1515	
			1520	
			1525	
			1530	
			1535	
			1540	
			1545	
			1550	
			1555	
			1600	

ANALYSIS	CONTAINER	PRESERVATIVE
Organic phosphorus (ppm)	1	
Carbonate hardness (ppm)	1	
Ammonium Nitrate	1	
Deionized water	1	
Turbidity - Full Scale	1	

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
<u>David Noren</u>		<u>J. Thompson</u>	8/20/04 1100

\*MATRIX: DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

### ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT





## REPORT OF SAMPLE EVALUATION

**REPORT NO.:** R041519A  
**PAGE NO.:** 1 of 2  
**CLIENT ADDRESS:** EBA Engineering  
825 Sonoma Avenue  
Santa Rosa, CA 95404  
**CLIENT NO.:** EBA001

### SAMPLE INFORMATION:

Name of Sampler:	David Noren	Sample Date:	08/25/04
Sample Source:	Spring	Sample Time:	14:00
Sample ID / Location:	Water Storage Tank	Turbidity:	NA
Filter Type:	Parker Hannifan, M39R10A	Temperature:	NA
Sample Volume:	539 Gallons / 2040 Liters	pH:	NA
Comments:	Raw Drinking Water	P.O. #:	03-1050

Sample Received Date:	08/25/04
Sample Received Time:	15:33
Sample Check-in Temp.:	18.3 C

### ASSAY RESULTS:

1. Giardia species Assay: <0.0012 Giardia species cyst seen / Liter. (830.5 Liters Examined)  
(SM18;9711B; FA)
2. Cryptosporidium Assay: <0.0012 Cryptosporidium oocyst seen / Liter. (830.5 Liters Examined)  
(SM18;9711B; FA)
3. Microscopic Particulate Analysis: See page 2  
(EPA 910/9-92-029)

#### Commentary:

An aliquot representing 378.5 Liters was taken from the 2040 Liter sample concentrate for particulate analysis.

1 Gallon = 3.785 Liters

MICROSCOPIC PARTICULATE ANALYSIS

PRIMARY PARTICULATES  
(per 378.5 Liters)

Giardia: NS  
Cryptosporidium: NS  
Diatoms: NS  
Other Algae: NS  
Insect/Larvae: NS  
Rotifers: NS  
Plant Debris: NS

SECONDARY PARTICULATES  
(per 378.5 Liters)

Plant Pollen: NS  
Nematodes: 12  
Crustacea: NS  
Amoeba: NS  
Ciliates/Flagellates: NS  
Other Organisms: NS

Key:

EH - extremely heavy

M - moderate

NS - none seen

H - heavy

R - rare

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed of.

8-28-04

COMPLETION DATE

Richard E. Daniel  
SIGNATURE/DATE

9-7-04



1519A



# GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)  
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

# COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: <i>EB4 Engineering</i> <i>Attention: David Noren</i>		SAMPLE DATE: <i>August 25, 2004</i>	
		SAMPLE TIME: <i>1400</i>	
NAME OF SAMPLER: <i>David Noren</i>	pH:	Water Temp (C):	
SAMPLE SOURCE: <i>Spring</i>	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input checked="" type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>		
SAMPLE LOCATION: <i>Water Storage Tank</i>	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
SAMPLE VOLUME: (Meter # ) Meter Start: <i>7975</i> Meter Stop: <i>8514</i>	TURBIDITY (NTU): Begin: _____ End: _____ Total Volume: <i>539</i> Gallons _____ Liters		

Client Sample ID #: <i>Water Storage Tank</i>	P.O. #: <i>03-1050</i>
---	------------------------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21<sup>st</sup>, 41<sup>st</sup>, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21<sup>st</sup>, 41<sup>st</sup>, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: <i>David Noren</i>	DATE / TIME:
RECEIVED BY: <i>M. Bruden</i>	DATE / TIME: <i>8/25/04 1533</i>

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510  
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

## MICROSCOPIC PARTICULATE ANALYSIS

### Primary Particulates

Numerical range of each primary bio-indicator based on numbers counted per 378.5 Liters sampled

Surface Water	EH	H	M	R	NS
Giardia	**	**	**	**	None Seen
Coccidia	**	**	**	**	None Seen
Diatoms	> 150	41-149	11-40	1-10	None Seen
Other Algae	> 300	96-299	21-95	1-20	None Seen
Insects/Larvae	> 100	31-99	16-30	1-15	None Seen
Rotifers	> 150	61-149	21-60	1-20	None Seen
Plant Debris	> 200	71-199	26-70	1-25	None Seen

<i>Giardia lamblia</i>	** Assayed by immunofluorescent Method. The presence of any amount of these organisms represents a HIGH RISK to surface water contamination.
Giardia species	
Cryptosporidium	

#### Key:

EH - extremely heavy      M - moderate      NS - none seen  
H - heavy      R - rare

## SECONDARY PARTICULATES

Secondary bio-indicators are reported as a number based on relative concentration per 100 gallons sampled and should be used only to support information derived from the primary bio-indicator category.

## RELATIVE SURFACE WATER RISK FACTOR

Indicators of Surface Water	EH	H	M	R	NS
Giardia	40	30	25	20	0
Coccidia	35	30	25	20	0
Diatoms	16	13	11	6	0
Other Algae	14	12	9	4	0
Insects/Larvae	9	7	5	3	0
Rotifers	4	3	2	1	0
Plant Debris	3	2	1	0	0

### Indicators of Surface Water:

According to EPA "Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources", March, 1991 ed.

### Range of Indicators Key:

EH - extremely heavy

M - moderate

NS - none seen

H - heavy

R - rare

## RISK OF SURFACE WATER CONTAMINATION

High Risk	=	20 or greater
Moderate Risk	=	10-19
Low Risk	=	9 or less



Alpha Analytical Laboratories Inc.

208 Mason Street, Ukiah, California 95482

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com) • Phone: (707) 468-0401 • Fax: (707) 468-5267

31 August 2004

EBA Wastechologies

Attn: David Noren

825 Sonoma Ave. Suite C

Santa Rosa, CA 95404

RE: Tolay Lake Project

Work Order: A408573

Enclosed are the results of analyses for samples received by the laboratory on 08/26/04 12:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Sheri Speaks*

Sheri L. Speaks  
Project Manager



Alpha Analytical Laboratories Inc.

208 Mason Street, Ukiah, California 95482

e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Page 1 of 6

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 08/31/04 10:17  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number  
A408573

Receipt Date/Time  
08/26/2004 12:05

Client Code  
EBA

Client PO/Reference

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Water Tank	A408573-01	Water	08/25/04 13:30	08/26/04 12:05

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Sheri Speaks*

Sheri L. Speaks  
Project Manager

8/31/04



Alpha Analytical Laboratories Inc.

208 Mason Street, Ukiah, California 95482

e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Page 2 of 6

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 08/31/04 10:17  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number: A408573      Receipt Date/Time: 08/26/2004 12:05      Client Code: EBA      Client PO/Reference:

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>Water Tank (A408573-01)</b>							
<b>Metals by EPA 200 Series Methods</b>							
Iron	EPA 200.7	AH42707	08/27/04	08/30/04	1	ND mg/l	0.10
Manganese	"	"	"	"	"	ND "	0.020
Sodium	"	"	"	"	"	22 "	1.0
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>							
Hardness, Total	SM2340B	AH42707	"	08/30/04	1	140 mg/l	5
pH	EPA 150.1	AH42622	08/26/04	08/26/04	"	7.7 pH Units	1.0
Specific Conductance (EC)	EPA 120.1	"	"	"	"	440 umhos/cm	20
Total Dissolved Solids	"	"	"	"	"	220 mg/l	10
<b>Anions by EPA Method 300.0</b>							
Nitrate as NO3	EPA 300.0	AH42617	08/26/04	08/26/04	1	13 mg/l	1.0
<b>Total and fecal coliform by presence/absence</b>							
Total Coliforms	SM9223	AH43003	08/26/04	08/27/04	1	Present .	1
Fecal Coliforms	"	"	"	"	"	Present "	1

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*Sheri Speaks*

Sheri L. Speaks  
Project Manager

8/31/04



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CHEMICAL EXAMINATION REPORT

Page 3 of 6

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 08/31/04 10:17  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number  
A408573

Receipt Date/Time  
08/26/2004 12:05

Client Code  
EBA

Client PO/Reference

SourceResult

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AH42707 - EPA 200 Series</b>										
<b>Blank (AH42707-BLK1)</b> Prepared: 08/27/04 Analyzed: 08/30/04										
Iron	ND	0.10	mg/l							
Manganese	ND	0.020	"							
Sodium	ND	1.0	"							
<b>LCS (AH42707-BS1)</b> Prepared: 08/27/04 Analyzed: 08/30/04										
Iron	2.23	0.10	mg/l	2.00		112	85-115			
Manganese	0.212	0.020	"	0.200		106	85-115			
Sodium	10.2	1.0	"	10.0		102	85-115			
<b>LCS Dup (AH42707-BS1)</b> Prepared: 08/27/04 Analyzed: 08/30/04										
Iron	2.22	0.10	mg/l	2.00		111	85-115	0.449	20	
Manganese	0.213	0.020	"	0.200		106	85-115	0.471	20	
Sodium	10.4	1.0	"	10.0		104	85-115	1.94	20	
<b>Duplicate (AH42707-DUP1)</b> Source: A408479-01 Prepared: 08/27/04 Analyzed: 08/30/04										
Iron	0.0449	0.10	mg/l		ND				20	
Manganese	0.0139	0.020	"		ND				20	
Sodium	13.0	1.0	"		13			0.00	20	
<b>Matrix Spike (AH42707-MS1)</b> Source: A408479-01 Prepared: 08/27/04 Analyzed: 08/30/04										
Iron	2.32	0.10	mg/l	2.00	ND	114	70-130			
Manganese	0.229	0.020	"	0.200	ND	108	70-130			
Sodium	23.3	1.0	"	10.0	13	103	70-130			
<b>Matrix Spike Dup (AH42707-MSD1)</b> Source: A408479-01 Prepared: 08/27/04 Analyzed: 08/30/04										
Iron	2.37	0.10	mg/l	2.00	ND	116	70-130	2.13	20	
Manganese	0.234	0.020	"	0.200	ND	110	70-130	2.16	20	
Sodium	23.1	1.0	"	10.0	13	101	70-130	0.862	20	

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*Sheri Speaks*

Sheri L. Speaks  
Project Manager

8/31/04



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**CHEMICAL EXAMINATION REPORT**

Page 4 of 6

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 08/31/04 10:17  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number                      Receipt Date/Time                      Client Code                      Client PO/Reference  
A408573                              08/26/2004 12:05                      EBA

**Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control**

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AH42707 - EPA 200 Series</b>										
<b>Duplicate (AH42707-DUP1)</b>										
Source: A408479-01      Prepared: 08/27/04      Analyzed: 08/30/04										
Hardness, Total	9.00	5	mg/l		8			11.8	200	

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*Sheri Speaks*

Sheri L. Speaks  
Project Manager

8/31/04





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**CHEMICAL EXAMINATION REPORT**

Page 5 of 6

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 08/31/04 10:17  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number A408573      Receipt Date/Time 08/26/2004 12:05      Client Code EBA      Client PO/Reference

**Anions by EPA Method 300.0 - Quality Control**

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AH42617 - General Preparation</b>										
<b>Blank (AH42617-BLK1)</b>				Prepared & Analyzed: 08/26/04						
Nitrate as NO3	ND	1.0	mg/l							
<b>LCS (AH42617-BS1)</b>				Prepared & Analyzed: 08/26/04						
Nitrate as NO3	4.4	1.0	mg/l	4.43		99.3	90-110			
<b>LCS Dup (AH42617-BSD1)</b>				Prepared & Analyzed: 08/26/04						
Nitrate as NO3	4.4	1.0	mg/l	4.43		99.3	90-110	0.00	20	
<b>Duplicate (AH42617-DUP1)</b>				Source: A408573-01      Prepared & Analyzed: 08/26/04						
Nitrate as NO3	13	2.0	mg/l		13			0.00	200	
<b>Matrix Spike (AH42617-MS1)</b>				Source: A408573-01      Prepared & Analyzed: 08/26/04						
Nitrate as NO3	35	2.0	mg/l	22.2	13	99.1	80-120			
<b>Matrix Spike Dup (AH42617-MSD1)</b>				Source: A408573-01      Prepared & Analyzed: 08/26/04						
Nitrate as NO3	35	2.0	mg/l	22.2	13	99.1	80-120	0.00	20	

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*Sheri Speaks*

Sheri L. Speaks  
Project Manager

8/31/04



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**CHEMICAL EXAMINATION REPORT**

Page 6 of 6

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 08/31/04 10:17  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A408573	08/26/2004 12:05	EBA	

**Notes and Definitions**

P Present  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
PQL Practical Quantitation Limit





*alpha*

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02 September 2004

EBA Wastechнологies

Attn: David Noren

825 Sonoma Ave. Suite C

Santa Rosa, CA 95404

RE: Tolay Lake Project

Work Order: A408579

Enclosed are the results of analyses for samples received by the laboratory on 08/26/04 12:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nena M. Burgess For Sheri L. Speaks  
Project Manager



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CHEMICAL EXAMINATION REPORT

Page 1 of 9

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number  
A408579

Receipt Date/Time  
08/26/2004 12:05

Client Code  
EBA

Client PO/Reference

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1 @ 7.0'	A408579-01	Soil	08/25/04 12:50	08/26/04 12:05
B-2 @ 6.5'	A408579-02	Soil	08/25/04 12:45	08/26/04 12:05
B-3 @ 6.0'	A408579-03	Soil	08/25/04 14:15	08/26/04 12:05

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Nena M. Burgess For Sheri L. Speaks  
Project Manager

9/2/04



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CHEMICAL EXAMINATION REPORT

Page 2 of 9

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number: A408579      Receipt Date/Time: 08/26/2004 12:05      Client Code: EBA      Client PO/Reference:

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>B-1 @ 7.0' (A408579-01)</b>		<b>Sample Type: Soil</b>			<b>Sampled: 08/25/04 12:50</b>		
<b>TPH as Diesel and Motor Oil by EPA Method 8015 Modified</b>							
TPH as Diesel	8015DRO	AH43010	08/30/04	08/30/04	1	ND mg/kg	1.0
TPH as Motor Oil	"	"	"	"	"	ND "	2.0
<i>Surrogate: 1,4-Bromofluorobenzene</i>					"	79.1 %	20-152
<b>TPH as Gasoline by GCFID/5030</b>							
TPH as Gasoline	8015GRO	A140206	09/01/04	09/01/04	1	ND mg/kg	1.0
<i>Surrogate: 1,4-Bromofluorobenzene</i>					"	84.5 %	60-156
<b>BTEX by EPA Method 8260B</b>							
Benzene	EPA 8260B	AH43002	08/26/04	08/28/04	1	ND mg/kg	0.0050
Toluene	"	"	"	"	"	ND "	0.0050
Ethylbenzene	"	"	"	"	"	ND "	0.0050
Xylenes (total)	"	"	"	"	"	ND "	0.0050
<i>Surrogate: Dibromofluoromethane</i>					"	84.4 %	61-121
<i>Surrogate: Toluene-d8</i>					"	90.8 %	63-113
<i>Surrogate: Bromofluorobenzene</i>					"	82.4 %	52-103
<b>B-2 @ 6.5' (A408579-02)</b>		<b>Sample Type: Soil</b>			<b>Sampled: 08/25/04 12:45</b>		
<b>TPH as Diesel and Motor Oil by EPA Method 8015 Modified</b>							
TPH as Diesel	8015DRO	AH43010	08/30/04	08/31/04	1	ND mg/kg	1.0
TPH as Motor Oil	"	"	"	"	"	2.2 "	2.0
<i>Surrogate: 1,4-Bromofluorobenzene</i>					"	71.3 %	20-152

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Nena M. Burgess For Sheri L. Speaks  
Project Manager

9/2/04



# Alpha

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### CHEMICAL EXAMINATION REPORT

Page 3 of 9

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number  
A408579

Receipt Date/Time  
08/26/2004 12:05


Client Code  
EBA

Client PO/Reference

#### Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>B-2 @ 6.5' (A408579-02)</b>		<b>Sample Type: Soil</b>			<b>Sampled: 08/25/04 12:45</b>		
<b>TPH as Gasoline by GCFID/5030</b>							
TPH as Gasoline	8015GRO	AH40206	09/01/04	09/01/04	1	ND mg/kg	1.0
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		98.5 %	60-156
<b>BTEX by EPA Method 8260B</b>							
Benzene	EPA 8260B	AH43002	08/26/04	08/28/04	1	ND mg/kg	0.0050
Toluene	"	"	"	"	"	ND "	0.0050
Ethylbenzene	"	"	"	"	"	ND "	0.0050
Xylenes (total)	"	"	"	"	"	ND "	0.0050
Surrogate: Dibromofluoromethane	"	"	"	"		96.8 %	61-121
Surrogate: Toluene-d8	"	"	"	"		97.6 %	63-113
Surrogate: Bromofluorobenzene	"	"	"	"		88.0 %	52-103
<b>B-3 @ 6.0' (A408579-03)</b>		<b>Sample Type: Soil</b>			<b>Sampled: 08/25/04 14:15</b>		
<b>TPH as Diesel and Motor Oil by EPA Method 8015 Modified</b>							
TPH as Diesel	8015DRO	AH43010	08/30/04	08/31/04	1	ND mg/kg	1.0
TPH as Motor Oil	"	"	"	"	"	ND "	2.0
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		78.4 %	20-152
<b>TPH as Gasoline by GCFID/5030</b>							
TPH as Gasoline	8015GRO	A140206	09/01/04	09/01/04	1	ND mg/kg	1.0
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		94.5 %	60-156

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Nena M. Burgess For Sheri L. Speaks  
Project Manager

9/2/04



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CHEMICAL EXAMINATION REPORT

Page 4 of 9

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number                      Receipt Date/Time                      Client Code                      Client PO/Reference  
A408579                              08/26/2004 12:05                      EBA

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>B-3 @ 6.0' (A408579-03)</b>		<b>Sample Type: Soil</b>		<b>Sampled: 08/25/04 14:15</b>			
<b>BTEX by EPA Method 8260B</b>							
Benzene	EPA 8260B	AH43002	08/26/04	08/28/04	1	ND mg/kg	0.0050
Toluene	"	"	"	"	"	ND "	0.0050
Ethylbenzene	"	"	"	"	"	ND "	0.0050
Xylenes (total)	"	"	"	"	"	ND "	0.0050
Surrogate: Dibromofluoromethane	"	"	"	"		86.2 %	61-121
Surrogate: Toluene-d8	"	"	"	"		90.0 %	63-113
Surrogate: Bromofluorobenzene	"	"	"	"		82.8 %	52-103

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Nena M. Burgess For Sheri L. Speaks  
Project Manager

9/2/04





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CHEMICAL EXAMINATION REPORT

Page 5 of 9

EBA Wastechologies  
825 Sonoma Ave. Suite C  
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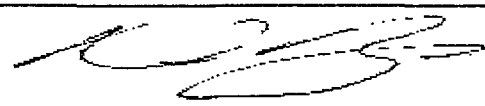
Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number: A408579      Receipt Date/Time: 08/26/2004 12:05      Client Code: EBA      Client PO/Reference:

Source/Result  
TPH as Diesel and Motor Oil by EPA Method 8015 Modified - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AH43010 - CA LUFT - orb shaker</b>										
<b>Blank (AH43010-BLK1)</b> Prepared & Analyzed: 08/30/04										
Surrogate: 1,4-Bromofluorobenzene	10.1		mg/kg	13.9		72.7	20-152			
TPH as Diesel	ND	1.0	"							
TPH as Motor Oil	ND	2.0	"							
<b>LCS (AH43010-BS1)</b> Prepared & Analyzed: 08/30/04										
Surrogate: 1,4-Bromofluorobenzene	12.1		mg/kg	13.9		87.1	20-152			
TPH as Diesel	33.1	1.0	"	41.2		80.3	63-126			
TPH as Motor Oil	34.2	2.0	"	39.8		85.9	57-139			
<b>Matrix Spike (AH43010-MS1)</b> Source: A408423-01      Prepared & Analyzed: 08/30/04										
Surrogate: 1,4-Bromofluorobenzene	11.4		mg/kg	13.9		82.0	20-152			
TPH as Diesel	31.7	1.0	"	41.2	ND	76.9	61-134			
TPH as Motor Oil	32.3	2.0	"	39.8	ND	81.2	61-126			
<b>Matrix Spike Dup (AH43010-MSD1)</b> Source: A408423-01      Prepared & Analyzed: 08/30/04										
Surrogate: 1,4-Bromofluorobenzene	13.0		mg/kg	13.9		93.5	20-152			
TPH as Diesel	34.9	1.0	"	41.2	ND	84.7	61-134	9.61	20	
TPH as Motor Oil	35.3	2.0	"	39.8	ND	88.7	61-126	8.88	20	

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Nena M. Burgess For Sheri L. Speaks  
Project Manager

9/2/04



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**CHEMICAL EXAMINATION REPORT**

Page 6 of 9

EBA Wastechologies  
825 Sonoma Ave. Suite C  
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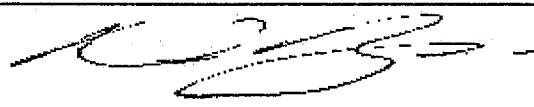
Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number A408579	Receipt Date/Time 08/26/2004 12:05	Client Code EBA	Client PO/Reference
-------------------------	---------------------------------------	--------------------	---------------------

**TPH as Gasoline by GCFID/5030 - Quality Control**

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AI40206 - EPA 5030 Soil GC</b>										
<b>Blank (AI40206-BLK1)</b>				Prepared & Analyzed: 09/01/04						
Surrogate: 1,4-Bromofluorobenzene	3.81		mg/kg	4.00		95.2	60-156			
TPH as Gasoline	ND	1.0	"							
<b>LCS (AI40206-BS1)</b>				Prepared & Analyzed: 09/01/04						
Surrogate: 1,4-Bromofluorobenzene	3.86		mg/kg	4.00		96.5	60-156			
TPH as Gasoline	24.5	1.0	"	22.2		110	77-139			
<b>LCS Dup (AI40206-BSD1)</b>				Prepared & Analyzed: 09/01/04						
Surrogate: 1,4-Bromofluorobenzene	3.84		mg/kg	4.00		96.0	60-156			
TPH as Gasoline	21.7	1.0	"	22.2		97.7	77-139	12.1	20	

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Nena M. Burgess For Sheri L. Speaks  
Project Manager

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CHEMICAL EXAMINATION REPORT

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EBA Wastechologies  
825 Sonoma Ave. Suite C  
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Attn: David Noren

Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number  
A408579

Receipt Date/Time  
08/26/2004 12:05

Client Code  
EBA

Client PO/Reference

BTEX by EPA Method 8260B - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AH43002 - EPA 5035 GCMS</b>										
<b>Blank (AH43002-BLK1)</b>										
Prepared: 08/26/04 Analyzed: 08/27/04										
Surrogate: Dibromofluoromethane	0.0250		mg/kg	0.0250		100	61-121			
Surrogate: Toluene-d8	0.0218		"	0.0250		87.2	63-113			
Surrogate: Bromofluorobenzene	0.0223		"	0.0250		89.2	52-103			
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
<b>LCS (AH43002-BS1)</b>										
Prepared: 08/26/04 Analyzed: 08/27/04										
Surrogate: Dibromofluoromethane	0.0211		mg/kg	0.0250		84.4	61-121			
Surrogate: Toluene-d8	0.0224		"	0.0250		89.6	63-113			
Surrogate: Bromofluorobenzene	0.0226		"	0.0250		90.4	52-103			
Benzene	0.00469	0.0050	"	0.00500		93.8	72-123			
Toluene	0.00463	0.0050	"	0.00500		92.6	72-126			
Ethylbenzene	0.00460	0.0050	"	0.00500		92.0	71-125			
Xylenes (total)	0.0144	0.0050	"	0.0150		96.0	67-127			
<b>LCS Dup (AH43002-BSD1)</b>										
Prepared: 08/26/04 Analyzed: 08/27/04										
Surrogate: Dibromofluoromethane	0.0222		mg/kg	0.0250		88.8	61-121			
Surrogate: Toluene-d8	0.0220		"	0.0250		88.0	63-113			
Surrogate: Bromofluorobenzene	0.0223		"	0.0250		89.2	52-103			
Benzene	0.00467	0.0050	"	0.00500		93.4	72-123	0.427	25	
Toluene	0.00479	0.0050	"	0.00500		95.8	72-126	3.40	25	
Ethylbenzene	0.00460	0.0050	"	0.00500		92.0	71-125	0.00	25	
Xylenes (total)	0.0147	0.0050	"	0.0150		98.0	67-127	2.06	25	

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Nena M. Burgess For Sheri L. Speaks  
Project Manager

9/2/04



Alpha Analytical Laboratories Inc.

208 Mason Street, Ukiah, California 95482

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**CHEMICAL EXAMINATION REPORT**

Page 8 of 9

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

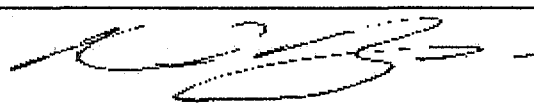
Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number A408579	Receipt Date/Time 08/26/2004 12:05	Client Code EBA	Client PO/Reference
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**BTEX by EPA Method 8260B - Quality Control**

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AH43002 - EPA 5035 GCMS</b>										
<b>Matrix Spike (AH43002-MS1)</b>										
Source: A408468-03 Prepared: 08/26/04 Analyzed: 08/27/04										
Surrogate: Dibromofluoromethane	0.0212		mg/kg	0.0250		84.8	67-121			
Surrogate: Toluene-d8	0.0222		"	0.0250		88.8	63-113			
Surrogate: Bromofluorobenzene	0.0217		"	0.0250		86.8	52-103			
Benzene	0.00481	0.0050	"	0.00500	ND	96.2	49-137			
Toluene	0.00495	0.0050	"	0.00500	ND	99.0	50-148			
Ethylbenzene	0.00457	0.0050	"	0.00500	ND	91.4	55-138			
Xylenes (total)	0.0142	0.0050	"	0.0150	ND	94.7	54-139			

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Nena M. Burgess For Sheri L. Speaks  
Project Manager

9/2/04



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**CHEMICAL EXAMINATION REPORT**

Page 9 of 9

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 09/02/04 15:10  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number  
A408579

Receipt Date/Time  
08/26/2004 12:05

Client Code  
EBA

Client PO/Reference

**Notes and Definitions**

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
PQL Practical Quantitation Limit



# WORK ORDER CHAIN OF CUSTODY RECORD

Alpha Analytical Laboratories Inc. • 208 Mason Street, Ukiah, CA 95482 • (707) 468-0401 • FAX (707) 468-5267

DATE 8/25/04 PAGE 1 OF 1

CLIENT'S NAME <u>EPA Engineering</u>				PROJECT MANAGER <u>David Noren</u>				ANALYSES		SAMPLE CONDITION ON RECEIPT: <u>9.2°C</u>	
STREET ADDRESS <u>825 Sonoma Ave, Santa Rosa, CA</u>				PHONE NUMBER <u>(707) 544-0784</u>				COLD/ICED? <u>yes</u>			
PROJECT NAME <u>Tolay Lake Project</u>				FAX NUMBER <u>(707) 544-0866</u>				BUBBLES OR AIR SPACE? <u>h</u>			
CONTRACT/PURCHASE ORDER/QUOTE NUMBER <u>03-1050</u>				SITE CONTACT <u>Martin Cardona</u>				WERE SAMPLES PRESERVED? <u>1A</u>			
SIGNATURE OF PERSON AUTHORIZING WORK UNDER TERMS STATED ON REVERSE SIDE OF THIS FORM.				SAMPLED BY <u>David Noren</u>							

SAMPLE NUMBER/IDENTIFICATION	DATE	TIME	LAB SAMPLE NUMBER	SAMPLE TYPE					No. of CONTS.	EXPLAIN IRREGULARITIES BELOW
				LQ	AIR	SOLID	COMP	GRAB		
B-1 @ 7.0'	8/25/04	1230				X	X	1	X	
B-2 @ 6.5'		1245								
B-3 @ 6.0'		1415								
B-4										
Water Tank	8/25/04	1320		X			X	4	X	X

RELINQUISHED BY: <u>David Noren</u> (SIGNATURE)		RECEIVED BY: <u>[Signature]</u> (SIGNATURE)		DATE: <u>8/26/04</u>	TIME: <u>1:00</u>	TURN AROUND TIME REQUESTED <u>5 Days</u>
RELINQUISHED BY: <u>[Signature] (1205)</u> (SIGNATURE)		RECEIVED BY: <u>[Signature]</u> (SIGNATURE)		DATE: <u>8/26/04</u>	TIME: <u>12:05</u>	
METHOD OF SHIPMENT		AUTHORIZED BY:		SAMPLE CONTROL OFFICER		
SPECIAL INSTRUCTIONS				SAMPLE DESPOSITION: 1. STORAGE TIME REQUESTED _____ DAYS (SAMPLES WILL BE STORED FOR 30 DAYS WITHOUT ADDITIONAL CHARGES; THEREAFTER STORAGE CHARGES WILL BE BILLED AT THE PUBLISHED RATES.) 2. SAMPLE TO BE RETURNED TO CLIENT? <input type="checkbox"/> YES <input type="checkbox"/> NO		
DRIVING TIME	SITE TIME	TOTAL TIME		HAZARDOUS MATERIALS ARE THE PROPERTY OF THE CLIENT. THE CLIENT IS RESPONSIBLE FOR PROPER DISPOSAL OF HAZARDOUS WASTES. CLIENTS NOT PICKING UP HAZARDOUS WASTES MAY BE ASSESSED AN APPROPRIATE FEE.		



*Alpha*

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02 September 2004

EBA Wastechologies

Attn: David Noren

825 Sonoma Ave. Suite C

Santa Rosa, CA 95404

RE: Tolay Lake Project

Work Order: A408571

Enclosed are the results of analyses for samples received by the laboratory on 08/26/04 12:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen A. Daly For Sheri L. Speaks  
Project Manager



Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

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**CHEMICAL EXAMINATION REPORT**

Page 1 of 5

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 09/02/04 10:36  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A408571	08/26/2004 12:05	EBA	

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1	A408571-01	Soil	08/25/04 12:15	08/26/04 12:05
S-2	A408571-02	Soil	08/25/04 12:20	08/26/04 12:05
S-3	A408571-03	Soil	08/25/04 12:03	08/26/04 12:05
S-4	A408571-04	Soil	08/25/04 12:28	08/26/04 12:05
S-5	A408571-05	Soil	08/25/04 12:30	08/26/04 12:05
S-6	A408571-06	Soil	08/25/04 12:35	08/26/04 12:05
S-7	A408571-07	Soil	08/25/04 12:38	08/26/04 12:05
S-8	A408571-08	Soil	08/25/04 12:40	08/26/04 12:05
S-9-B	A408571-09	Soil	08/25/04 12:50	08/26/04 12:05

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Karen A. Daly For Sheri L. Speaks  
Project Manager

9/2/2004





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**CHEMICAL EXAMINATION REPORT**

Page 2 of 5

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 09/02/04 10:36  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number A408571	Receipt Date/Time 08/26/2004 12:05	Client Code EBA	Client PO/Reference
-------------------------	---------------------------------------	--------------------	---------------------

**Alpha Analytical Laboratories, Inc.**

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	POL	NOTE
S-1 (A408571-01)		Sample Type: Soil		Sampled: 08/25/04 12:15			
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	16 mg/kg	5.0
S-2 (A408571-02)		Sample Type: Soil		Sampled: 08/25/04 12:20			
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	16 mg/kg	5.0
S-3 (A408571-03)		Sample Type: Soil		Sampled: 08/25/04 12:03			
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	14 mg/kg	5.0
S-4 (A408571-04)		Sample Type: Soil		Sampled: 08/25/04 12:28			
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	20 mg/kg	5.0
S-5 (A408571-05)		Sample Type: Soil		Sampled: 08/25/04 12:30			
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	11 mg/kg	5.0
S-6 (A408571-06)		Sample Type: Soil		Sampled: 08/25/04 12:35			
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	17 mg/kg	5.0
S-7 (A408571-07)		Sample Type: Soil		Sampled: 08/25/04 12:38			
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	19 mg/kg	5.0
S-8 (A408571-08)		Sample Type: Soil		Sampled: 08/25/04 12:40			
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	15 mg/kg	5.0
S-9-B (A408571-09)		Sample Type: Soil		Sampled: 08/25/04 12:50			

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Karen A. Daly For Sheri L. Speaks  
Project Manager

9/2/2004



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**CHEMICAL EXAMINATION REPORT**

Page 3 of 5

EBA Wastechologies  
825 Sonoma Ave. Suite C  
Santa Rosa, CA 95404  
Attn: David Noren

Report Date: 09/02/04 10:36  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number A408571	Receipt Date/Time 08/26/2004 12:05	Client Code EBA	Client PO/Reference
-------------------------	---------------------------------------	--------------------	---------------------

**Alpha Analytical Laboratories, Inc.**

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	POL	NOTE
S-9-B (A408571-09)		Sample Type: Soil			Sampled: 08/25/04 12:50		
Metals by EPA 6000/7000 Series Methods							
Lead	EPA 6010	AH42701	08/27/04	08/31/04	1	9.0 mg/kg	5.0

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**CHEMICAL EXAMINATION REPORT**

Page 4 of 5

EBA Wastechologies  
825 Sonoma Ave. Suite C  
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Attn: David Noren

Report Date: 09/02/04 10:36  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A408571	08/26/2004 12:05	EBA	

**Metals by EPA 6000/7000 Series Methods - Quality Control**

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AH42701 - EPA 3051 Microwave</b>										
<b>Blank (AH42701-BLK1)</b>				Prepared: 08/27/04 Analyzed: 08/31/04						
Lead	ND	5.0	mg/kg							
<b>LCS (AH42701-BS1)</b>				Prepared: 08/27/04 Analyzed: 08/31/04						
Lead	21.3	5.0	mg/kg	20.0		106	85-115			
<b>LCS Dup (AH42701-BSD1)</b>				Prepared: 08/27/04 Analyzed: 08/31/04						
Lead	20.4	5.0	mg/kg	20.0		102	85-115	4.32	20	
<b>Duplicate (AH42701-DUP1)</b>				Source: A408571-01 Prepared: 08/27/04 Analyzed: 08/31/04						
Lead	16.7	5.0	mg/kg		16			4.28	20	
<b>Matrix Spike (AH42701-MS1)</b>				Source: A408571-01 Prepared: 08/27/04 Analyzed: 08/31/04						
Lead	35.6	5.0	mg/kg	20.0	16	98.0	70-130			
<b>Matrix Spike Dup (AH42701-MSD1)</b>				Source: A408571-01 Prepared: 08/27/04 Analyzed: 08/31/04						
Lead	34.6	5.0	mg/kg	20.0	16	93.0	70-130	2.85	20	

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Project Manager

9/2/2004



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### CHEMICAL EXAMINATION REPORT

Page 5 of 5

EBA Wastechologies  
825 Sonoma Ave. Suite C  
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Attn: David Noren

Report Date: 09/02/04 10:36  
Project No: 03-1050  
Project ID: Tolay Lake Project

Order Number  
A408571

Receipt Date/Time  
08/26/2004 12:05

Client Code  
EBA

Client PO/Reference

#### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
PQL Practical Quantitation Limit

