

## **Appendix A. Air Quality Worksheets**

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Summary

**Albion Dairy Construction Emissions**

Construction

<i>lbs/day</i>	<b>CO</b>	<b>VOC</b>	<b>NOx</b>	<b>Sox</b>	<b>PM10</b>	<b>PM2.5</b>
Demolition	20	4	38	0	7	3
Remediation	19	4	34	0	39	9
<i>Max Emissions</i>	20	4	38	0	39	9
<i>SCAQMD Threshold</i>	550	75	100	150	150	55
<i>LST Construction Threshold*</i>	2,331	NA	157	NA	50	11

Operations

<i>lbs/day</i>	<b>CO</b>	<b>VOC</b>	<b>NOx</b>	<b>Sox</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2</b>
Maintenance Trips	4	0	0	0	1	0	632
Visitor Trips	1	0	4	0	0	0	510
<i>Total</i>	6	1	4	0	1	0	1,142
<i>SCAQMD Threshold</i>	550	55	55	150	150	55	NA

\*LST thresholds are for Central LA for a 5 acre site, 50 meters away.

Albion Dairy Construction Inputs and Operations

Albion Dairy Operations								
Stages of Construction	Months	Heavy Equipment	Qty or Trips	Type	ONROAD	hrs/day or miles/roundtrip		
<b>Operations</b>								
		Visitor Trips	23	Gas	LDA-CAT	30		
		Maintenance Trips	4	Diesel	HHDT-DSL	30		
Source: Albion Project Description, 12/08/2010								
		CO (lbs/day)	ROG (lbs/day)	NOX (lbs/day)	SO2 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	CO2 (lbs/day)
		4.19	0.40	0.35	0.01	0.61	0.12	631.86
		1.38	0.36	3.98	0.00	0.31	0.20	510.19
<b>Albion Dairy Construction Inputs</b>								
Table 1: Existing Structures				Grading Numbers				
Structure	(s.f.)	Use	Height	Cut –				
1. Warehouse No. 1	20,732	dairy-product processing	30	Overexcavate & Recompact –		3,214	CY	
2. Warehouse No. 2	15,010	dairy-product processing	32	Fill –		47,146	CY	
3. Office	16,737	office/administrative	10	Export –		15,670	CY	
4. Garage	3,257	maintenance	23	Import –		5,968	CY	
5. Storage	3,015	equipment storage	9			18,028	CY	
6. Metal Frame Structure	972	maintenance	9	Demolition Start – 7/11/11 (125 working days)				
7. Security Booth	25	site security	8	Soil Remediation & Export Start – 1/2/12 (100 days)				
				Rough Grading – Fill & Import Start – 5/21/12 (140 days)				
Truck Trip Calculations				Truck Trip Calculations				
				<u>Remediation</u>		<u>Export</u>	<u>Import</u>	
<u>Demolition</u>	<u>Export</u>			Soil hauling (CY)		5,968	18,028	
Material hauling (ft3)	1,380,644			Truck Capacity (CY)		15	15	
Material hauling (CY)	51,135			Total truck trips		398	1,202	
Truck Capacity (CY)	15			Weeks/month		4	4	
Total truck trips	3,409			Days per week		5	5	
Weeks/month	4			Total days		87	130	
Days per week	5			Trips/day		5.0	10.0	
Total days	125							
Trips/day	28.0							
				Buttonwillow		131	miles one-way	
				Sun Valley		17.5	miles one-way	

Albion Dairy Construction: Peak Daily

Urbemis 2007 Version 9.2.4													
Combined Summer Emissions Reports (Pounds/Day)													
File Name: C:\Documents and Settings\TRAVISKR\Desktop\Albion\Albion Construction 120910.urb924													
Project Name: Albion Dairy													
Project Location: Los Angeles County													
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006													
Off-Road Vehicle Emissions Based on: OFFROAD2007													
Summary Report:													
CONSTRUCTION EMISSION ESTIMATES													
				ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5
2011 TOTALS (lbs/day unmitigated)				4.40	38.28	20.30	0.01	4.78	1.90	6.68	1.00	1.74	2.74
2011 TOTALS (lbs/day mitigated)				4.40	38.28	20.30	0.01	4.78	1.90	6.68	1.00	1.74	2.74
2012 TOTALS (lbs/day unmitigated)				4.09	34.49	18.69	0.01	71.51	1.76	73.27	14.94	1.61	16.55
2012 TOTALS (lbs/day mitigated)				4.09	34.49	18.69	0.01	37.07	1.76	38.83	7.75	1.61	9.36
<b>MAX PHASE</b>				<b>4</b>	<b>38</b>	<b>20</b>	<b>0</b>	<b>37</b>	<b>2</b>	<b>39</b>	<b>8</b>	<b>2</b>	<b>9</b>
Construction Unmitigated Detail Report:													
CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated													
				ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5
Time Slice 7/11/2011-12/30/2011 Active Days: 125				<b>4.40</b>	<b>38.28</b>	<b>20.30</b>	<b>0.01</b>	<b>4.78</b>	<b>1.90</b>	<b>6.68</b>	<b>1.00</b>	<b>1.74</b>	<b>2.74</b>
Demolition 07/11/2011-12/31/2011				4.40	38.28	20.30	0.01	4.78	1.90	6.68	1.00	1.74	2.74
Fugitive Dust				0.00	0.00	0.00	0.00	4.74	0.00	4.74	0.99	0.00	0.99
Demo Off Road Diesel				3.79	31.40	16.04	0.00	0.00	1.61	1.61	0.00	1.48	1.48
Demo On Road Diesel				0.56	6.79	2.74	0.01	0.03	0.28	0.32	0.01	0.26	0.27
Demo Worker Trips				0.05	0.09	1.52	0.00	0.01	0.01	0.01	0.00	0.00	0.01
Time Slice 1/2/2012-5/18/2012 Active Days: 100				4.09	34.46	18.68	0.01	<b>71.51</b>	1.75	<b>73.27</b>	<b>14.94</b>	1.61	<b>16.55</b>
Mass Grading 01/02/2012-05/20/2012				4.09	34.46	18.68	0.01	71.51	1.75	73.27	14.94	1.61	16.55
Mass Grading Dust				0.00	0.00	0.00	0.00	71.47	0.00	71.47	14.93	0.00	14.93
Mass Grading Off Road Die				3.49	27.85	14.62	0.00	0.00	1.48	1.48	0.00	1.36	1.36
Mass Grading On Road Die				0.55	6.53	2.64	0.01	0.04	0.27	0.30	0.01	0.25	0.26
Mass Grading Worker Trips				0.04	0.08	1.42	0.00	0.01	0.01	0.01	0.00	0.00	0.01
Time Slice 5/21/2012-12/3/2012 Active Days: 141				<b>4.09</b>	<b>34.49</b>	<b>18.69</b>	<b>0.01</b>	33.45	<b>1.76</b>	35.20	6.99	<b>1.61</b>	8.61
Mass Grading 05/21/2012-12/03/2012				4.09	34.49	18.69	0.01	33.45	1.76	35.20	6.99	1.61	8.61
Mass Grading Dust				0.00	0.00	0.00	0.00	33.40	0.00	33.40	6.98	0.00	6.98
Mass Grading Off Road Die				3.49	27.85	14.62	0.00	0.00	1.48	1.48	0.00	1.36	1.36
Mass Grading On Road Die				0.55	6.55	2.65	0.01	0.04	0.27	0.30	0.01	0.25	0.26
Mass Grading Worker Trips				0.04	0.08	1.42	0.00	0.01	0.01	0.01	0.00	0.00	0.01
<b>Phase Assumptions</b>													
Phase: Demolition 7/11/2011 - 12/31/2011 - Default Demolition Description													
Building Volume Total (cubic feet): 1379794													
Building Volume Daily (cubic feet): 11291.28													
On Road Truck Travel (VMT): 236.98													
Off-Road Equipment:													
1 Cranes (399 hp) operating at a 0.43 load factor for 8 hours per day													
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day													
2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day													
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day													



Albion Dairy Construction: Annual

Urbemis 2007 Version 9.2.4													
Combined Annual Emissions Reports (Tons/Year)													
File Name: C:\Documents and Settings\TRAVISKR\Desktop\Albion\Albion Construction 120910.urb924													
Project Name: Albion Dairy													
Project Location: Los Angeles County													
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006													
Off-Road Vehicle Emissions Based on: OFFROAD2007													
Summary Report:													
CONSTRUCTION EMISSION ESTIMATES													
			ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (tons/year unmitigated)			0.27	2.39	1.27	0.00	0.30	0.12	0.42	0.06	0.11	0.17	282.69
2011 TOTALS (tons/year mitigated)			0.27	2.39	1.27	0.00	0.30	0.12	0.42	0.06	0.11	0.17	282.69
Percent Reduction			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012 TOTALS (tons/year unmitigated)			0.49	4.15	2.25	0.00	5.93	0.21	6.15	1.24	0.19	1.43	524.43
2012 TOTALS (tons/year mitigated)			0.49	4.15	2.25	0.00	3.08	0.21	3.29	0.64	0.19	0.84	524.43
Percent Reduction			0.00	0.00	0.00	0.00	48.15	0.00	46.49	48.12	0.00	41.59	0.00
Construction Unmitigated Detail Report:													
CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated													
			ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011			0.27	2.39	1.27	0.00	0.30	0.12	0.42	0.06	0.11	0.17	282.69
	Demolition 07/11/2011-12/31/2011		0.27	2.39	1.27	0.00	0.30	0.12	0.42	0.06	0.11	0.17	282.69
	Fugitive Dust		0.00	0.00	0.00	0.00	0.29	0.00	0.29	0.06	0.00	0.06	0.00
	Demo Off Road Diesel		0.24	1.96	1.00	0.00	0.00	0.10	0.10	0.00	0.09	0.09	208.26
	Demo On Road Diesel		0.03	0.42	0.17	0.00	0.00	0.02	0.02	0.00	0.02	0.02	62.78
	Demo Worker Trips		0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.65
2012			0.49	4.15	2.25	0.00	5.93	0.21	6.15	1.24	0.19	1.43	524.43
	Mass Grading 01/02/2012-05/20/2012		0.20	1.72	0.93	0.00	3.58	0.09	3.66	0.75	0.08	0.83	217.47
	Mass Grading Dust		0.00	0.00	0.00	0.00	3.57	0.00	3.57	0.75	0.00	0.75	0.00
	Mass Grading Off Road Diesel		0.17	1.39	0.73	0.00	0.00	0.07	0.07	0.00	0.07	0.07	154.19
	Mass Grading On Road Diesel		0.03	0.33	0.13	0.00	0.00	0.01	0.02	0.00	0.01	0.01	53.96
	Mass Grading Worker Trips		0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.32
	Mass Grading 05/21/2012-12/03/2012		0.29	2.43	1.32	0.00	2.36	0.12	2.48	0.49	0.11	0.61	306.96
	Mass Grading Dust		0.00	0.00	0.00	0.00	2.35	0.00	2.35	0.49	0.00	0.49	0.00
	Mass Grading Off Road Diesel		0.25	1.96	1.03	0.00	0.00	0.10	0.10	0.00	0.10	0.10	217.40
	Mass Grading On Road Diesel		0.04	0.46	0.19	0.00	0.00	0.02	0.02	0.00	0.02	0.02	76.41
	Mass Grading Worker Trips		0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.14
Phase Assumptions													
Phase: Demolition 7/11/2011 - 12/31/2011 - Default Demolition Description													
Building Volume Total (cubic feet): 1379794													
Building Volume Daily (cubic feet): 11291.28													
On Road Truck Travel (VMT): 236.98													
Off-Road Equipment:													
1 Cranes (399 hp) operating at a 0.43 load factor for 8 hours per day													
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day													
2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day													

Albion Dairy Construction: Annual

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day														
Phase: Mass Grading 1/2/2012 - 5/20/2012 - Default Mass Site Grading/Excavation Description							Phase: Mass Grading 5/21/2012 - 12/3/2012 - Default Fine Site Grading/Excavation Description							
Total Acres Disturbed: 10							Total Acres Disturbed: 10							
Maximum Daily Acreage Disturbed: 0.5							Maximum Daily Acreage Disturbed: 0.5							
Fugitive Dust Level of Detail: Low							Fugitive Dust Level of Detail: Low							
Onsite Cut/Fill: 563.3 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day							Onsite Cut/Fill: 240.7 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day							
On Road Truck Travel (VMT): 254.63							On Road Truck Travel (VMT): 255.72							
Off-Road Equipment:							Off-Road Equipment:							
1 Cranes (399 hp) operating at a 0.43 load factor for 8 hours per day							1 Cranes (399 hp) operating at a 0.43 load factor for 8 hours per day							
1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day							1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day							
1 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day							1 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day							
2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day							2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day							
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day							1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day							
<b>Construction Mitigated Detail Report:</b>														
<b>CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated</b>														
			ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2	
2011			0.27	2.39	1.27	0.00	0.30	0.12	0.42	0.06	0.11	0.17	282.69	
	Demolition 07/11/2011-12/31/2011		0.27	2.39	1.27	0.00	0.30	0.12	0.42	0.06	0.11	0.17	282.69	
	Fugitive Dust		0.00	0.00	0.00	0.00	0.29	0.00	0.29	0.06	0.00	0.06	0.00	
	Demo Off Road Diesel		0.24	1.96	1.00	0.00	0.00	0.10	0.10	0.00	0.09	0.09	208.26	
	Demo On Road Diesel		0.03	0.42	0.17	0.00	0.00	0.02	0.02	0.00	0.02	0.02	62.78	
	Demo Worker Trips		0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.65	
2012			0.49	4.15	2.25	0.00	3.08	0.21	3.29	0.64	0.19	0.84	524.43	
	Mass Grading 01/02/2012-05/20/2012		0.20	1.72	0.93	0.00	1.85	0.09	1.94	0.39	0.08	0.47	217.47	
	Mass Grading Dust		0.00	0.00	0.00	0.00	1.85	0.00	1.85	0.39	0.00	0.39	0.00	
	Mass Grading Off Road Diesel		0.17	1.39	0.73	0.00	0.00	0.07	0.07	0.00	0.07	0.07	154.19	
	Mass Grading On Road Diesel		0.03	0.33	0.13	0.00	0.00	0.01	0.02	0.00	0.01	0.01	53.96	
	Mass Grading Worker Trips		0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.32	
	Mass Grading 05/21/2012-12/03/2012		0.29	2.43	1.32	0.00	1.22	0.12	1.35	0.26	0.11	0.37	306.96	
	Mass Grading Dust		0.00	0.00	0.00	0.00	1.22	0.00	1.22	0.25	0.00	0.25	0.00	
	Mass Grading Off Road Diesel		0.25	1.96	1.03	0.00	0.00	0.10	0.10	0.00	0.10	0.10	217.40	
	Mass Grading On Road Diesel		0.04	0.46	0.19	0.00	0.00	0.02	0.02	0.00	0.02	0.02	76.41	
	Mass Grading Worker Trips		0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.14	
<u>Construction Related Mitigation Measures</u>														
The following mitigation measures apply to Phase: Mass Grading 1/2/2012 - 5/20/2012 - Default Mass Site Grading/Excavation Description														
For Soil Stabilizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:														
PM10: 61% PM25: 61%														
The following mitigation measures apply to Phase: Mass Grading 5/21/2012 - 12/3/2012 - Default Fine Site Grading/Excavation Description														
For Soil Stabilizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:														
PM10: 61% PM25: 61%														