Appendix F

Record of Non-Applicability (RONA) and Air Quality Data

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RECORD OF NON-APPLICABILITY (RONA) FOR THE PROPOSED BAKER PUMPING STATION IMPROVEMENTS DALLAS, TEXAS

CLEAN AIR ACT CONFORMITY METROPOLITAN DALLAS FORT WORTH AIR QUALITY CONTROL REGION (AQCR)

INTRODUCTION

The U.S. Environmental Protection Agency (USEPA) published *Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule* in the 30 November 1993, Federal Register (40 Code of Federal Regulations [CFR] Parts 6, 51, and 93). This publication provides implementing guidance to document Clean Air Act Conformity Determination requirements.

Federal regulations state that no department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license to permit, or approve any activity that does not conform to an applicable implementation plan. It is the responsibility of the Federal agency to determine whether a Federal action conforms to the applicable implementation plan, before the action is taken (40 CFR Part 1 51.850[a]).

The general conformity rule applies to federal actions proposed within areas which are designated as either nonattainment or maintenance areas for a National Ambient Air Quality Standards (NAAQS) for any of the criteria pollutants. Former nonattainment areas that have attained a NAAQS are designated as maintenance areas. Emissions of pollutants for which an area is in attainment are exempt from conformity analyses.

The Proposed Action would occur within the Metropolitan Dallas Fort Worth AQCR, which is currently in "serious" nonattainment of the 8-hour ozone (O_3) NAAQS, and attains the NAAQS for all other criteria pollutants. Therefore, only project emissions of O_3 precursors (volatile organic compounds [VOCs] and oxides of nitrogen [NO_x]) are analyzed for conformity rule applicability.

The annual *de minimis* levels for this region are 50 tons of VOC and NO_x, as listed in Table F-1. Federal actions may be exempt from conformity determinations if they do not exceed designated *de minimis* levels (40 CFR Part 1, Section 51.853[b]).

Table F-1. Conformity *de minimis* Levels for Criteria Pollutants in the Metropolitan Dallas Fort Worth AQCR

Criteria Pollutant	*De minimis* Level (tons/year)
Volatile Organic Compounds (VOC)	50
Oxides of Nitrogen (NO_x)	50

PROPOSED ACTION

Action Proponent: USACE

Location: City of Dallas, Texas

Proposed Action Name: Proposed Baker Pumping Station Improvements, Dallas, Texas.

Proposed Action Summary: The Proposed Action would involve constructing a new 13,000 square foot pump station consisting of four, 175,000-gallons per minute (gpm) pumps and one, 6,000 gpm low-flow pump. The Proposed Action also includes rehabilitating the New Baker Pumping Station, decommissioning the Old Baker Pumping Station, and extending the New Baker Pumping Station outfall approximately 300 feet into the Dallas Floodway.

Air Emissions Summary: It was assumed that construction would take 2 years (24 months) and would begin in May 2012 and end in May 2014. However, for purposes of establishing compliance with CAA conformity applicability requirements, emissions are shown per calendar year 2012-2014. Emissions in 2012 were assumed to occur over 7 months. Emissions in 2013 were assumed to occur over 12 months. Emissions in 2014 were assumed to occur over 5 months. Implementation of the Estimated construction emissions due to implementation of the Proposed Action are shown in Table F-2. Based on the air quality analysis for the Proposed Action, the maximum estimated emissions would be below conformity *de minimis* levels and would not be significant.

Table F-2. Estimated Emissions Resulting from Implementation of the Proposed Action

Project Emissions Tons Per Year	Pollutant					
	VOCs[1]	NO_x[1]	CO[2]	SO_x[2]	PM_{10}[2]	$PM_{2.5}$[2]
2012 Emissions (May-December)	0.54	4.07	2.01	0.00	1.62	1.78
2013 Emissions (January-December)	0.93	6.99	3.46	0.01	2.82	0.47
2014 Emissions (January-May)	1.39	2.87	1.39	0.00	0.97	0.24
de minimis threshold	50	50	100	100	100	100
Exceeds *de minimis* threshold?	No	No	No	No	No	No

Notes: [1] The Metropolitan Dallas Fort Worth AQCR is in "serious" nonattainment for the federal O_3 standard; VOCs and NO_x are precursors to the formation of O_3; and is in attainment of all other federal standards.
[2] *De minimis* thresholds are not applicable to NAAQS attainment areas; however, estimated average annual emissions have been compared with moderate nonattainment *de minimis* thresholds for planning purposes only.
Sources: TCEQ 2011; USEPA 2011a.

Affected Air Basin: Metropolitan Dallas Fort Worth

Date RONA Prepared: 09 January 2012

RONA Prepared By: USACE with direct support from TEC Inc.

EMISSIONS EVALUATION AND CONCLUSION

Emissions associated with the Proposed Action were calculated using data presented in Chapter 2 of the Environmental Assessment (EA), general air quality assumptions, and standard emission factors. The USACE concludes that *de minimis* thresholds for applicable criteria pollutants would not be exceeded as a result of implementation of the Proposed Action. The emissions data supporting that conclusion is shown in Table F-2, which is a summary of the calculations, methodology, and data included in Appendix F of the Baker Pumping Station EA. Therefore, the USACE concludes that further formal Conformity Determination procedures are not required, resulting in this RONA.

Emissions Summary

Construction Emmissions Summary

Baker Pump Station	Emissions (tons)					
	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$
2012 Emissions (May-December)	2.01	0.54	4.07	0.00	1.62	1.78
2013 Emissions (January-December)	3.46	0.93	6.99	0.01	2.82	0.47
2014 Emissions (January-May)	1.39	0.38	2.87	0.00	0.97	0.24

1) It was assumed that construction would take 2 years (24 months) and would begin in May 2012 and end in May 2014. For purposes of establishing compliance with CAA conformity applicability requirements, emissions are shown per calendar year 2012-2014. Emissions in 2012 were assumed to occur over 7 months. Emissions in 2013 were assumed to occur over 12 months. Emissions in 2014 were assumed to occur over 5 months. Total construction duration was assumed to be 24 months.

Construction Equipment Emissions

Baker Pump Station Construction - 2012 (May -December, 7 Months Total)

Proposed Action	Fuel	HP	Load Factor	Emission Factors, g/bhp-hr								No of Equipment	Hrs/day	Months	Emissions, lbs/day								Emissions, tons/year							
Equipment				CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4				CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4	CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4
Tractor/Loader/Backhoe	Diesel	108	55	4.07	1.19	7.16	0.007	0.654	0.58206	568.3	0.108	1	4	7	2.13	0.62	3.75	0.00	0.34	0.30	297.69	0.06	0.19	0.06	0.34	0.00	0.03	0.03	27.09	0.01
Dump Truck	Diesel	479	57	1.82	0.57	5.55	0.006	0.295	0.26255	568.3	0.051	1	2	7	2.19	0.69	6.68	0.01	0.36	0.32	684.16	0.06	0.20	0.06	0.61	0.00	0.03	0.03	62.26	0.01
Water Truck	Diesel	250	50	1.82	0.57	5.55	0.006	0.295	0.26255	568.3	0.051	1	4	7	2.01	0.63	6.12	0.01	0.33	0.29	626.45	0.06	0.18	0.06	0.56	0.00	0.03	0.03	57.01	0.01
Drill Rig	Diesel	291	75	3.16	0.7	6.71	0.006	0.271	0.24119	568.3	0.063	1	2	7	3.04	0.67	6.46	0.01	0.26	0.23	546.89	0.06	0.28	0.06	0.59	0.00	0.02	0.02	49.77	0.01
Excavator	Diesel	168	57	2.19	0.59	6.15	0.006	0.229	0.20381	568.3	0.053	1	4	7	1.85	0.50	5.19	0.01	0.19	0.17	479.91	0.04	0.17	0.05	0.47	0.00	0.02	0.02	43.67	0.00
Bobcat	Diesel	44	55	6.07	2.25	5.68	0.007	0.578	0.51442	568.3	0.203	1	4	7	1.30	0.48	1.21	0.00	0.12	0.11	121.28	0.04	0.12	0.04	0.11	0.00	0.01	0.01	11.04	0.00
Trencher	Diesel	63	75	4.35	1.47	8.72	0.007	0.734	0.65326	568.3	0.133	1	4	7	1.81	0.61	3.63	0.00	0.31	0.27	236.80	0.06	0.16	0.06	0.33	0.00	0.03	0.02	21.55	0.01
Compactor	Diesel	8	43	3.47	0.68	4.33	0.009	0.274	0.24386	568.3	0.061	1	4	7	0.11	0.02	0.13	0.00	0.01	0.01	17.24	0.00	0.01	0.00	0.01	0.00	0.00	0.00	1.57	0.00
Compressor	Diesel	106	48	4.08	1.32	7.76	0.007	0.686	0.61054	568.3	0.119	1	4	7	1.83	0.59	3.48	0.00	0.31	0.27	254.99	0.05	0.17	0.05	0.32	0.00	0.03	0.02	23.20	0.00
Paver	Diesel	100	62	4.4	1.5	8.75	0.007	0.759	0.67551	568.3	0.135	1	4	7	2.41	0.82	4.78	0.00	0.41	0.37	310.72	0.07	0.22	0.07	0.44	0.00	0.04	0.03	28.28	0.01
													TOTAL		**18.67**	**5.64**	**41.44**	**0.04**	**2.64**	**2.35**	**3576.11**	**0.51**	**1.70**	**0.51**	**3.77**	**0.00**	**0.24**	**0.21**	**325.43**	**0.05**

ASSUMPTIONS:

1) It was assumed that construction would take 2 years (24 months) and would begin in May 2012 and end in May 2014. For purposes of establishing compliance with CAA conformity applicability requirements, emissions are shown per calendar year 2012-2014. Emissions in 2012 were assumed to occur over 7 months. Emissions in 2013 were assumed to occur over 12 months. Emissions in 2014 were assumed to occur over 5 months. Total construction duration was assumed to be 24 months.

Baker Pump Station Construction - 2013 (January-December, 12 Months Total)

Proposed Action	Fuel	HP	Load Factor	Emission Factors, g/bhp-hr								No of Equipment	Hrs/day	Months	Emissions, lbs/day								Emissions, tons/year							
Equipment				CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4				CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4	CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4
Tractor/Loader/Backhoe	Diesel	108	55	4.07	1.19	7.16	0.007	0.654	0.58206	568.3	0.108	1	4	12	2.13	0.62	3.75	0.00	0.34	0.30	297.69	0.06	0.33	0.10	0.59	0.00	0.05	0.05	46.44	0.01
Dump Truck	Diesel	479	57	1.82	0.57	5.55	0.006	0.295	0.26255	568.3	0.051	1	2	12	2.19	0.69	6.68	0.01	0.36	0.32	684.16	0.06	0.34	0.11	1.04	0.00	0.06	0.05	106.73	0.01
Water Truck	Diesel	250	50	1.82	0.57	5.55	0.006	0.295	0.26255	568.3	0.051	1	4	12	2.01	0.63	6.12	0.01	0.33	0.29	626.45	0.06	0.31	0.10	0.95	0.00	0.05	0.05	97.73	0.01
Drill Rig	Diesel	291	75	3.16	0.7	6.71	0.006	0.271	0.24119	568.3	0.063	1	2	12	3.04	0.67	6.46	0.01	0.26	0.23	546.89	0.06	0.47	0.11	1.01	0.00	0.04	0.04	85.31	0.01
Excavator	Diesel	168	57	2.19	0.59	6.15	0.006	0.229	0.20381	568.3	0.053	1	4	12	1.85	0.50	5.19	0.01	0.19	0.17	479.91	0.04	0.29	0.08	0.81	0.00	0.03	0.03	74.87	0.01
Bobcat	Diesel	44	55	6.07	2.25	5.68	0.007	0.578	0.51442	568.3	0.203	1	4	12	1.30	0.48	1.21	0.00	0.12	0.11	121.28	0.04	0.20	0.07	0.19	0.00	0.02	0.02	18.92	0.01
Trencher	Diesel	63	75	4.35	1.47	8.72	0.007	0.734	0.65326	568.3	0.133	1	4	12	1.81	0.61	3.63	0.00	0.31	0.27	236.80	0.06	0.28	0.10	0.57	0.00	0.05	0.04	36.94	0.01
Compactor	Diesel	8	43	3.47	0.68	4.33	0.009	0.274	0.24386	568.3	0.061	1	4	12	0.11	0.02	0.13	0.00	0.01	0.01	17.24	0.00	0.02	0.00	0.02	0.00	0.00	0.00	2.69	0.00
Compressor	Diesel	106	48	4.08	1.32	7.76	0.007	0.686	0.61054	568.3	0.119	1	4	12	1.83	0.59	3.48	0.00	0.31	0.27	254.99	0.05	0.29	0.09	0.54	0.00	0.05	0.04	39.78	0.01
Paver	Diesel	100	62	4.4	1.5	8.75	0.007	0.759	0.67551	568.3	0.135	1	4	12	2.41	0.82	4.78	0.00	0.41	0.37	310.72	0.07	0.38	0.13	0.75	0.00	0.06	0.06	48.47	0.01
													TOTAL		**18.67**	**5.64**	**41.44**	**0.04**	**2.64**	**2.35**	**3576.11**	**0.51**	**2.91**	**0.88**	**6.47**	**0.01**	**0.41**	**0.37**	**557.87**	**0.08**

Baker Pump Station Construction - 2014 (January-May, 5 Months Total)

Proposed Action	Fuel	HP	Load Factor	Emission Factors, g/bhp-hr								No of Equipment	Hrs/day	Months	Emissions, lbs/day								Emissions, tons/year							
Equipment				CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4				CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4	CO	VOC	NOx	SOx	PM10	PM2.5	CO2	CH4
Tractor/Loader/Backhoe	Diesel	108	55	4.07	1.19	7.16	0.007	0.654	0.58206	568.3	0.108	1	4	5	2.13	0.62	3.75	0.00	0.34	0.30	297.69	0.06	0.14	0.04	0.24	0.00	0.02	0.02	19.35	0.00
Dump Truck	Diesel	479	57	1.82	0.57	5.55	0.006	0.295	0.26255	568.3	0.051	1	2	5	2.19	0.69	6.68	0.01	0.36	0.32	684.16	0.06	0.14	0.04	0.43	0.00	0.02	0.02	44.47	0.00
Water Truck	Diesel	250	50	1.82	0.57	5.55	0.006	0.295	0.26255	568.3	0.051	1	4	5	2.01	0.63	6.12	0.01	0.33	0.29	626.45	0.06	0.13	0.04	0.40	0.00	0.02	0.02	40.72	0.00
Drill Rig	Diesel	291	75	3.16	0.7	6.71	0.006	0.271	0.24119	568.3	0.063	1	2	5	3.04	0.67	6.46	0.01	0.26	0.23	546.89	0.06	0.20	0.04	0.42	0.00	0.02	0.02	35.55	0.00
Excavator	Diesel	168	57	2.19	0.59	6.15	0.006	0.229	0.20381	568.3	0.053	1	4	5	1.85	0.50	5.19	0.01	0.19	0.17	479.91	0.04	0.12	0.03	0.34	0.00	0.01	0.01	31.19	0.00
Bobcat	Diesel	44	55	6.07	2.25	5.68	0.007	0.578	0.51442	568.3	0.203	1	4	5	1.30	0.48	1.21	0.00	0.12	0.11	121.28	0.04	0.08	0.03	0.08	0.00	0.01	0.01	7.88	0.00
Trencher	Diesel	63	75	4.35	1.47	8.72	0.007	0.734	0.65326	568.3	0.133	1	4	5	1.81	0.61	3.63	0.00	0.31	0.27	236.80	0.06	0.12	0.04	0.24	0.00	0.02	0.02	15.39	0.00
Compactor	Diesel	8	43	3.47	0.68	4.33	0.009	0.274	0.24386	568.3	0.061	1	4	5	0.11	0.02	0.13	0.00	0.01	0.01	17.24	0.00	0.01	0.00	0.01	0.00	0.00	0.00	1.12	0.00
Compressor	Diesel	106	48	4.08	1.32	7.76	0.007	0.686	0.61054	568.3	0.119	1	4	5	1.83	0.59	3.48	0.00	0.31	0.27	254.99	0.05	0.12	0.04	0.23	0.00	0.02	0.02	16.57	0.00
Paver	Diesel	100	62	4.4	1.5	8.75	0.007	0.759	0.67551	568.3	0.135	1	4	5	2.41	0.82	4.78	0.00	0.41	0.37	310.72	0.07	0.16	0.05	0.31	0.00	0.03	0.02	20.20	0.00
													TOTAL		**18.67**	**5.64**	**41.44**	**0.04**	**2.64**	**2.35**	**3576.11**	**0.51**	**1.21**	**0.37**	**2.69**	**0.00**	**0.17**	**0.15**	**232.45**	**0.03**

Construction Truck Emissions

Vehicle Class	No. of Trucks Per Construction Year	Speed (mph)	VMT (mi/vehicle-day)	CO Running Exhaust (g/mi)	NO_X Running Exhaust (g/mi)	VOC Running Exhaust (g/mi)	SOx Running Exhaust (g/mi)	PM10 Running Exhaust (g/mi)	PM10 Tire Wear (g/mi)	PM10 Brake Wear (g/mi)	PM2.5 Running Exhaust (g/mi)	PM2.5 Tire Wear (g/mi)	PM2.5 Brake Wear (g/mi)	CO2 Running Exhaust (g/mi)	CH4 Running Exhaust (g/mi)	Emissions, lbs/day CO	NOx	VOCs	SOx	PM10	PM2.5	CO2	CH4	Emissions, tons/year CO	NOx	VOCs	SOx	PM10	PM2.5	CO2	CH4
Heavy-duty diesel truck (2012)	5	27	20	6.303	17.209	1.262	0.019	0.713	0.036	0.028	0.656	0.009	0.012	1992.669	0.059	**1.39**	**3.79**	**0.28**	**0.00**	**0.17**	**0.15**	**439.31**	**0.01**	**0.10**	**0.28**	**0.02**	**0.00**	**0.01**	**0.01**	**32.51**	**0.00**
Heavy-duty diesel truck (2013)	5	27	20	6.303	17.209	1.262	0.019	0.713	0.036	0.028	0.656	0.009	0.012	1992.669	0.059	**1.39**	**3.79**	**0.28**	**0.00**	**0.17**	**0.15**	**439.31**	**0.01**	**0.18**	**0.49**	**0.04**	**0.00**	**0.02**	**0.02**	**56.89**	**0.00**
Heavy-duty diesel truck (2014)	5	27	20	6.303	17.209	1.262	0.019	0.713	0.036	0.028	0.656	0.009	0.012	1992.669	0.059	**1.39**	**3.79**	**0.28**	**0.00**	**0.17**	**0.15**	**439.31**	**0.01**	**0.06**	**0.16**	**0.01**	**0.00**	**0.01**	**0.01**	**18.89**	**0.00**

1) It was assumed that construction would take 2 years (24 months) and would begin in May 2012 and end in May 2014. For purposes of establishing compliance with CAA conformity applicability requirements, emissions are shown per calendar year 2012-2014. Emissions in 2012 were assumed to occur over 7 months (148 days subtracting weekends and holidays). Emissions in 2013 were assumed to occur over 12 months (259 days subtracting weekends and holidays). Emissions in 2014 were assumed to occur over 5 months (86 days subtracting weekends and holidays).

2) Emission Factors from EMFAC2007

Unpaved Road Emissions		**PM10**	**PM2.5**
E = k(s/12)^a(W/3)^b	k	1.5	0.15
Assume s = 8.5	a	0.9	0.9
Assume W = 10	b	0.45	0.45
Assume 5 miles of travel per vehicle per day			
Emission Factor		1.8906	0.18906
Control Efficiency		61%	61%
Emissions, lbs/day		18.4334	1.84334
Emissions 2012, tons/year		1.36407	1.554
Emissions 2013, tons/year		2.38712	0.23871
Emissions 2014, tons/year		0.79264	0.07926

Worker Vehicle Emissions

		No. POVs	Speed	VMT	CO		NO_x		VOCs						SOx		PM10				PM2.5				CO2		CH4		Emissions, lbs/day								Emissions, tons/year							
Category	Vehicle Class	Per Year	(mph)	(mi/vehicle-day)	Running Exhaust (g/mi)	Start-Up (g/start)[a]	Running Exhaust (g/mi)	Start-Up (g/start)[a]	Running Exhaust (g/mi)	Start-Up (g/start)[a]	Hot-Soak (g/trip)	Resting Loss (g/hr)	Running Evaporative (g/mi)	Diurnal Evaporative (g/hr)	Running Exhaust (g/mi)	Start-Up (g/start)[a]	Running Exhaust (g/mi)	Start-Up (g/start)[a]	Tire Wear (g/mi)	Brake Wear (g/mi)	Running Exhaust (g/mi)	Start-Up (g/start)[a]	Tire Wear (g/mi)	Brake Wear (g/mi)	Running Exhaust (g/mi)	Start-Up (g/start)[a]	Running Exhaust (g/mi)	Start-Up (g/start)[a]	CO	NOx	VOCs	SOx	PM10	PM2.5	CO2	CH4	CO	NOx	VOCs	SOx	PM10	PM2.5	CO2	CH4
2012	Light-duty truck, catalyst	10	33	40	2.924	11.289	0.284	0.56	0.055	0.816	0.183	0.024	0.047	0.054	0.004	0.002	0.013	0.016	0.008	0.013	0.011	0.014	0.002	0.005	399.538	203.967	0.027	0.046	**2.83**	**0.26**	**0.13**	**0.00**	**0.03**	**0.02**	**356.8**	**0.02**	**0.21**	**0.02**	**0.01**	**0.00**	**0.00**	**0.00**	**26.41**	**0.00**
2013	Light-duty truck, catalyst	10	33	40	2.924	11.289	0.284	0.56	0.055	0.816	0.183	0.024	0.047	0.054	0.004	0.002	0.013	0.016	0.008	0.013	0.011	0.014	0.002	0.005	399.538	203.967	0.027	0.046	**2.83**	**0.26**	**0.13**	**0.00**	**0.03**	**0.02**	**356.8**	**0.02**	**0.37**	**0.03**	**0.02**	**0.00**	**0.00**	**0.00**	**46.21**	**0.00**
2014	Light-duty truck, catalyst	10	33	40	2.924	11.289	0.284	0.56	0.055	0.816	0.183	0.024	0.047	0.054	0.004	0.002	0.013	0.016	0.008	0.013	0.011	0.014	0.002	0.005	399.538	203.967	0.027	0.046	**2.83**	**0.26**	**0.13**	**0.00**	**0.03**	**0.02**	**356.8**	**0.02**	**0.12**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**	**15.34**	**0.00**

ASSUMPTIONS:

1) It was assumed that construction would take 2 years (24 months) and would begin in May 2012 and end in May 2014. For purposes of CAA conformity applicability, emissions are shown per calendar year 2012-2014. Emissions in 2012 were assumed to occur over 7 months (148 days subtracting weekends and holidays). Emissions in 2013 were assumed to occur over 12 months (259 days subtracting weekends and holidays). Emissions in 2014 were assumed to occur over 5 months (86 days subtracting weekends and holidays).

2) Emission Factors from EMFAC2007