APPENDIX D – CLIMATE AND AIR QUALITY SUPPORTING DATA

D.1 Emissions Summary Tables – Transmission Line and Series Compensation Station Construction

TABLE D-1 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-B AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	127.30	157.3	0.00	1.390
$PM_{2.5}$	12.70	15.7	0.00	0.140
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2,444.80	4,570.1	965.30	39.020
$PM_{2.5}$	246.00	459.9	97.10	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	2,522.80	4,404.4	895.60	38.250
$PM_{2.5}$	253.90	443.2	90.10	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	26.80	54.7	6.60	0.430
NO_x	24.20	49.6	5.90	0.390
PM_{10}	1.60	3.2	0.40	0.030
$PM_{2.5}$	1.60	3.2	0.40	0.030
SO_2	0.10	0.3	0.03	0.002
VOC	1.80	3.8	0.40	0.030
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	25.70	43.8	5.10	0.370
NO_x	23.10	38.9	4.50	0.320
PM_{10}	1.60	2.6	0.30	0.020
$PM_{2.5}$	1.60	2.6	0.30	0.020
SO_2	0.10	0.2	0.02	0.002
VOC	1.80	3.0	0.30	0.020
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.20	2.2	0.40	0.010
NO_x	0.30	3.1	0.50	0.020
PM_{10}	0.01	0.1	0.02	0.001
$PM_{2.5}$	0.01	0.1	0.02	0.001
SO_2	0.04	0.4	0.10	0.003
VOC	0.20	1.8	0.30	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	1.30	2.3	0.40	0.020
NO_x	2.20	3.4	0.50	0.030
PM_{10}	0.10	0.1	0.02	0.001
$PM_{2.5}$	0.10	0.1	0.02	0.001
SO_2	0.30	0.4	0.10	0.004
VOC	1.00	1.9	0.30	0.020

TABLE D-1 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-B AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	2.90	5.8	0.80	0.050
NO_x	5.70	11.5	1.60	0.090
PM_{10}	0.40	0.8	0.10	0.010
$PM_{2.5}$	0.30	0.6	0.10	0.010
SO_2	0.04	0.1	0.01	0.001
VOC	0.90	1.6	0.30	0.010
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	2.90	5.4	0.70	0.040
NO_x	5.80	10.9	1.50	0.090
PM_{10}	0.40	0.7	0.10	0.010
$PM_{2.5}$	0.30	0.6	0.10	0.005
SO_2	0.04	0.1	0.01	0.001
VOC	0.90	1.5	0.30	0.010

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-2 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-C AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	130.20	160.90	0.00	1.380
$PM_{2.5}$	13.00	16.10	0.00	0.140
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2,515.30	4,701.90	993.10	39.020
$PM_{2.5}$	253.10	473.10	99.90	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	2,595.50	4,531.50	921.50	38.250
$PM_{2.5}$	261.20	456.00	92.70	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	27.60	56.30	6.70	0.430
NO_x	24.90	51.00	6.10	0.390
PM_{10}	1.70	3.30	0.40	0.030
$PM_{2.5}$	1.70	3.30	0.40	0.030
SO_2	0.10	0.30	0.03	0.002
VOC	1.90	3.90	0.50	0.030

TABLE D-2 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-C AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	26.40	45.10	5.30	0.370
NO_x	23.80	40.00	4.60	0.320
PM_{10}	1.60	2.70	0.30	0.020
$PM_{2.5}$	1.60	2.70	0.30	0.020
SO_2	0.10	0.20	0.02	0.002
VOC	1.80	3.10	0.30	0.020
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.20	2.20	0.40	0.010
NO_x	0.30	3.20	0.50	0.020
PM_{10}	0.01	0.10	0.02	0.001
$PM_{2.5}$	0.01	0.10	0.02	0.001
SO_2	0.04	0.40	0.10	0.003
VOC	0.20	1.80	0.30	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	1.30	2.40	0.40	0.020
NO_x	2.20	3.50	0.50	0.030
PM_{10}	0.10	0.10	0.02	0.001
$PM_{2.5}$	0.10	0.10	0.02	0.001
SO_2	0.30	0.50	0.10	0.004
VOC	1.00	2.00	0.30	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	2.90	6.00	0.80	0.050
NO_x	5.90	11.80	1.60	0.090
PM_{10}	0.40	0.80	0.10	0.010
$PM_{2.5}$	0.30	0.60	0.10	0.010
SO_2	0.04	0.10	0.01	0.001
VOC	0.90	1.70	0.30	0.010
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	3.00	5.60	0.80	0.040
NO_x	5.90	11.20	1.50	0.090
PM_{10}	0.40	0.70	0.10	0.010
$PM_{2.5}$	0.30	0.60	0.10	0.005
SO_2	0.04	0.06	0.01	0.001
VOC	0.90	1.60	0.30	0.010

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-3 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-D AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	153.60	189.8	0.0	1.370
$PM_{2.5}$	15.40	19.0	0.0	0.140
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2.988.70	5,586.9	1,180.1	39.020
$PM_{2.5}$	300.70	562.2	118.7	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	3,084.10	5,384.4	1,094.9	38.250
$PM_{2.5}$	310.30	541.8	110.2	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	32.80	66.8	8.00	0.430
NO_x	29.60	60.6	7.20	0.390
PM_{10}	2.00	3.9	0.50	0.030
$PM_{2.5}$	2.00	3.9	0.50	0.030
SO_2	0.10	0.3	0.03	0.002
VOC	2.30	4.6	0.50	0.030
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	31.40	53.6	6.30	0.370
NO_x	28.20	47.5	5.50	0.320
PM_{10}	1.90	3.2	0.40	0.020
$PM_{2.5}$	1.90	3.2	0.40	0.020
SO_2	0.10	0.3	0.03	0.002
VOC	2.20	3.6	0.40	0.020
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.30	2.7	0.40	0.010
NO_x	0.40	3.8	0.60	0.020
PM_{10}	0.01	0.1	0.02	0.001
$PM_{2.5}$	0.01	0.1	0.02	0.001
SO_2	0.10	0.5	0.10	0.003
VOC	0.20	2.2	0.40	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	1.50	2.9	0.40	0.020
NO_x	2.60	4.2	0.60	0.030
PM_{10}	0.10	0.1	0.02	0.001
$PM_{2.5}$	0.10	0.1	0.02	0.001
SO_2	0.30	0.5	0.10	0.004
VOC	1.20	2.3	0.40	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	3.50	7.1	1.00	0.050
NO_x	7.00	14.0	1.90	0.090
PM_{10}	0.50	0.9	0.10	0.010
$PM_{2.5}$	0.40	0.8	0.10	0.010
SO_2	0.10	0.1	0.02	0.001
VOC	1.10	2.0	0.30	0.010

TABLE D-3 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-D AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	3.50	6.6	0.90	0.040
NO_x	7.10	13.3	1.80	0.090
PM_{10}	0.50	0.9	0.10	0.010
$PM_{2.5}$	0.40	0.7	0.10	0.005
SO_2	0.10	0.1	0.02	0.001
VOC	1.10	1.9	0.30	0.010

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-4 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-F AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	135.10	166.9	0.00	1.380
$PM_{2.5}$	13.50	16.7	0.00	0.140
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2,616.90	4,891.9	1,033.30	39.020
$PM_{2.5}$	263.30	492.2	104.00	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	2,700.40	4,714.5	958.70	38.250
$PM_{2.5}$	271.70	474.4	96.50	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	28.70	58.5	7.00	0.430
NO_x	25.90	53.1	6.30	0.390
PM_{10}	1.70	3.4	0.40	0.030
$PM_{2.5}$	1.70	3.4	0.40	0.030
SO_2	0.10	0.3	0.03	0.002
VOC	2.00	4.0	0.50	0.030
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	27.50	46.9	5.50	0.370
NO_x	24.70	41.6	4.80	0.320
PM_{10}	1.70	2.8	0.30	0.020
$PM_{2.5}$	1.70	2.8	0.30	0.020
SO_2	0.10	0.2	0.02	0.002
VOC	1.90	3.2	0.40	0.020

TABLE D-4
CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-F AND ROUTE VARIATIONS

Pollutant	Year 1 (tons)	Year 2 (tons)	Year 3 (tons)	Tons Per Mile of Transmission Line
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.20	2.3	0.40	0.010
NO_x	0.30	3.4	0.60	0.020
PM_{10}	0.01	0.1	0.02	0.001
$PM_{2.5}$	0.01	0.1	0.02	0.001
SO_2	0.04	0.4	0.10	0.003
VOC	0.20	1.9	0.30	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	1.30	2.5	0.40	0.020
NO_x	2.30	3.7	0.60	0.030
PM_{10}	0.10	0.1	0.02	0.001
$PM_{2.5}$	0.10	0.1	0.02	0.001
SO_2	0.30	0.5	0.10	0.004
VOC	1.10	2.0	0.30	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	3.10	6.2	0.90	0.050
NO_x	6.10	12.3	1.70	0.090
PM_{10}	0.40	0.8	0.10	0.010
$PM_{2.5}$	0.30	0.7	0.10	0.010
SO_2	0.05	0.1	0.01	0.001
VOC	1.00	1.7	0.30	0.010
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	3.10	5.8	0.80	0.040
NO_x	6.20	11.6	1.60	0.090
PM_{10}	0.40	0.8	0.10	0.010
$PM_{2.5}$	0.30	0.6	0.10	0.005
SO_2	0.05	0.1	0.01	0.001
VOC	1.00	1.6	0.30	0.010

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-5 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-B				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	130.5	260.9	25.10	1.490
$PM_{2.5}$	13.0	26.1	2.50	0.150
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	3,337.8	6,239.4	1,317.90	39.020
$PM_{2.5}$	335.9	627.8	132.60	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	3,444.3	6,013.3	1,222.80	38.250
$PM_{2.5}$	346.6	605.1	123.00	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	68.7	149.5	20.20	0.850
NO_x	29.4	83.4	18.30	0.470
PM_{10}	2.7	6.6	1.20	0.040
$PM_{2.5}$	2.7	6.6	1.20	0.040
SO_2	0.1	0.4	0.10	0.002
VOC	5.4	11.3	1.40	0.060
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	68.4	140.2	20.20	0.820
NO_x	29.1	74.2	18.30	0.440
PM_{10}	2.6	6.1	1.20	0.040
$PM_{2.5}$	2.6	6.1	1.20	0.040
SO_2	0.1	0.3	0.10	0.002
VOC	5.4	10.7	1.40	0.060
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.0	2.5	1.40	0.010
NO_x	0.0	3.6	2.00	0.020
PM_{10}	0.0	0.1	0.10	0.001
$PM_{2.5}$	0.0	0.1	0.10	0.001
SO_2	0.0	0.5	0.30	0.003
VOC	0.0	2.0	1.10	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	0.0	4.1	1.40	0.020
NO_x	0.0	6.5	2.00	0.030
PM_{10}	0.0	0.2	0.10	0.001
$PM_{2.5}$	0.0	0.2	0.10	0.001
SO_2	0.0	0.8	0.30	0.004
VOC	0.0	3.4	1.10	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	2.9	9.2	2.50	0.050
NO_x	6.1	18.7	4.90	0.110
PM_{10}	0.4	1.3	0.30	0.010
$PM_{2.5}$	0.3	1.0	0.30	0.010
SO_2	0.1	0.1	0.04	0.001
VOC	1.1	2.8	0.80	0.02

TABLE D-5 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-B				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	2.9	8.9	2.30	0.050
NO_x	6.1	18.3	4.60	0.100
PM_{10}	0.4	1.2	0.30	0.010
$PM_{2.5}$	0.3	1.0	0.30	0.010
SO_2	0.1	0.1	0.04	0.001
VOC	1.1	2.7	0.70	0.020

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-6 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-C				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	133.1	266.2	25.60	1.470
$PM_{2.5}$	13.3	26.6	2.60	0.150
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	3,463.3	6,474.1	1,367.50	39.020
$PM_{2.5}$	348.5	651.5	137.60	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	3,573.8	6,239.4	1,268.80	38.250
$PM_{2.5}$	359.6	627.8	127.70	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	71.3	155.1	21.00	0.850
NO_x	30.5	86.5	19.00	0.470
PM_{10}	2.8	6.9	1.30	0.040
$PM_{2.5}$	2.8	6.9	1.30	0.040
SO_2	0.1	0.4	0.10	0.002
VOC	5.6	11.8	1.40	0.060
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	70.9	145.4	21.00	0.820
NO_x	30.2	77.0	19.00	0.440
PM_{10}	2.7	6.3	1.30	0.040
$PM_{2.5}$	2.7	6.3	1.30	0.040
SO_2	0.1	0.4	0.10	0.002
VOC	5.6	11.1	1.40	0.060

TABLE D-6 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-C				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.0	2.6	1.40	0.010
NO_x	0.0	3.7	2.10	0.020
PM_{10}	0.0	0.1	0.10	0.001
$PM_{2.5}$	0.0	0.1	0.10	0.001
SO_2	0.0	0.5	0.30	0.003
VOC	0.0	2.1	1.20	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	0.0	4.3	1.40	0.020
NO_x	0.0	6.8	2.10	0.030
PM_{10}	0.0	0.2	0.10	0.001
$PM_{2.5}$	0.0	0.2	0.10	0.001
SO_2	0.0	0.8	0.30	0.004
VOC	0.0	3.5	1.20	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	3.0	9.5	2.60	0.050
NO_x	6.4	19.4	5.00	0.110
PM_{10}	0.4	1.3	0.30	0.010
$PM_{2.5}$	0.4	1.1	0.30	0.010
SO_2	0.1	0.1	0.04	0.001
VOC	1.1	2.9	0.80	0.020
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	3.0	9.2	2.40	0.050
NO_x	6.4	19.0	4.70	0.100
PM_{10}	0.4	1.3	0.30	0.010
$PM_{2.5}$	0.4	1.0	0.30	0.010
SO_2	0.1	0.1	0.04	0.001
VOC	1.1	2.8	0.80	0.020

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-7 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-E				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	129.9	259.8	25.00	1.420
$PM_{2.5}$	13.0	26.0	2.50	0.140
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	3,484.9	6,514.3	1,376.00	39.020
$PM_{2.5}$	350.7	655.5	138.50	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	3,596.0	6.278.2	1,276.60	38.250
$PM_{2.5}$	361.8	631.7	128.50	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	71.7	156.1	21.10	0.850
NO_x	30.7	87.1	19.10	0.470
PM_{10}	2.8	6.9	1.30	0.040
$PM_{2.5}$	2.8	6.9	1.30	0.040
SO_2	0.1	0.4	0.10	0.002
VOC	5.6	11.8	1.40	0.060
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	71.4	146.3	21.10	0.820
NO_x	30.4	77.4	19.10	0.440
PM_{10}	2.7	6.4	1.30	0.040
$PM_{2.5}$	2.7	6.4	1.30	0.040
SO_2	0.1	0.4	0.10	0.002
VOC	5.6	11.1	1.40	0.060
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.0	2.6	1.40	0.010
NO_x	0.0	3.7	2.10	0.020
PM_{10}	0.0	0.1	0.10	0.001
$PM_{2.5}$	0.0	0.1	0.10	0.001
SO_2	0.0	0.5	0.30	0.003
VOC	0.0	2.1	1.20	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	0.0	4.3	1.40	0.020
NO_x	0.0	6.8	2.10	0.030
PM_{10}	0.0	0.2	0.10	0.001
$PM_{2.5}$	0.0	0.2	0.10	0.001
SO_2	0.0	0.8	0.30	0.004
VOC	0.0	3.5	1.20	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	3.0	9.6	2.60	0.050
NO_x	6.4	19.5	5.10	0.110
PM_{10}	0.5	1.3	0.40	0.010
$PM_{2.5}$	0.4	1.1	0.30	0.010
SO_2	0.1	0.1	0.04	0.001
VOC	1.1	2.9	0.80	0.020

TABLE D-7 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-E				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	3.0	9.3	2.40	0.050
NO_x	6.4	19.1	4.80	0.100
PM_{10}	0.5	1.3	0.30	0.010
$PM_{2.5}$	0.4	1.1	0.30	0.010
SO_2	0.1	0.1	0.04	0.001
VOC	1.1	2.9	0.80	0.020

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-8 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-A AND ROUTE VARIATION				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	102.40	204.8	19.70	1.590
$PM_{2.5}$	10.20	20.5	2.00	0.160
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2,462.70	4,603.6	972.40	39.020
$PM_{2.5}$	247.80	463.2	97.80	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	2,541.30	4,436.7	902.20	38.250
$PM_{2.5}$	255.70	446.4	90.80	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	50.70	110.3	14.90	0.850
NO_x	21.70	61.5	13.50	0.470
PM_{10}	2.00	4.9	0.90	0.040
$PM_{2.5}$	2.00	4.9	0.90	0.040
SO_2	0.10	0.3	0.10	0.002
VOC	4.00	8.4	1.00	0.060
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	50.40	103.4	14.90	0.820
NO_x	21.50	54.7	13.50	0.440
PM_{10}	1.90	4.5	0.90	0.040
$PM_{2.5}$	1.90	4.5	0.90	0.040
SO_2	0.10	0.3	0.10	0.002
VOC	4.00	7.9	1.00	0.060

TABLE D-8 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-A AND ROUTE VARIATION				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.00	1.8	1.00	0.010
NO_x	0.00	2.6	1.50	0.020
PM_{10}	0.00	0.1	0.04	0.001
$PM_{2.5}$	0.00	0.1	0.04	0.001
SO_2	0.00	0.3	0.20	0.003
VOC	0.00	1.5	0.80	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	0.00	3.1	1.00	0.020
NO_x	0.00	4.8	1.50	0.030
PM_{10}	0.00	0.1	0.04	0.001
$PM_{2.5}$	0.00	0.1	0.04	0.001
SO_2	0.00	0.6	0.20	0.004
VOC	0.00	2.5	0.80	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	2.10	6.8	1.80	0.050
NO_x	4.50	13.8	3.60	0.110
PM_{10}	0.30	0.9	0.20	0.010
$PM_{2.5}$	0.30	0.8	0.20	0.010
SO_2	0.04	0.1	0.03	0.001
VOC	0.80	2.1	0.60	0.020
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	2.10	6.6	1.70	0.050
NO_x	4.50	13.5	3.40	0.100
PM_{10}	0.30	0.9	0.20	0.010
$PM_{2.5}$	0.30	0.7	0.20	0.010
SO_2	0.04	0.1	0.03	0.001
VOC	0.80	2.0	0.50	0.020

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-9 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-B AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	106.40	212.7	20.50	1.570
$PM_{2.5}$	10.60	21.3	2.00	0.160
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2,582.30	4,827.1	1,019.60	39.020
$PM_{2.5}$	259.80	485.7	102.60	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	2,664.60	4,652.1	946.00	38.250
$PM_{2.5}$	268.10	468.1	95.20	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	53.20	115.6	15.70	0.850
NO_x	22.80	64.5	14.20	0.470
PM_{10}	2.10	5.1	0.90	0.040
$PM_{2.5}$	2.10	5.1	0.90	0.040
SO_2	0.10	0.3	0.10	0.002
VOC	4.20	8.8	1.10	0.060
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	52.90	108.4	15.70	0.820
NO_x	22.50	57.4	14.20	0.440
PM_{10}	2.00	4.7	0.90	0.040
$PM_{2.5}$	2.00	4.7	0.90	0.040
SO_2	0.10	0.3	0.10	0.002
VOC	4.20	8.2	1.10	0.060
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.00	1.9	1.10	0.010
NO_x	0.00	2.8	1.50	0.020
PM_{10}	0.00	0.1	0.04	0.001
$PM_{2.5}$	0.00	0.1	0.04	0.001
SO_2	0.00	0.4	0.20	0.003
VOC	0.00	1.5	0.90	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	0.00	3.2	1.10	0.020
NO_x	0.00	5.1	1.50	0.030
PM_{10}	0.00	0.1	0.04	0.001
$PM_{2.5}$	0.00	0.1	0.04	0.001
SO_2	0.00	0.6	0.20	0.004
VOC	0.00	2.6	0.90	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	2.20	7.1	1.90	0.050
NO_x	4.70	14.5	3.80	0.110
PM_{10}	0.30	1.0	0.30	0.010
$PM_{2.5}$	0.30	0.8	0.20	0.010
SO_2	0.05	0.1	0.03	0.001
VOC	0.80	2.2	0.60	0.020

TABLE D-9 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-B AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	2.20	6.9	1.80	0.050
NO_x	4.70	14.1	3.50	0.100
PM_{10}	0.30	1.0	0.20	0.010
$PM_{2.5}$	0.30	0.8	0.20	0.010
SO_2	0.05	0.1	0.03	0.001
VOC	0.80	2.1	0.60	0.020

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-10 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-C AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	108.30	216.7	20.80	1.650
$PM_{2.5}$	10.80	21.7	2.10	0.160
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2,508.10	4,688.5	990.30	39.020
$PM_{2.5}$	252.40	471.8	99.70	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	2,588.10	4,518.6	918.80	38.250
$PM_{2.5}$	260.40	454.7	92.50	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	51.60	112.3	15.20	0.850
NO_x	22.10	62.7	13.80	0.470
PM_{10}	2.00	5.0	0.90	0.040
$PM_{2.5}$	2.00	5.0	0.90	0.040
SO_2	0.10	0.3	0.10	0.002
VOC	4.10	8.5	1.00	0.060
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	51.40	105.3	15.20	0.820
NO_x	21.90	55.7	13.80	0.440
PM_{10}	2.00	4.6	0.90	0.040
$PM_{2.5}$	2.00	4.6	0.90	0.040
SO_2	0.10	0.3	0.10	0.002
VOC	4.00	8.0	1.00	0.060

TABLE D-10 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-C AND ROUTE VARIATIONS				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.00	1.9	1.00	0.010
NO_x	0.00	2.7	1.50	0.020
PM_{10}	0.00	0.1	0.04	0.001
$PM_{2.5}$	0.00	0.1	0.04	0.001
SO_2	0.00	0.3	0.20	0.003
VOC	0.00	1.5	0.80	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	0.00	3.1	1.00	0.020
NO_x	0.00	4.9	1.50	0.030
PM_{10}	0.00	0.1	0.04	0.001
$PM_{2.5}$	0.00	0.1	0.04	0.001
SO_2	0.00	0.6	0.20	0.004
VOC	0.00	2.5	0.80	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	2.20	6.9	1.90	0.050
NO_x	4.60	14.1	3.70	0.110
PM_{10}	0.30	1.0	0.30	0.010
$PM_{2.5}$	0.30	0.8	0.20	0.010
SO_2	0.04	0.1	0.03	0.001
VOC	0.80	2.1	0.60	0.020
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	2.20	6.7	1.70	0.050
NO_x	4.60	13.7	3.40	0.100
PM_{10}	0.30	0.9	0.20	0.010
$PM_{2.5}$	0.30	0.8	0.20	0.010
SO_2	0.04	0.1	0.03	0.001
VOC	0.80	2.1	0.60	0.020

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-11 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-H				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	99.20	198.4	19.10	1.580
$PM_{2.5}$	9.90	19.8	1.90	0.160
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2,398.20	4,482.9	946.90	39.020
$PM_{2.5}$	241.30	451.1	95.30	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	2,474.70	4,320.4	878.50	38.250
$PM_{2.5}$	249.00	434.7	88.40	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	49.40	107.4	14.50	0.850
NO_x	21.10	59.9	13.20	0.470
PM_{10}	1.90	4.8	0.90	0.040
$PM_{2.5}$	1.90	4.8	0.90	0.040
SO_2	0.10	0.3	0.10	0.002
VOC	3.90	8.1	1.00	0.060
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	49.10	100.7	14.50	0.820
NO_x	20.90	53.3	13.20	0.440
PM_{10}	1.90	4.4	0.90	0.040
$PM_{2.5}$	1.90	4.4	0.90	0.040
SO_2	0.10	0.2	0.10	0.002
VOC	3.90	7.7	1.00	0.060
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.00	1.8	1.00	0.010
NO_x	0.00	2.6	1.40	0.020
PM_{10}	0.00	0.1	0.04	0.001
$PM_{2.5}$	0.00	0.1	0.04	0.001
SO_2	0.00	0.3	0.20	0.003
VOC	0.00	1.4	0.80	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	0.00	3.0	1.00	0.020
NO_x	0.00	4.7	1.40	0.030
PM_{10}	0.00	0.1	0.04	0.001
$PM_{2.5}$	0.00	0.1	0.04	0.001
SO_2	0.00	0.6	0.20	0.004
VOC	0.00	2.4	0.80	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	2.10	6.6	1.80	0.050
NO_x	4.40	13.4	3.50	0.110
PM_{10}	0.30	0.9	0.20	0.010
$PM_{2.5}$	0.20	0.7	0.20	0.010
SO_2	0.04	0.1	0.03	0.001
VOC	0.80	2.0	0.60	0.020

TABLE D-11 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-H				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	2.10	6.4	1.70	0.050
NO_x	4.40	13.1	3.30	0.100
PM_{10}	0.30	0.9	0.20	0.010
$PM_{2.5}$	0.20	0.7	0.20	0.010
SO_2	0.04	0.1	0.03	0.001
VOC	0.80	2.0	0.50	0.020

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-12 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-I				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Fugitive Dust from Earthmoving and Grading Activities				
PM_{10}	117.8	235.6	22.70	1.570
$PM_{2.5}$	11.8	23.6	2.30	0.160
Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]				
PM_{10}	2,871.6	5,367.9	1,133.80	39.020
$PM_{2.5}$	289.0	540.1	114.10	3.930
Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]				
PM_{10}	2,963.2	5,173.3	1,052.00	38.250
$PM_{2.5}$	298.2	520.6	105.90	3.850
Nonroad Engine Emissions – Conventional Steel Erection Option[1]				
CO	59.1	128.6	17.40	0.850
NO_x	25.3	71.7	15.80	0.470
PM_{10}	2.3	5.7	1.00	0.040
$PM_{2.5}$	2.3	5.7	1.00	0.040
SO_2	0.1	0.3	0.10	0.002
VOC	4.6	9.8	1.20	0.060
Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]				
CO	58.8	120.6	17.40	0.820
NO_x	25.0	63.8	15.80	0.440
PM_{10}	2.3	5.2	1.00	0.040
$PM_{2.5}$	2.3	5.2	1.00	0.040
SO_2	0.1	0.3	0.10	0.002
VOC	4.6	9.2	1.20	0.060

TABLE D-12 CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-I				
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Helicopter Emissions – Conventional Steel Erection Option[1]				
CO	0.0	2.6	1.20	0.010
NO_x	0.0	3.7	1.70	0.020
PM_{10}	0.0	0.1	0.05	0.001
$PM_{2.5}$	0.0	0.1	0.05	0.001
SO_2	0.0	0.5	0.20	0.003
VOC	0.0	2.1	1.00	0.010
Helicopter Emissions – Steel Erection Using Helicopters Option[1]				
CO	0.0	3.6	1.20	0.020
NO_x	0.0	5.6	1.70	0.030
PM_{10}	0.0	0.2	0.05	0.001
$PM_{2.5}$	0.0	0.2	0.05	0.001
SO_2	0.0	0.7	0.20	0.004
VOC	0.0	2.9	1.00	0.020
Traffic Emissions – Conventional Steel Erection Option[1]				
CO	2.5	7.9	2.10	0.050
NO_x	5.3	16.1	4.20	0.110
PM_{10}	0.4	1.1	0.30	0.010
$PM_{2.5}$	0.3	0.9	0.20	0.010
SO_2	0.1	0.1	0.03	0.001
VOC	0.9	2.4	0.70	0.020
Traffic Emissions – Steel Erection Using Helicopters Option[1]				
CO	2.5	7.7	2.00	0.050
NO_x	5.3	15.7	3.90	0.100
PM_{10}	0.4	1.1	0.30	0.010
$PM_{2.5}$	0.3	0.9	0.20	0.010
SO_2	0.1	0.1	0.03	0.001
VOC	0.9	2.4	0.60	0.020

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-13 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-B AND ROUTE VARIATIONS				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	4,695.6	9,728.8	1,151.4	76.17
Helicopter	131.2	1,279.6	213.3	7.94
Traffic	2,215.6	4,119.4	637.1	34.09
Steel Erection Using Helicopters Option				
Nonroad Engine	4,480.1	7,622.1	872.3	63.45
Helicopter	816.3	1,390.1	213.3	11.83
Traffic	2,245.2	3,913.4	607.0	33.08
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-14 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-C AND ROUTE VARIATIONS				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	4,831.1	10,009.5	1,184.6	76.17
Helicopter	135.0	1,316.5	219.4	7.94
Traffic	2,279.5	4,238.2	655.5	34.09
Steel Erection Using Helicopters Option				
Nonroad Engine	4,609.3	7,842.0	897.5	63.45
Helicopter	839.8	1,430.2	219.4	11.83
Traffic	2,310.0	4,026.3	624.5	33.08
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-15 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-D AND ROUTE VARIATION				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	5,740.4	11,893.4	1,407.5	76.17
Helicopter	160.4	1,564.3	260.7	7.94
Traffic	2,708.6	5,035.9	778.9	34.09
Steel Erection Using Helicopters Option				
Nonroad Engine	5,476.9	9,317.9	1,066.4	63.45
Helicopter	997.9	1,699.3	260.7	11.83
Traffic	2,744.8	4,784.2	742.1	33.08
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-16 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-F AND ROUTE VARIATIONS				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	5,026.3	10,413.9	1,232.4	76.17
Helicopter	140.5	1,369.7	228.3	7.94
Traffic	2,371.6	4,409.4	682.0	34.09
Steel Erection Using Helicopters Option				
Nonroad Engine	4,795.6	8,158.8	933.8	63.45
Helicopter	873.8	1,487.9	228.3	11.83
Traffic	2,403.3	4,189.0	649.8	33.08
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-17 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-B				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	5,691.4	16,759.3	3,572.8	93.21
Helicopter	0.0	1,451.5	808.9	8.10
Traffic	2,607.7	7,126.0	1,913.2	41.72
Steel Erection Using Helicopters Option				
Nonroad Engine	5,627.4	14,562.0	2,666.7	81.86
Helicopter	0.0	2,558.8	808.9	12.06
Traffic	2,607.7	6,985.3	1,815.4	40.86
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-18 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-C				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	5,905.4	17,389.6	3,707.2	93.21
Helicopter	0.0	1,506.1	839.3	8.10
Traffic	2,705.8	7,394.0	1,985.2	41.72
Steel Erection Using Helicopters Option				
Nonroad Engine	5,839.0	15,109.7	2,767.0	81.86
Helicopter	0.0	2,655.0	839.3	12.06
Traffic	2,705.8	7,248.0	1,883.7	40.86
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-19 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-E				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	5,942.1	17,497.7	3,730.2	93.21
Helicopter	0.0	1,515.5	844.5	8.10
Traffic	2,722.6	7,439.9	1,997.5	41.72
Steel Erection Using Helicopters Option				
Nonroad Engine	5,875.3	15,203.5	2,784.2	81.86
Helicopter	0.0	2,671.5	844.5	12.06
Traffic	2,722.6	7,293.1	1,895.4	40.86
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-20 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-A AND ROUTE VARIATION				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons/Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	4,199.2	12,365.4	2,636.1	93.21
Helicopter	0.0	1,071.0	596.8	8.10
Traffic	1,924.0	5,257.7	1,411.6	41.72
Steel Erection Using Helicopters Option				
Nonroad Engine	4,152.0	10,744.2	1,967.5	81.86
Helicopter	0.0	1,887.9	596.8	12.06
Traffic	1,924.0	5,153.9	1,339.5	40.86
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-21 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-B AND ROUTE VARIATIONS				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	4,403.1	12,965.7	2,764.1	93.21
Helicopter	0.0	1,123.0	625.8	8.10
Traffic	2,017.4	5,512.9	1,480.1	41.72
Steel Erection Using Helicopters Option				
Nonroad Engine	4,353.6	11,265.7	2,063.0	81.86
Helicopter	0.0	1,979.6	625.8	12.06
Traffic	2,017.4	5,404.1	1,404.5	40.86
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-22 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-C AND ROUTE VARIATIONS				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	4,276.7	12,593.5	2,684.7	93.21
Helicopter	0.0	1,090.7	607.8	8.10
Traffic	1,959.5	5,354.7	1,437.6	41.72
Steel Erection Using Helicopters Option				
Nonroad Engine	4,228.6	10,942.4	2,003.8	81.86
Helicopter	0.0	1,922.8	607.8	12.06
Traffic	1,959.5	5,249.0	1,364.2	40.86
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-23 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-H				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	4,089.2	12,041.3	2,567.0	93.21
Helicopter	0.0	1,042.9	581.2	8.10
Traffic	1,873.6	5,119.9	1,374.6	41.72
Steel Erection Using Helicopters Option				
Nonroad Engine	4,043.2	10,462.5	1,916.0	81.86
Helicopter	0.0	1,838.5	581.2	12.06
Traffic	1,873.6	5,018.8	1,304.3	40.86
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-24 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT) FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-I				
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**	**Tons Per Mile of Transmission Line**
Conventional Steel Erection Option				
Nonroad Engine	4,896.4	14,418.3	3,073.7	93.21
Helicopter	0.0	1,518.1	695.9	8.10
Traffic	2,243.5	6,130.6	1,646.0	41.72
Steel Erection Using Helicopters Option				
Nonroad Engine	4,841.3	12,527.9	2,294.2	81.86
Helicopter	0.0	2,201.4	695.9	12.06
Traffic	2,243.5	6,009.6	1,561.8	40.86
NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.				

TABLE D-25 CRITERIA POLLUTANT EMISSIONS FOR SERIES COMPENSATION STATIONS (EACH SERIES COMPENSATION STATION)			
Pollutant	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**
Fugitive Dust from Earthmoving and Grading Activities			
PM_{10}	1.900	4.000	0.0000
$PM_{2.5}$	0.200	0.400	0.0000
Paved and Unpaved Road Dust			
PM_{10}	1.400	4.300	3.4000
$PM_{2.5}$	0.100	0.400	0.4000
Nonroad Engine Emissions			
CO	5.600	9.900	6.6000
NO_x	5.000	5.400	6.3000
PM_{10}	0.300	0.40	0.4000
$PM_{2.5}$	0.300	0.40	0.4000
SO_2	0.010	0.010	0.0100
VOC	0.400	0.900	0.5000
Traffic Emissions			
CO	0.030	0.040	0.0300
NO_x	0.070	0.090	0.0600
PM_{10}	0.010	0.010	0.0040
$PM_{2.5}$	0.004	0.010	0.0030
SO_2	0.001	0.001	0.0004
VOC	0.010	0.020	0.0100

NOTES:
CO = Carbon monoxide
NO_x = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide
VOC = Volatile organic compounds

TABLE D-26 GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALNT) FOR SERIES COMPENSATION STATIONS (EACH SERIES COMPENSATION STATION)			
Area of Emissions	**Year 1 (tons)**	**Year 2 (tons)**	**Year 3 (tons)**
Nonroad Engine	948.8	887.7	1,179.0
Traffic	35.4	53.6	24.5

D.2 Modeling Results Summary Tables – Transmission Line and Series Compensation Station Construction

TABLE D-27
MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION
FOR ALTERNATIVES WYCO-B, WYCO-C, WYCO-D, AND WYCO-F AND ROUTE VARIATIONS

Pollutant	Averaging Period	Maximum AERSCREEN Concentration (µg/m^3)	Background Concentration (µg/m^3)	Project Impact plus Background (µg/m^3)	Limiting Standard (µg/m^3)	Comments
NO_2	1-hour	1,307.2	55.7	1,362.9	188.7	May exceed the numerical value of the standards
PM_{10}	24-hour	62.5	58.4	120.9	150.0	Below all ambient air quality standards
$PM_{2.5}$	24-hour	8.2	13.2	21.4	35.0	Below all ambient air quality standards
CO	1-hour	5,758.0	1,379.3	7,137.3	40,000.0	Below all ambient air quality standards
	8-hour	5,758.0	1,092.0	6,850.0	10,000.0	Below all ambient air quality standards
SO_2	1-hour	3.2	13.2	16.3	196.4	Below all ambient air quality standards
	3-hour	3.2	10.3	13.4	700.0	Below all ambient air quality standards

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011, memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard*
CO = Carbon monoxide
NO_2 = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide

TABLE D-28
MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION
FOR ALTERNATIVES COUT BAX-B, COUT BAX-C, AND COUT BAX-E

Pollutant	Averaging Period	Maximum AERSCREEN Concentration (µg/m^3)	Background Concentration (µg/m^3)	Project Impact plus Background (µg/m^3)	Limiting Standard (µg/m^3)	Comments
NO_2	1-hour	1,307.2	73.7	1,380.9	188.7	May exceed the numerical value of the standards
PM_{10}	24-hour	62.5	78.8	141.4	150.0	Below all ambient air quality standards
$PM_{2.5}$	24-hour	8.2	19.9	28.1	35.0	Below all ambient air quality standards
CO	1-hour	5,758.0	1,954.0	7,712.0	40,000.0	Below all ambient air quality standards
	8-hour	5,758.0	1,264.4	7,022.4	10,000.0	Below all ambient air quality standards

TABLE D-28
MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVES COUT BAX-B, COUT BAX-C, AND COUT BAX-E

Pollutant	Averaging Period	Maximum AERSCREEN Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Project Impact plus Background ($\mu g/m^3$)	Limiting Standard ($\mu g/m^3$)	Comments
SO_2	1-hour	3.2	7.9	11.1	196.4	Below all ambient air quality standards
	3-hour	3.2	7.9	11.1	700.0	Below all ambient air quality standards

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011, memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard*
CO = Carbon monoxide
NO_2 = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide

TABLE D-29
MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-A AND ROUTE VARIATION AND ALTERNATIVE COUT-B AND ROUTE VARIATIONS (EXCEPT UTAH COUNTY PM_{10})

Pollutant	Averaging Period	Maximum AERSCREEN Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Project Impact plus Background ($\mu g/m^3$)	Limiting Standard ($\mu g/m^3$)	Comments
NO_2	1-hour	1,307.2	93.0	1,400.2	188.7	May exceed the numerical value of the standards
PM_{10}	24-hour	62.5	78.8	141.4	150.0	Below all ambient air quality standards
$PM_{2.5}$	24-hour	8.2	19.8	28.0	35.0	Below all ambient air quality standards
CO	1-hour	5,758.0	4,367.8	10,125.8	40,000.0	Below all ambient air quality standards
	8-hour	5,758.0	1,724.1	7,482.1	10,000.0	Below all ambient air quality standards
SO_2	1-hour	3.2	7.9	11.1	196.4	Below all ambient air quality standards
	3-hour	3.2	7.9	11.1	700.0	Below all ambient air quality standards

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011, memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard*
CO = Carbon monoxide
NO_2 = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide

TABLE D-30
MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-A AND ROUTE VARIATION (UTAH COUNTY), ALTERNATIVE COUT-B AND ROUTE VARIATIONS (UTAH COUNTY), AND ALTERNATIVE COUT-C AND ROUTE VARIATIONS (UTAH COUNTY)

Pollutant	Averaging Period	Maximum AERSCREEN Concentration (µg/m^3)	Background Concentration (µg/m^3)	Project Impact plus Background (µg/m^3)	Limiting Standard (µg/m^3)	Comments
PM_{10}	24-hour	62.5	49.5	112.0	150.0	Below all ambient air quality standards

NOTE: PM_{10} = Particulate matter less than 10 micrometers

TABLE D-31
MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-C AND ROUTE VARIATIONS AND ALTERNATIVES COUT-H AND COUT-I (EXCEPT UTAH COUNTY PM_{10})

Pollutant	Averaging Period	Maximum AERSCREEN Concentration (µg/m^3)	Background Concentration (µg/m^3)	Project Impact plus Background (µg/m^3)	Limiting Standard (µg/m^3)	Comments
NO_2	1-hour	1,307.2	67.0	1,374.2	188.7	May exceed the numerical value of the standards
PM_{10}	24-hour	62.5	78.8	141.4	150.0	Below all ambient air quality standards
$PM_{2.5}$	24-hour	8.2	14.5	22.7	35.0	Below all ambient air quality standards
CO	1-hour	5,758.0	4,367.8	10,125.8	40,000.0	Below all ambient air quality standards
	8-hour	5,758.0	1,724.1	7,482.1	10,000.0	Below all ambient air quality standards
SO_2	1-hour	3.2	7.9	11.1	196.4	Below all ambient air quality standards
	3-hour	3.2	7.9	11.1	700.0	Below all ambient air quality standards

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011 memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard*
CO = Carbon monoxide
NO_2 = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide

TABLE D-32 MODELING RESULTS – SERIES COMPENSATION STATION CONSTRUCTION EACH SERIES COMPENSATION STATION						
Pollutant	**Averaging Period**	**Maximum AERSCREEN Concentration ($\mu g/m^3$)**	**Background Concentration ($\mu g/m^3$)**	**Project Impact plus Background ($\mu g/m^3$)**	**Limiting Standard ($\mu g/m^3$)**	**Comments**
NO_2	1-hour	4,950.4	67.0	5,017.4	188.7	May exceed the numerical value of the standards
PM_{10}	24-hour	20.5	78.8	99.3	150.0	Below all ambient air quality standards
$PM_{2.5}$	24-hour	7.1	14.5	21.6	35.0	Below all ambient air quality standards
CO	1-hour	4,524.0	4,367.8	8,891.8	40,000.0	Below all ambient air quality standards
	8-hour	4,524.0	1,724.1	6,248.1	10,000.0	Below all ambient air quality standards
SO_2	1-hour	11.4	7.9	19.3	196.4	Below all ambient air quality standards
	3-hour	11.4	7.9	19.3	700.0 (Colorado) 1,300 (Utah)	Below all ambient air quality standards

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011, memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard*
CO = Carbon monoxide
NO_2 = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
PM_{10} = Particulate matter less than 10 micrometers
SO_2 = Sulfur dioxide