BOBBY JINDAL
GOVERNOR

PEGGY M. HATCH
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

February 14, 2011

Dr. Alfredo Armendariz
Regional Administrator
U. S. EPA Region 6 (6-RA)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: Baton Rouge Nonattainment Area Redesignation and Maintenance Plan, Technical Amendment to Section 5, Attainment Inventory and supporting Appendix E documentation.

Dear Dr. Armendariz:

As the official designee of Governor Bobby Jindal and on behalf of the State of Louisiana, I respectfully submit this technical amendment for your approval. The Baton Rouge Nonattainment Area has worked diligently toward this attainment goal and looks forward to the completion of the redesignation request.

Enclosed you will find the amended version of Section 5: Attainment Inventory; specifically, the emissions inventory factors were grown to 2022 as requested by your staff to ensure approvability. The revised supporting emissions data is attached as Appendix E. Please have your staff replace the current Section 5 and Appendix E with these documents.

If you, or your staff, have any questions concerning this submittal please ask them to contact Vivian Aucoin, SIP Coordinator at (225) 219-3419 or vivian.aucoin@la.gov or Timothy Bergeron, at (225) 219-3410 or timothy.bergeron@la.gov.

Sincerely,

Peggy M. Hatch

Peggy M. Hatch
Secretary

c: Guy Donaldson, Section Chief
EPA Region 6

Post Office Box 4313 • Baton Rouge, Louisiana 70821-4313 • Phone 225-219-3181 • Fax 225-219-3309
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SECTION 5: ATTAINMENT INVENTORY

5.1 Inventory Description

The attainment inventory should be based on actual "typical summer day" emissions of VOC and NOx. For purposes of the attainment emissions inventory, the state is using the 2006 base year attainment inventory that was used in the attainment demonstration published in March 2009. Tables 5 and 6 summarize the 2006 VOC and NOx emissions totals by source categories which comprise the attainment inventory for the BRNA. The source categories include stationary point, nonpoint, nonroad mobile, and onroad mobile.

Table 5: Baton Rouge Ozone Maintenance Area
2006 NOx (tpd) Emissions Inventory Summary

Sources/Parishes	Point	Nonpoint	Nonroad	Onroad	Emission Totals
Ascension	20.70	0.81	8.35	4.50	34.36
East Baton Rouge	26.20	1.34	12.98	12.60	53.11
Iberville	22.80	1.03	6.09	3.20	33.12
Livingston	0.20	0.51	1.20	6.00	7.91
West Baton Rouge	3.50	0.37	8.13	3.00	15.00

Table 6: Baton Rouge Ozone Maintenance Area
2006 VOC (tpd) Emissions Inventory Summary

Sources/Parishes	Point	Nonpoint	Nonroad	Onroad	Emissions Totals
Ascension	7.80	4.40	0.74	2.90	15.84
East Baton Rouge	15.40	14.12	4.51	8.80	42.83
Iberville	7.10	4.15	0.57	1.30	13.12
Livingston	1.10	5.50	1.28	3.20	11.08
West Baton Rouge	1.70	3.42	6.49	1.40	13.01

5.2 Projected Emissions Inventory

The 2006 attainment inventory has been grown for the final year of 2020 and for the interim years of 2008, 2012, and 2016. The 2006 emission inventory was submitted to EPA for the National Emissions Inventory to comply with the requirements of the CERR. The

2006 base year point source values are from the LDEQ Emissions Inventory. No growth was assumed for point source emissions. Nonpoint growth projections were derived from EGAS 6.0. Nonroad mobile growth projections for SCC codes 2275, 2280, and 2285 were derived from EGAS 6.0; other nonroad mobile growth projections were derived from NONROAD 2005. Onroad mobile projections were discussed in section 3.4.

5.3 Emissions Inventory Summary

Tables 7 and 8 summarize the 2006 attainment/baseline year and interim emission projections for the years 2008, 2012, 2016, 2020 and 2022 for the parishes which make up the BRNA[1]. The emissions projections show a downward trend in VOC and NOx emissions.

Table 7 Summary of VOC Emissions Inventory Baseline And Projections in Tons per Day

Projection Years/ Nonattainment Parish	2006	2008	2012	2016	2020	2022
Ascension	15.84	16.98	15.97	16.14	16.15	16.17
East Baton Rouge	42.82	41.74	38.15	38.50	38.32	38.95
Iberville	13.12	12.85	12.57	12.61	12.67	12.68
Livingston	11.08	10.91	9.62	9.67	9.52	9.76
West Baton Rouge	13.01	12.48	11.38	10.83	10.67	10.71
5 PARISH TOTAL	**95.89**	**94.98**	**87.71**	**87.77**	**87.36**	**88.27**

Table 8 Summary of NOx Emissions Inventory Baseline And Projections in Tons per Day

Projection Years/ Nonattainment Parish	2006	2008	2012	2016	2020	2022
Ascension	34.36	32.00	31.66	30.50	30.31	29.85
East Baton Rouge	53.11	52.27	46.72	44.59	43.18	42.67
Iberville	33.12	31.08	30.49	30.36	30.61	30.37
Livingston	7.91	7.81	5.56	4.13	3.26	3.09
West Baton Rouge	15.00	14.48	14.74	14.34	14.77	14.12
5 PARISH TOTAL	**143.51**	**137.66**	**129.18**	**123.92**	**122.14**	**120.09**

[1] Appendix E has the complete tables with all growth projections broken down by Parish and source category.

Appendix E
Attainment Demonstration

Emission Source Summary

	NOX (TPD)						VOC (TPD)					
	2006	2008	2012	2016	2020	2022	2006	2008	2012	2016	2020	2022
Ascension												
Point	20.70	18.46	18.46	18.46	18.46	18.46	7.80	9.02	9.02	9.02	9.02	9.02
Area	0.81	0.83	0.87	0.91	0.96	0.98	4.40	4.51	4.69	4.97	5.26	5.40
Nonroad	8.35	8.61	9.13	9.33	9.65	9.41	0.74	0.68	0.64	0.62	0.63	0.63
Onroad	4.50	4.10	3.20	1.80	1.24	1.00	2.90	2.77	1.63	1.53	1.25	1.12
Total	34.36	32.00	31.66	30.50	30.31	29.85	15.84	16.98	15.98	16.14	16.16	16.17
East Baton Rouge												
Point	26.20	25.50	25.50	25.50	25.50	25.50	15.40	14.01	14.01	14.01	14.01	14.01
Area	1.34	1.37	1.44	1.48	1.54	1.56	14.12	14.46	15.07	15.98	16.87	17.32
Nonroad	12.98	12.87	12.49	12.14	12.29	12.42	4.51	4.12	3.79	3.58	3.49	3.82
Onroad	12.60	12.53	7.30	5.48	3.85	3.19	8.80	9.15	5.28	4.94	3.96	3.80
Total	53.11	52.27	46.72	44.59	43.18	42.67	42.83	41.74	38.16	38.51	38.32	38.95
Iberville												
Point	22.80	20.71	20.71	20.71	20.71	20.71	7.10	6.79	6.79	6.79	6.79	6.79
Area	1.03	1.06	1.12	1.17	1.23	1.26	4.15	4.25	4.43	4.61	4.78	4.86
Nonroad	6.09	6.34	6.71	7.29	7.89	7.74	0.57	0.55	0.52	0.52	0.54	0.52
Onroad	3.20	2.98	1.95	1.20	0.79	0.66	1.30	1.27	0.83	0.69	0.56	0.51
Total	33.12	31.09	30.49	30.36	30.62	30.37	13.12	12.85	12.58	12.62	12.68	12.68
Livingston												
Point	0.20	0.24	0.24	0.24	0.24	0.24	1.10	0.88	0.88	0.88	0.88	0.88
Area	0.51	0.52	0.53	0.55	0.57	0.58	5.50	5.61	5.79	6.09	6.39	6.54
Nonroad	1.20	1.14	1.03	0.88	0.79	0.77	1.28	1.22	1.10	0.96	0.84	0.80
Onroad	6.00	5.91	3.76	2.45	1.66	1.50	3.20	3.20	1.84	1.75	1.42	1.54
Total	7.91	7.81	5.56	4.13	3.26	3.09	11.08	10.91	9.62	9.67	9.52	9.76
West Baton Rouge												
Point	3.50	2.80	2.80	2.80	2.80	2.80	1.70	1.52	1.52	1.52	1.52	1.52
Area	0.37	0.38	0.40	0.42	0.44	0.45	3.42	3.52	3.65	3.94	4.24	4.39
Nonroad	8.13	8.49	9.15	9.95	10.74	10.26	6.49	6.02	5.17	4.59	4.28	4.22
Onroad	3.00	2.82	2.39	1.17	0.79	0.61	1.40	1.43	1.04	0.79	0.64	0.58
Total	15.00	14.49	14.74	14.34	14.77	14.12	13.01	12.49	11.38	10.83	10.68	10.71

	NOX (TPD)						VOC (TPD)					
	2006	2008	2012	2016	2020	2022	2006	2008	2012	2016	2020	2022
Ascension	34.361	32.00	31.664	30.501	30.31	29.85	15.843	16.985	15.976	16.145	16.157	16.17
East Baton Rouge	53.11	52.27	46.72	44.59	43.18	42.67	42.828	41.744	38.158	38.508	38.325	38.95
Iberville	33.123	31.087	30.494	30.36	30.62	30.37	13.124	12.855	12.576	12.616	12.676	12.68
Livingston	7.91	7.81	5.56	4.13	3.26	3.09	11.08	10.91	9.62	9.67	9.52	9.76
West Baton Rouge	15.00	14.485	14.741	14.34	14.77	14.12	13.011	12.487	11.382	10.83	10.679	10.71
5 PARISH TOTAL	143.51	137.66	129.18	123.92	122.14	120.09	95.89	94.98	87.71	87.77	87.36	88.27

Notes:

1. 2006 and 2008 point source values are from the LDEQ EI (emissions inventory).
2. Point source emissions for 2012, 2016, 2020, and 2022 are equal to 2008 since no growth was assumed.
3. 2002 Area and Nonroad base year values are from the 2002 Louisiana Base Year Emissions Inventory (Submitted to EPA July 20, 2007) .
4. Area growth projections were derived from EGAS 6.0.
5. Nonroad growth projections for SCC codes 2275, 2280, and 2285 were derived with EGAS 6.0.
6. Other Nonroad growth projections were derived from NONROAD 2005.
7. Mobile emissions were projectived using MOBILE6.
8. 2022 mobile emissions were modeled using 2009 as the base year.

Point Source Summary by Parish

NOX (TPY)

	2008	2012	2016	2020	2022
Ascension	6738.37	6996.50	7436.28	7910.70	10154.14
East Baton Rouge	9308.52	11177.00	14265.86	12035.06	12262.99
Iberville	7558.64	8395.02	9133.06	9495.74	9764.37
Livingston	87.34	92.92	95.91	100.06	101.85
West Baton Rouge	1021.65	1096.91	1147.08	1199.29	1222.36
TOTAL	24714.51	27758.35	32078.18	30740.85	33505.70

NOX (TPD)

	2008	2012	2016	2020	2022
Ascension	18.46	19.17	20.37	21.67	27.82
East Baton Rouge	25.50	30.62	39.08	32.97	33.60
Iberville	20.71	23.00	25.02	26.02	26.75
Livingston	0.24	0.25	0.26	0.27	0.28
West Baton Rouge	2.80	3.01	3.14	3.29	3.35
TOTAL	67.71	76.05	87.89	84.22	91.80

VOC (TPY)

	2008	2012	2016	2020	2022
Ascension	3291.12	3315.36	3585.43	3875.96	4023.86
East Baton Rouge	5113.46	5503.13	6016.45	6259.12	6456.86
Iberville	2477.62	2539.32	2721.16	2878.62	2967.16
Livingston	320.96	337.72	353.30	369.64	378.19
West Baton Rouge	553.56	577.52	615.33	654.35	674.17
TOTAL	11756.73	12273.05	13291.68	14037.68	14500.23

VOC (TPD)

	2008	2012	2016	2020	2022
Ascension	9.02	9.08	9.82	10.62	11.02
East Baton Rouge	14.01	15.08	16.48	17.15	17.69
Iberville	6.79	6.96	7.46	7.89	8.13
Livingston	0.88	0.93	0.97	1.01	1.04
West Baton Rouge	1.52	1.58	1.69	1.79	1.85
TOTAL	32.21	33.62	36.42	38.46	39.73

Notes: 1. Emissions were grown from actual emissions reported for 2008 using EGAS 6.0

Area Source Summary by Parish

NOX (TPY)

	2002	2006	2008	2012	2016	2020	2022
Ascension	286	296	303	319	334	350	358
East Baton Rouge	461	487	501	524	541	562	570
Iberville	364	375	386	407	427	448	459
Livingston	182	187	190	195	201	207	210
West Baton Rouge	132	135	139	146	153	160	164
TOTAL	1426	1480	1519	1592	1654	1727	1761

NOX (TPD)

	2002	2006	2008	2012	2016	2020	2022
Ascension	0.78	0.81	0.83	0.87	0.91	0.96	0.98
East Baton Rouge	1.26	1.34	1.37	1.44	1.48	1.54	1.56
Iberville	1.00	1.03	1.06	1.12	1.17	1.23	1.26
Livingston	0.50	0.51	0.52	0.53	0.55	0.57	0.58
West Baton Rouge	0.36	0.37	0.38	0.40	0.42	0.44	0.45
TOTAL	3.91	4.05	4.16	4.36	4.53	4.73	4.82

VOC (TPY)

	2002	2006	2008	2012	2016	2020	2022
Ascension	1494	1606	1645	1711	1814	1918	1972
East Baton Rouge	4770	5152	5279	5501	5831	6156	6321
Iberville	1442	1516	1552	1618	1682	1745	1775
Livingston	1873	2008	2048	2114	2222	2331	2386
West Baton Rouge	1084	1247	1284	1331	1438	1547	1604
TOTAL	10663	11530	11808	12276	12987	13697	14058

VOC (TPD)

	2002	2006	2008	2012	2016	2020	2022
Ascension	4.09	4.40	4.51	4.69	4.97	5.26	5.40
East Baton Rouge	13.07	14.12	14.46	15.07	15.98	16.87	17.32
Iberville	3.95	4.15	4.25	4.43	4.61	4.78	4.86
Livingston	5.13	5.50	5.61	5.79	6.09	6.39	6.54
West Baton Rouge	2.97	3.42	3.52	3.65	3.94	4.24	4.39
TOTAL	29.21	31.59	32.35	33.63	35.58	37.53	38.51

Notes:

1. 2002 base year values are from the 2002 Louisiana Base Year Emissions Inventory (Submitted to EPA July 20, 2007) .
2. 2002 values were grown to 2006. 2006 values were grown to 2008, 2012, 2016, 2020 and 2022.
3. Growth projections were derived with EGAS 6.0.

NONROAD Source Summary by Parish

NOX (TPY)

	2002	2006	2008	2012	2016	2020	2022
Ascension	2760	3048	3144	3333	3404	3523	3436
East Baton Rouge	4669	4737	4698	4558	4430	4487	4534
Iberville	1973	2225	2313	2451	2660	2879	2823
Livingston	453	436	417	374	323	289	282
West Baton Rouge	2604	2969	3097	3340	3631	3920	3744
TOTAL	12458	13415	13669	14056	14448	15098	14820

NOX (TPD)

	2002	2006	2008	2012	2016	2020	2022
Ascension	7.56	8.35	8.61	9.13	9.33	9.65	9.41
East Baton Rouge	12.79	12.98	12.87	12.49	12.14	12.29	12.42
Iberville	5.41	6.09	6.34	6.71	7.29	7.89	7.74
Livingston	1.24	1.20	1.14	1.03	0.88	0.79	0.77
West Baton Rouge	7.13	8.13	8.49	9.15	9.95	10.74	10.26
TOTAL	34.13	36.75	37.45	38.51	39.58	41.36	40.60

VOC (TPY)

	2002	2006	2008	2012	2016	2020	2022
Ascension	308	271	250	233	228	231	230
East Baton Rouge	1844	1647	1503	1385	1308	1272	1394
Iberville	218	208	199	189	191	199	190
Livingston	450	467	445	403	349	306	290
West Baton Rouge	2645	2370	2198	1887	1674	1564	1541
TOTAL	5465	4963	4595	4097	3750	3573	3645

VOC (TPD)

	2002	2006	2008	2012	2016	2020	2022
Ascension	0.84	0.74	0.68	0.64	0.62	0.63	0.63
East Baton Rouge	5.05	4.51	4.12	3.79	3.58	3.49	3.82
Iberville	0.60	0.57	0.55	0.52	0.52	0.54	0.52
Livingston	1.23	1.28	1.22	1.10	0.96	0.84	0.80
West Baton Rouge	7.25	6.49	6.02	5.17	4.59	4.28	4.22
TOTAL	14.97	13.60	12.59	11.22	10.27	9.79	9.99

Notes:

1. 2002 base year values are from the 2002 Louisiana Base Year Emissions Inventory (Submitted to EPA July 20, 2007) .
2. 2002 values were grown to 2006. 2006 values were grown to 2008, 2012, 2016, 2020 and 2022
3. Growth projections for SCC codes 2275, 2280, and 2285 were derived with EGAS 6.0.
4. Other Nonroad growth projections were derived from NONROAD2005.

Mobile Summary by Parish

NOX (TPD)

	2006	2008	2012	2016	2020	2022
Ascension	4.50	4.12	3.22	1.78	1.24	1.00
East Baton Rouge	12.60	12.53	7.30	5.48	3.85	3.19
Iberville	3.20	2.98	1.95	1.20	0.79	0.66
Livingston	6.00	5.91	3.76	2.45	1.66	1.50
West Baton Rouge	3.00	2.82	2.39	1.17	0.79	0.61
TOTAL	29.30	28.35	18.63	12.08	8.33	6.96

VOC (TPD)

	2006	2008	2012	2016	2020	2022
Ascension	2.90	2.77	1.63	1.53	1.25	1.12
East Baton Rouge	8.80	9.15	5.28	4.94	3.96	3.80
Iberville	1.30	1.27	0.83	0.69	0.56	0.51
Livingston	3.20	3.20	1.84	1.75	1.42	1.54
West Baton Rouge	1.40	1.43	1.04	0.79	0.64	0.58
TOTAL	17.60	17.82	10.64	9.70	7.82	7.55

Notes:

1. Mobile emissions were projectived using MOBILE6.
2. 2022 mobile emissions were modeled using 2009 as the base year.

BOBBY JINDAL
GOVERNOR

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245
www.dotd.la.gov
225-379-1924 Section 85

SHERRI H. LEBAS, P.E.
SECRETARY

January 26, 2011

RE: Baton Rouge 5-Parish Ozone Nonattainment Area Redesignation Request and Maintenance Plan (Maintenance Plan)

To whom it may concern:

The Louisiana Department of Environmental Quality (LDEQ) submitted a Maintenance Plan to the US Environmental Protection Agency (EPA) on behalf of the 5-parish ozone nonattainment area on August 31, 2010. After review, EPA requested LDEQ provide additional emissions inventory data for the future year 2022; this is the last year of the maintenance plan as well as a milestone year in the Baton Rouge MPO Metropolitan Transportation Plan for 2032.

The LDEQ calculated mobile emissions for the Baton Rouge area using MOBILE6, with 2009 as the base year. Upon review of the technical data and results, we find that LDEQ's calculation summaries are equivalent to those represented in the Transportation Conformity Analysis for The Baton Rouge 8-Hour Ozone Nonattainment Area document, August 4, 2009.

Oxides of Nitrogen (NOx)	6.96 tons per day, YR 2022
Volatile Organic Compounds	7.55 tons per day, YR 2022

On behalf of LA DOTD, I concur with the 2022 emissions inventory budget for the 5-parish Baton Rouge ozone nonattainment area.

Sincerely,

Daniel J. Broussard
Statewide Planning Engineer

C: Robin Romeo
John Fu
Jamie Setze, FHWA
Yasoob, Zia (email)

CAPITAL REGION
PLANNING COMMISSION

333 North 19th Street
Post Office Box 3355
Baton Rouge, Louisiana 70821-3355

Phone: 225.383.5203
Fax: 225.383.3804
E-Mail: CRPC@brgov.com

January 25, 2011

RE: Baton Rouge 5-Parish Ozone Nonattainment Area Redesignation Request and Maintenance Plan (Maintenance Plan)

To whom it may concern:

The Louisiana Department of Environmental Quality (LDEQ) submitted a Maintenance Plan to the US Environmental Protection Agency (EPA) on behalf of the 5-parish ozone nonattainment area on August 31, 2010. After review, EPA requested LDEQ provide additional emissions inventory data for the future year 2022; this is the last year of the maintenance plan as well as a milestone year in the Baton Rouge MPO Metropolitan Transportation Plan for 2032.

The LDEQ calculated mobile emissions for the Baton Rouge area using MOBILE6, with 2009 as the base year. Upon review of the technical data and results, we find that LDEQ's calculation summaries are equivalent to those represented in the Transportation Conformity Analysis for The Baton Rouge 8-Hour Ozone Nonattainment Area document, August 4, 2009.

Oxides of Nitrogen (NOx)	6.96 tons per day, YR 2022
Volatile Organic Compounds	7.55 tons per day, YR 2022

On behalf of CRPC, I concur with the 2022 emissions inventory budget for the 5-parish Baton Rouge ozone nonattainment area.

Sincerely,

Huey P. Dugas
Executive Director

C: Yasoob, Zia (email)

Huey P. Dugas, Executive Director

U.S. Department of Transportation
Federal Highway Administration

Louisiana Division Office

5304 Flanders Drive, Suite A
Baton Rouge, Louisiana 70808
(225) 757-7600
(225) 757-7601 (Fax)

February 15, 2011

RE: Baton Rouge 5-Parish Ozone Nonattainment Area
Redesignation Request and Maintenance Plan (Maintenance Plan)

To whom it may concern:

The Louisiana Department of Environmental Quality (LDEQ) submitted a Maintenance Plan to the US Environmental Protection Agency (EPA) on behalf of the 5-Parish Ozone Nonattainment Area on August 31, 2010. After review, EPA requested LDEQ provide additional emissions inventory data for the future year 2022; this is the last year of the maintenance plan as well as a milestone year in the Baton Rouge MPO Metropolitan Transportation Plan for 2032.

The LDEQ calculated mobile emissions for the Baton Rouge area using MOBILE6, with 2009 as the base year. Upon review of the technical data and results, we find that LDEQ's calculation summaries are equivalent to those represented in the Transportation Conformity Analysis for The Baton Rouge 8-Hour Ozone Nonattainment Area document, August 4, 2009.

Oxides of Nitrogen (NOx)	6.96 tons per day, YR 2022
Volatile Organic Compounds	7.55 tons per day, YR 2022

On behalf of the FHWA Louisiana Division, I concur that these were the results of the Transportation Model for 2022.

Sincerely,

James C. Setze
Planning Engineer

cc: Yasoob, Zaia via (email)