APPENDIX C. AIR QUALITY TECHNICAL APPENDIX

TABLE C-1
EQUIPMENT EXHAUST EMISSION SOURCE DATA — WELL PADS SITES

								SCAQMD CEQA Handbook Emission Factors[b]					
Equipment Type[a]	**Fuel Type[a]**	**Number Active[a]**	**Rated HP[b]**	**Load Factor[b]**	**Equip Hrs Per Day[a]**	**Equip Days Per Week[a]**	**Equip Total Days[a]**	**CO lb/hp-hr**	**ROG lb/hp-hr**	**NO_x lb/hp-hr**	**SO_x lb/hp-hr**	**PM_{10} lb/hp-hr**	**Source Category**
Tracked Loader	Diesel	2	77	0.465	12	6	36	0.0150	0.0030	0.0220	0.0020	0.0010	Trctr/Lodr/Bckho
Wheeled Loader	Diesel	2	77	0.465	12	6	36	0.0110	0.0020	0.0230	0.0020	0.0015	Rubber Tired Loader
Motor Grader	Diesel	2	156.6	0.575	12	6	36	0.0080	0.0030	0.0210	0.0020	0.0010	Grader

[a] Source of Data: URBEMIS7G model. The total construction area for the well pads sites is approximately 14.89 acre, and 6 pieces of equipment are used in the calculation.
[b] Source of Data: SCAQMD 1993, Tables A9-8-B,C, and D.

TABLE C-2
EQUIPMENT EXHAUST EMISSION SOURCE DATA — SEPARATION FACILITY

								SCAQMD CEQA Handbook Emission Factors[b]					
Equipment Type[a]	**Fuel Type[a]**	**Number Active[a]**	**Rated HP[b]**	**Load Factor[b]**	**Equip Hrs Per Day[a]**	**Equip Days Per Week[a]**	**Equip Total Days[a]**	**CO lb/hp-hr**	**ROG lb/hp-hr**	**NO_x lb/hp-hr**	**SO_x lb/hp-hr**	**PM_{10} lb/hp-hr**	**Source Category**
Tracked Loader	Diesel	1	77	0.465	12	6	52	0.0150	0.0030	0.0220	0.0020	0.0010	Trctr/Lodr/Bckho
Wheeled Loader	Diesel	1	77	0.465	12	6	52	0.0110	0.0020	0.0230	0.0020	0.0015	Rubber Tired Loader
Motor Grader	Diesel	1	156.6	0.575	12	6	52	0.0080	0.0030	0.0210	0.0020	0.0010	Grader

[a] Source of Data: URBEMIS7G model. The total construction area for the separation facility is 2 acres, and 3 pieces of equipment are used in the calculation.
[b] Source of Data: SCAQMD 1993, Tables A9-8-B,C, and D.

TABLE C-3
EQUIPMENT EXHAUST EMISSION SOURCE DATA — COMPRESSOR FACILITY

								SCAQMD CEQA Handbook Emission Factors[b]					
Equipment Type[a]	**Fuel Type[a]**	**Number Active[a]**	**Rated HP[b]**	**Load Factor[b]**	**Equip Hrs Per Day[a]**	**Equip Days Per Week[a]**	**Equip Total Days[a]**	**CO lb/hp-hr**	**ROG lb/hp-hr**	**NO_x lb/hp-hr**	**SO_x lb/hp-hr**	**PM_{10} lb/hp-hr**	**Source Category**
Tracked Loader	Diesel	1	77	0.465	12	6	104	0.0150	0.0030	0.0220	0.0020	0.0010	Trctr/Lodr/Bckho
Wheeled Loader	Diesel	1	77	0.465	12	6	104	0.0110	0.0020	0.0230	0.0020	0.0015	Rubber Tired Loader
Motor Grader	Diesel	1	156.6	0.575	12	6	104	0.0080	0.0030	0.0210	0.0020	0.0010	Grader

[a] Source of Data: URBEMIS7G model. The total construction area for the separation facility is 5 acres, and 3 pieces of equipment are used in the calculation.
[b] Source of Data: SCAQMD 1993, Tables A9-8-B,C, and D.

TABLE C-4
EQUIPMENT EXHAUST EMISSION SOURCE DATA — FIELD PIPELINES

Equipment Type[a]	Fuel Type[a]	Number Active[a]	Rated HP[b]	Load Factor[b]	Equip Hrs Per Day[a]	Equip Days Per Week[a]	Equip Total Days[a]	SCAQMD CEQA Handbook Emission Factors[b] CO lb/hp-hr	ROG lb/hp-hr	NO_x lb/hp-hr	SO_x lb/hp-hr	PM_{10} lb/hp-hr	Source Category
Dozer	Diesel	4	356	0.590	12	6	36	0.0100	0.0020	0.0210	0.0020	0.0005	Rubber Tired Dozer
Small Backhoe	Diesel	5	77	0.465	12	6	36	0.0150	0.0030	0.0220	0.0020	0.0010	Trctr/Lodr/Bckho
Trencher	Diesel	1	60	0.695	12	6	36	0.0200	0.0030	0.0220	0.0020	0.0010	Trencher
Side Boom	Diesel	3	161	0.620	12	6	36	0.0200	0.0030	0.0240	0.0020	0.0015	Other Cnstrctn Equip.
Bending Machine	Diesel	1	161	0.620	12	6	36	0.0200	0.0030	0.0240	0.0020	0.0015	Other Cnstrctn Equip.
Water Truck	Gasoline	3	150	0.480	12	6	36	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Dump Truck	Gasoline	4	150	0.480	12	6	36	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Welding Machine	Gasoline	1	19	0.510	12	6	36	1.4790	0.0540	0.0020	0.0006	0.0003	Welder
Pipe Truck	Gasoline	2	150	0.480	12	6	36	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Fuel Truck	Gasoline	3	150	0.480	12	6	36	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Low Bed Truck	Gasoline	3	150	0.480	12	6	36	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Flat Bed Truck	Gasoline	3	150	0.480	12	6	36	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Pickup Truck	Gasoline	7	150	0.480	12	6	36	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Compressor	Gasoline	5	9	0.560	12	6	36	1.4790	0.0540	0.0020	0.0006	0.0003	Air Compressor
Hydraulic Tamper	Diesel	1	161	0.620	12	6	36	0.0200	0.0030	0.0240	0.0020	0.0015	Other Cnstrctn Equip.
Roller	Gasoline	1	17	0.620	12	6	36	0.8500	0.0490	0.0050	0.0006	0.0003	Roller
Asphalt Truck	Diesel	2	150	0.480	12	6	36	0.0200	0.0030	0.0240	0.0020	0.0015	Other Cnstrctn Equip.
Paver	Diesel	1	91	0.590	12	6	36	0.0070	0.0010	0.0230	0.0020	0.0010	Asphalt Paver
Concrete Truck	Diesel	2	161	0.620	12	6	36	0.0200	0.0030	0.0240	0.0070	0.0015	Other Cnstrctn Equip.
Boring Machine	Diesel	1	209	0.750	12	6	36	0.0200	0.0030	0.0240	0.0020	0.0015	Bore/Drill Rig

[a] Source of Data: PEA Table 2.5.7-1.
[b] Source of Data: SCAQMD 1993, Tables A9-8-B, C, and D.

TABLE C-5
EQUIPMENT EXHAUST EMISSION SOURCE DATA — TRANSMISSION PIPELINE

								SCAQMD CEQA Handbook Emission Factors[b]					
Equipment Type[a]	Fuel Type[a]	Number Active[a]	Rated HP[b]	Load Factor[b]	Equip Hrs Per Day[a]	Equip Days Per Week[a]	Equip Total Days[a]	CO lb/hp-hr	ROG lb/hp-hr	NO_x lb/hp-hr	SO_x lb/hp-hr	PM_{10} lb/hp-hr	Source Category
Dozer	Diesel	4	356	0.590	12	6	104	0.0100	0.0020	0.0210	0.0020	0.0005	Rubber Tired Dozer
Small Backhoe	Diesel	5	77	0.465	12	6	104	0.0150	0.0030	0.0220	0.0020	0.0010	Trctr/Lodr/Bckho
Trencher	Diesel	1	60	0.695	12	6	104	0.0200	0.0030	0.0220	0.0020	0.0010	Trencher
Side Boom	Diesel	3	161	0.620	12	6	104	0.0200	0.0030	0.0240	0.0020	0.0015	Other Cnstrctn Equip.
Bending Machine	Diesel	1	161	0.620	12	6	104	0.0200	0.0030	0.0240	0.0020	0.0015	Other Cnstrctn Equip.
Water Truck	Gasoline	3	150	0.480	12	6	104	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Dump Truck	Gasoline	4	150	0.480	12	6	104	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Welding Machine	Gasoline	1	19	0.510	12	6	104	1.4790	0.0540	0.0020	0.0006	0.0003	Welder
Pipe Truck	Gasoline	2	150	0.480	12	6	104	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Fuel Truck	Gasoline	3	150	0.480	12	6	104	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Low Bed Truck	Gasoline	3	150	0.480	12	6	104	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Flat Bed Truck	Gasoline	3	150	0.480	12	6	104	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Pickup Truck	Gasoline	7	150	0.480	12	6	104	0.5700	0.0250	0.0110	0.0005	0.0015	Other Cnstrctn Equip.
Compressor	Gasoline	5	9	0.560	12	6	104	1.4790	0.0540	0.0020	0.0006	0.0003	Air Compressor
Hydraulic Tamper	Diesel	1	161	0.620	12	6	104	0.0200	0.0030	0.0240	0.0020	0.0015	Other Cnstrctn Equip.
Roller	Gasoline	1	17	0.620	12	6	104	0.8500	0.0490	0.0050	0.0006	0.0003	Roller
Asphalt Truck	Diesel	2	150	0.480	12	6	104	0.0200	0.0030	0.0240	0.0020	0.0015	Other Cnstrctn Equip.
Paver	Diesel	1	91	0.590	12	6	104	0.0070	0.0010	0.0230	0.0020	0.0010	Asphalt Paver
Concrete Truck	Diesel	2	161	0.620	12	6	104	0.0200	0.0030	0.0240	0.0070	0.0015	Other Cnstrctn Equip.
Boring Machine	Diesel	1	209	0.750	12	6	104	0.0200	0.0030	0.0240	0.0020	0.0015	Bore/Drill Rig

[a] Source of Data: PEA Table 2.5.7-1.
[b] Source of Data: SCAQMD 1993, Tables A9-8-B, C, and D.

TABLE C-6
EQUIPMENT EXHAUST EMISSIONS — WELL PADS SITES

	Daily Emissions (lbs/day)					Total Project Emissions (tons)				
Equipment Type	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**
Tracked Loader	12.89	2.58	18.91	1.72	0.86	0.23	0.05	0.34	0.03	0.02
Wheeled Loader	9.45	1.72	19.76	1.72	1.29	0.17	0.03	0.36	0.03	0.02
Motor Grader	17.29	6.48	45.38	4.32	2.16	0.31	0.12	0.82	0.08	0.04
Total Emissions	39.63	10.78	84.05	7.76	4.31	0.71	0.19	1.51	0.14	0.08

TABLE C-7
EQUIPMENT EXHAUST EMISSIONS — SEPARATION FACILITY

	Daily Emissions (lbs/day)					Total Project Emissions (tons)				
Equipment Type	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**
Tracked Loader	6.44	1.29	9.45	0.86	0.43	0.17	0.03	0.25	0.02	0.01
Wheeled Loader	4.73	0.86	9.88	0.86	0.64	0.12	0.02	0.26	0.02	0.02
Motor Grader	8.64	3.24	22.69	2.16	1.08	0.22	0.08	0.59	0.06	0.03
Total Emissions	19.82	5.39	42.03	3.88	2.15	0.52	0.14	1.09	0.10	0.06

TABLE C-8
EQUIPMENT EXHAUST EMISSIONS — COMPRESSOR FACILITY

	Daily Emissions (lbs/day)					Total Project Emissions (tons)				
Equipment Type	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**
Tracked Loader	6.44	1.29	9.45	0.86	0.43	0.34	0.07	0.49	0.04	0.02
Wheeled Loader	4.73	0.86	9.88	0.86	0.64	0.25	0.04	0.51	0.04	0.03
Motor Grader	8.64	3.24	22.69	2.16	1.08	0.45	0.17	1.18	0.11	0.06
Total Emissions	19.82	5.39	42.03	3.88	2.15	1.03	0.28	2.19	0.20	0.11

TABLE C-9
EQUIPMENT EXHAUST EMISSIONS — FIELD PIPELINES

	Daily Emissions (lbs/day)					Total Project Emissions (tons)				
Equipment Type	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**
Dozer	100.82	20.16	211.72	20.16	5.04	1.81	0.36	3.81	0.36	0.09
Small Backhoe	32.22	6.44	47.26	4.30	2.15	0.58	0.12	0.85	0.08	0.04
Trencher	10.01	1.50	11.01	1.00	0.50	0.18	0.03	0.20	0.02	0.01
Side Boom	71.87	10.78	86.24	7.19	5.39	1.29	0.19	1.55	0.13	0.10
Bending Machine	23.96	3.59	28.75	2.40	1.80	0.43	0.06	0.52	0.04	0.03
Water Tank Truck	1477.44	64.80	28.51	1.30	3.89	26.59	1.17	0.51	0.02	0.07
Dump Truck	1969.92	86.40	38.02	1.73	5.18	35.46	1.56	0.68	0.03	0.09
Welding Machine	171.98	6.28	0.23	0.07	0.03	3.10	0.11	0.00	0.00	0.00
Pipe Truck	984.96	43.20	19.01	0.86	2.59	17.73	0.78	0.34	0.02	0.05
Fuel Truck	1477.44	64.80	28.51	1.30	3.89	26.59	1.17	0.51	0.02	0.07
Low Bed Truck	1477.44	64.80	28.51	1.30	3.89	26.59	1.17	0.51	0.02	0.07
Flat Bed Truck	1477.44	64.80	28.51	1.30	3.89	26.59	1.17	0.51	0.02	0.07
Pickup Truck	3447.36	151.20	66.53	3.02	9.07	62.05	2.72	1.20	0.05	0.16
Compressor	447.25	16.33	0.60	0.18	0.08	8.05	0.29	0.01	0.00	0.00
Hydraulic Tamper	23.96	3.59	28.75	2.40	1.80	0.43	0.06	0.52	0.04	0.03
Roller	107.51	6.20	0.63	0.08	0.03	1.94	0.11	0.01	0.00	0.00
Asphalt Truck	34.56	5.18	41.47	3.46	2.59	0.62	0.09	0.75	0.06	0.05
Paver	4.51	0.64	14.82	1.29	0.64	0.08	0.01	0.27	0.02	0.01
Concrete Truck	47.91	7.19	57.50	16.77	3.59	0.86	0.13	1.03	0.30	0.06
Boring Machine	37.62	5.64	45.14	3.76	2.82	0.68	0.10	0.81	0.07	0.05
Total Emissions	13426.20	633.54	811.73	73.84	58.86	241.67	11.40	14.61	1.33	1.03

TABLE C-10
EQUIPMENT EXHAUST EMISSIONS — TRANSMISSION PIPELINES

	Daily Emissions (lbs/day)					Total Project Emissions (tons)				
Equipment Type	**CO**	**ROG**	**NO_x**	**SO_x**	**PM_{10}**	**CO**	**ROG**	**NO_x**	**SO_x**	PM_{10}
Dozer	100.82	20.16	211.72	20.16	5.04	5.24	1.05	11.01	1.05	0.26
Small Backhoe	32.22	6.44	47.26	4.30	2.15	1.68	0.34	2.46	0.22	0.11
Trencher	10.01	1.50	11.01	1.00	0.50	0.52	0.08	0.57	0.05	0.03
Side Boom	71.87	10.78	86.24	7.19	5.39	3.74	0.56	4.48	0.37	0.28
Bending Machine	23.96	3.59	28.75	2.40	1.80	1.25	0.19	1.49	0.12	0.09
Water Tank Truck	1477.44	64.80	28.51	1.30	3.89	76.83	3.37	1.48	0.07	0.20
Dump Truck	1969.92	86.40	38.02	1.73	5.18	102.44	4.49	1.98	0.09	0.27
Welding Machine	171.98	6.28	0.23	0.07	0.03	8.94	0.33	0.01	0.00	0.00
Pipe Truck	984.96	43.20	19.01	0.86	2.59	51.22	2.25	0.99	0.04	0.13
Fuel Truck	1477.44	64.80	28.51	1.30	3.89	76.83	3.37	1.48	0.07	0.20
Low Bed Truck	1477.44	64.80	28.51	1.30	3.89	76.83	3.37	1.48	0.07	0.20
Flat Bed Truck	1477.44	64.80	28.51	1.30	3.89	76.83	3.37	1.48	0.07	0.20
Pickup Truck	3447.36	151.20	66.53	3.02	9.07	179.26	7.86	3.46	0.16	0.47
Compressor	447.25	16.33	0.60	0.18	0.08	23.26	0.85	0.03	0.01	0.00
Hydraulic Tamper	23.96	3.59	28.75	2.40	1.80	1.25	0.19	1.49	0.12	0.09
Roller	107.51	6.20	0.63	0.08	0.03	5.59	0.32	0.03	0.00	0.00
Asphalt Truck	34.56	5.18	41.47	3.46	2.59	1.80	0.27	2.16	0.18	0.13
Paver	4.51	0.64	14.82	1.29	0.64	0.23	0.03	0.77	0.07	0.03
Concrete Truck	47.91	7.19	57.50	16.77	3.59	2.49	0.37	2.99	0.87	0.19
Boring Machine	37.62	5.64	45.14	3.76	2.82	1.96	0.29	2.35	0.20	0.15
Total Emissions	13426.20	633.54	811.73	73.84	58.86	698.16	32.94	42.21	3.84	3.06

TABLE C-11
PM_{10} DUST EMISSIONS FROM SITE GRADING/EXCAVATION/CLEARANCE — ALL PROJECT COMPONENTS

Construction Activities	Emission Factor (lb/month/acre)[a]	Emission Factor (lb/acre/day)[b]	Total Area (acres)[c]	Conc. Days (days)[c]	Max. Daily (acre/day)[d]	PM10 Emissions (lb/day)	PM10 Emissions (tons)
Well Pad Sites							
Well Pad Construction							
One Pad- Site Grading/Clearance	220	10	2.00	6	0.50	5.00	
Six Pads -Site Grading/Clearance [e]							0.09
Access Road Construction							
Site 2 - Site Grading/Clearance [e]	220	10	0.34	6	0.09	0.85	
Site 3 - Site Grading/Clearance [e]	220	10	1.45	6	0.36	3.625	
Site 4 - Site Grading/Clearance [e]	220	10	1.10	6	0.28	2.75	
Subtotal - Access Road Construction						8.625	0.021675
Maximum Daily Emissions (lb/day)							
Total Emission (tons)							0.111675
Separation Facility							
Site Grading/Clearance	220	10	2.00	52	0.50	5	0.13
Compressor/Dehydration Facility							
Site Grading/Clearance	220	10	5.00	104	1.25	12.5	0.65
Field Pipelines							
Excavation	220	10	52.72	36	13.18	131.8	2.3724
Transmission Pipeline							
Excavation	220	10	253.43	104	63.36	633.575	32.9459

[a] Source of Data: URBEMIS7G model.
[b] The number of days per month used in the URBEMIS7G model is 22 days.
[c] Source of Data: PEA. The width of an access road is assumed to be 30 ft.
[d] The maximum daily site excavation/grading/clearance area is assumed to be 25% of the total area.
[e] A well pad/access road will be constructed separately, one week (6 days) for each well pad or access road.

TABLE C-12
ASPHALT PAVING ROG EMISSIONS - WELL PAD SITES

Construction Activities	Emission Factor (lb/acre)[a]	Total Area (acres)[b]	Conc. Days (days)[b]	Avg. Area (acre/day)	ROG Emissions (lb/day)	ROG Emissions (tons)
Well Pad Sites						
Access Road Construction						
Site 2 - Site Grading/Clearance [c]	2.62	0.34	6	0.06	0.15	
Site 3 - Site Grading/Clearance [c]	2.62	1.45	6	0.24	0.63	
Site 4 - Site Grading/Clearance [c]	2.62	1.1	6	0.18	0.48	
Maximum Daily Emissions (lb/day)					0.63	
Total Emission (tons)						7.57

[a] The ROC emission factor is obtained from the URBEMIS7G model.
[b] Source of Data: PEA. Each access road will be separately constructed, one week (6 days) for each access road. The width of an access road is assumed to be 30 ft.
[c] A well pad/access road will be constructed separately, one week (6 days) for each well pad or access road.

TABLE C-13
EMISSION SOURCE DATA FOR OFF-SITE VEHICLES — ALL PROJECT COMPONENTS

Vehicle	Max. Trips Per Day [a]	Max. Construction Days [a]	Total Trips	Round Trip Distance (mile) [b]	EMFAC7G Emission Factors (g/mile) [c] CO	ROG	NOx	PM10 [d]	Source Category
Well Pad Site & Facilities									
Employee Vehicles (Gasoline)	50	104	5200	20	4.82	0.28	0.52	0.02	LDA - CAT
Trucks (Diesel)	10	104	1040	20	10.15	1.74	10.22	0.80	HH TRK
Pipelines									
Employee Vehicles (Gasoline)	180	104	18720	20	4.82	0.28	0.52	0.02	LDA - CAT
Trucks (Gasoline)	5	104	520	20	10.28	0.84	5.18	0.07	MH TRK - CAT
Trucks (Diesel)	2	104	208	20	10.15	1.74	10.22	0.80	HH TRK

[a] Source of Data: PEA. The number of trucks used in the well pad and facility construction is assumed to be 10 trucks using the diesel fuel.
[b] The round trip distance was conservatively assumed to be 20 miles per vehicle, and some internal trips are expected to travel less than 20 miles per day.
[c] Source of Data: The MVEI7G model outputs. The travel speed of vehicles is assumed to be 25 miles per hour.
[d] The emission factor includes PM10 exhaust, tire wear, and break wear emissions.

TABLE C-14
ESTIMATED EMISSIONS FOR OFF-SITE VEHICLES — ALL PROJECT COMPONENTS

	Emissions (lb/day)					Total Emissions (tons)				
Vehicles	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**	**CO**	**ROG**	**NO_x**	**SO_x**	**PM10**
Well Pad Site & Facilities										
Employee Vehicles (Gasoline)	10.63	0.62	1.15	neg.	0.04	0.55	0.03	0.06	neg.	0.00
Trucks (Diesel)	4.48	0.77	4.51	neg.	0.35	0.23	0.04	0.23	neg.	0.02
Pipelines										
Employee Vehicles (Gasoline)	38.25	2.22	4.13	neg.	0.16	1.99	0.12	0.21	neg.	0.01
Trucks (Gasoline)	2.27	0.19	1.14	neg.	0.02	0.12	0.01	0.06	neg.	0.00
Trucks (Diesel)	0.90	0.15	0.90	neg.	0.07	0.05	0.01	0.05	neg.	0.00
Total Emissions	56.52	3.95	11.82	neg.	0.64	2.94	0.21	0.61	neg.	0.03

TABLE C-15
DETAILED SCREENING HEALTH RISK ASSESSMENT MODELING RESULTS

	Formaldehyde	Benzene	Toluene	Xylene
Cancer Unit Risk Factor $(\mu g/m^3)^{-1}$	0.000006	0.000029	Not Applicable	Not Applicable
Chronic RELs	3.6	71.0	200	300
Acute RELs	370.0	Not Applicable	Not Applicable	4400
Maximum Annual Concentration $(\mu g/m^3)$	0.572	0.0021	0.0023	0.0016
Maximum Hourly Concentration $(\mu g/m^3)$	14.28	0.0282	0.0288	0.0105
Cancer Risk (per million)	3.4	0.06	Not Applicable	Not Applicable
Chronic Health Hazard Index	0.16	0.00003	1.15E-5	0.0000053
Acute Health Hazard Index	0.04	Not Applicable	Not Applicable	0.0000024

Notes: Emissions of ethylbenzene, shown in Table 3.5-6, are not shown here because neither unit risk factors nor health hazard indices used to calculated health risk have been established for this pollutant.

The SCREEN3 model was used to estimate emissions. Modeling was conducted for the four compressor engines assuming colocation, a stack height of 0.76 meters, a stack exit velocity of 66.6379 meters per second, a stack exit temperature of 721 degrees Kelvin, ambient air temperature of 293.0 degrees Kelvin, a receptor height of 2.0 meters, and using the rural option. Modeling was conducted for the two glycol regenerators assuming colocation, a stack height of 9.83 meters, a stack exit velocity of 1 meter per second, a stack exit temperature of 810 degrees Kelvin, an ambient air temperature of 293 degrees Kelvin, and using the rural option. Modeling assumes a 100% load factor. The actual load factor is expected to equal 20 percent.

The cancer unit risk factor is defined as the estimated probability of a person contracting cancer as a result of exposure to an ambient concentration of 1 microgram per cubic meter over a 70-year lifetime.

Cancer risk was calculated by multiplying the cancer unit risk factor by the maximum annual concentration. The chronic health hazard index (HHI) was calculated by dividing the maximum annual concentration by the chronic reference exposure level. The acute health hazard index was calculated by dividing the maximum hourly concentration by the acute reference exposure level.