APPENDIX D

Air Quality

5/15/2008 04:41:34 PM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Facilities Construction.urb924

Project Name: Construction of maintenance buildings

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2008	0.39	1.04	0.62	0.00	0.01	0.06	0.08	0.00	0.06	0.06	98.40
Fine Grading 05/01/2008-	0.04	0.31	0.16	0.00	0.01	0.02	0.03	0.00	0.01	0.02	25.84
Fine Grading Dust	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Fine Grading Off Road Diesel	0.04	0.31	0.15	0.00	0.00	0.02	0.02	0.00	0.01	0.01	24.72
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
Asphalt 06/02/2008-06/11/2008	0.02	0.10	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	9.22
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.07	0.03	0.00	0.00	0.01	0.01	0.00	0.01	0.01	4.53
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.88
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
Building 06/12/2008-11/21/2008	0.09	0.63	0.40	0.00	0.00	0.04	0.04	0.00	0.04	0.04	63.04
Building Off Road Diesel	0.08	0.61	0.30	0.00	0.00	0.04	0.04	0.00	0.04	0.04	52.26
Building Vendor Trips	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.17
Building Worker Trips	0.00	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.61
Coating 11/22/2008-12/11/2008	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
Architectural Coating	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29

Phase Assumptions

Phase: Fine Grading 5/1/2008 - 6/1/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 0.12

Maximum Daily Acreage Disturbed: 0.12

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Phase: Paving 6/2/2008 - 6/11/2008 - Default Paving Description
Acres to be Paved: 6.5
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 6/12/2008 - 11/21/2008 - Default Building Construction Description
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 11/22/2008 - 12/11/2008 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Trail Construction.urb924

Project Name: Trail Construction

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2008	0.08	0.58	0.30	0.00	1.87	0.03	1.90	0.39	0.03	0.42	60.57
Mass Grading 09/01/2008-	0.08	0.58	0.30	0.00	1.87	0.03	1.90	0.39	0.03	0.42	60.57
Mass Grading Dust	0.00	0.00	0.00	0.00	1.87	0.00	1.87	0.39	0.00	0.39	0.00
Mass Grading Off Road Diesel	0.08	0.50	0.24	0.00	0.00	0.03	0.03	0.00	0.02	0.02	47.90
Mass Grading On Road Diesel	0.00	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.30
Mass Grading Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.37
2009	0.06	0.45	0.23	0.00	1.53	0.02	1.55	0.32	0.02	0.34	49.56
Mass Grading 09/01/2008-	0.06	0.45	0.23	0.00	1.53	0.02	1.55	0.32	0.02	0.34	49.56
Mass Grading Dust	0.00	0.00	0.00	0.00	1.53	0.00	1.53	0.32	0.00	0.32	0.00
Mass Grading Off Road Diesel	0.06	0.39	0.19	0.00	0.00	0.02	0.02	0.00	0.02	0.02	39.19
Mass Grading On Road Diesel	0.00	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.61
Mass Grading Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76

Phase Assumptions

Phase: Mass Grading 9/1/2008 - 4/11/2009 - Trail Excavation

Total Acres Disturbed: 17

Maximum Daily Acreage Disturbed: 4.25

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 52.5

Off-Road Equipment:

1 Excavators (42 hp) operating at a 0.57 load factor for 8 hours per day

1 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

1 Rubber Tired Dozers (84 hp) operating at a 0.59 load factor for 6 hours per day

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Facilities Construction.urb924

Project Name: Construction of maintenance buildings

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 5/1/2008-5/30/2008 Active	3.35	**28.06**	**14.68**	0.00	**1.20**	1.41	**2.62**	**0.25**	1.30	1.55	**2,349.48**
Fine Grading 05/01/2008-	3.35	28.06	14.68	0.00	1.20	1.41	2.62	0.25	1.30	1.55	2,349.48
Fine Grading Dust	0.00	0.00	0.00	0.00	1.20	0.00	1.20	0.25	0.00	0.25	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.06	1.12	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.17
Time Slice 6/2/2008-6/11/2008 Active	5.48	24.61	13.35	**0.01**	0.04	**1.72**	1.76	0.01	**1.58**	**1.60**	2,305.98
Asphalt 06/02/2008-06/11/2008	5.48	24.61	13.35	0.01	0.04	1.72	1.76	0.01	1.58	1.60	2,305.98
Paving Off-Gas	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.78	16.39	8.47	0.00	0.00	1.40	1.40	0.00	1.29	1.29	1,131.92
Paving On Road Diesel	0.50	8.09	2.65	0.01	0.03	0.32	0.35	0.01	0.29	0.30	969.73
Paving Worker Trips	0.07	0.12	2.23	0.00	0.01	0.00	0.01	0.00	0.00	0.01	204.33
Time Slice 6/12/2008-11/21/2008	1.46	10.78	6.85	0.00	0.01	0.68	0.69	0.00	0.62	0.63	1,077.58
Building 06/12/2008-11/21/2008	1.46	10.78	6.85	0.00	0.01	0.68	0.69	0.00	0.62	0.63	1,077.58
Building Off Road Diesel	1.39	10.47	5.09	0.00	0.00	0.67	0.67	0.00	0.61	0.61	893.39
Building Vendor Trips	0.02	0.23	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01	37.07
Building Worker Trips	0.05	0.09	1.61	0.00	0.01	0.00	0.01	0.00	0.00	0.01	147.12
Time Slice 11/24/2008-12/11/2008	**34.72**	0.03	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.38
Coating 11/22/2008-12/11/2008	34.72	0.03	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.38
Architectural Coating	34.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.03	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.38

Phase Assumptions

Phase: Fine Grading 5/1/2008 - 6/1/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 0.12

Maximum Daily Acreage Disturbed: 0.12

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

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1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 6/2/2008 - 6/11/2008 - Default Paving Description
Acres to be Paved: 6.5
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 6/12/2008 - 11/21/2008 - Default Building Construction Description
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 11/22/2008 - 12/11/2008 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Trail Construction.urb924

Project Name: Trail Construction

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 9/1/2008-12/31/2008 Active	**1.89**	**13.18**	**6.81**	**0.00**	**42.51**	**0.66**	**43.17**	**8.88**	**0.61**	**9.49**	1,376.62
Mass Grading 09/01/2008-	1.89	13.18	6.81	0.00	42.51	0.66	43.17	8.88	0.61	9.49	1,376.62
Mass Grading Dust	0.00	0.00	0.00	0.00	42.50	0.00	42.50	8.88	0.00	8.88	0.00
Mass Grading Off Road Diesel	1.75	11.37	5.40	0.00	0.00	0.59	0.59	0.00	0.54	0.54	1,088.62
Mass Grading On Road Diesel	0.11	1.76	0.58	0.00	0.01	0.07	0.08	0.00	0.06	0.07	211.37
Mass Grading Worker Trips	0.03	0.05	0.84	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.63
Time Slice 1/1/2009-4/10/2009 Active	1.75	12.43	6.46	**0.00**	**42.51**	0.62	43.13	**8.88**	0.57	9.45	**1,376.65**
Mass Grading 09/01/2008-	1.75	12.43	6.46	0.00	42.51	0.62	43.13	8.88	0.57	9.45	1,376.65
Mass Grading Dust	0.00	0.00	0.00	0.00	42.50	0.00	42.50	8.88	0.00	8.88	0.00
Mass Grading Off Road Diesel	1.63	10.74	5.16	0.00	0.00	0.56	0.56	0.00	0.51	0.51	1,088.62
Mass Grading On Road Diesel	0.10	1.65	0.53	0.00	0.01	0.06	0.07	0.00	0.06	0.06	211.37
Mass Grading Worker Trips	0.02	0.04	0.77	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.66

Phase Assumptions

Phase: Mass Grading 9/1/2008 - 4/11/2009 - Trail Excavation

Total Acres Disturbed: 17

Maximum Daily Acreage Disturbed: 4.25

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 52.5

Off-Road Equipment:

1 Excavators (42 hp) operating at a 0.57 load factor for 8 hours per day

1 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

1 Rubber Tired Dozers (84 hp) operating at a 0.59 load factor for 6 hours per day

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Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Trail Construction.urb924

Project Name: Trail Construction

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (tons/year unmitigated)	0.08	0.58	0.30	0.00	1.87	0.03	1.90	0.39	0.03	0.42	60.57
2009 TOTALS (tons/year unmitigated)	0.06	0.45	0.23	0.00	1.53	0.02	1.55	0.32	0.02	0.34	49.56

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Facilities Construction.urb924

Project Name: Construction of maintenance buildings

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	34.72	28.06	14.68	0.01	1.20	1.72	2.62	0.25	1.58	1.60	2,349.48

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Weekend Traffic.urb924

Project Name: Hidden Falls Operational - Weekend

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.39	5.05	42.22	0.03	5.93	1.16	3,472.95

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.39	5.05	42.22	0.03	5.93	1.16	3,472.95

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Trail Construction.urb924

Project Name: Trail Construction

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	1.89	13.18	6.81	0.00	42.51	0.66	43.17	8.88	0.61	9.49	1,376.62
2009 TOTALS (lbs/day unmitigated)	1.75	12.43	6.46	0.00	42.51	0.62	43.13	8.88	0.57	9.45	1,376.65

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Urbemis 2007 Version 9.2.4

Summary Report for Winter Emissions (Pounds/Day)

File Name: C:\Documents and Settings\boparaip\Desktop\Work\Hidden Falls Regional Park\Urbemis\Weekend Traffic.urb924

Project Name: Hidden Falls Operational - Weekend

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	4.43	7.23	48.75	0.03	5.93	1.16	3,033.86

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	4.43	7.23	48.75	0.03	5.93	1.16	3,033.86