

Section 3: Attainment Inventory/Maintenance Demonstration

3.1 Attainment Inventory

According to EPA Guidance dated May 20, 2005, the attainment inventory should be based on actual “typical summer day” emissions of VOC and NO_x. The Phase I Implementation Rule provides that the 10-year maintenance plan period begins as of the effective date of designation for the 8-hour NAAQS for the area, which was June 15, 2004. EPA suggests in their guidance that the state use one of any of the three years upon which the 8-hour attainment designation was based (2001, 2002, 2003) for the purposes of an attainment emissions inventory. The state is using actual “typical summer day” emissions of VOC and NO_x for the base year 2002 as the attainment emission inventory for the Grant Parish maintenance plan.

Tables 3.1 and 3.2 summarize the 2002 VOC and NO_x emissions totals by source categories which comprise the attainment inventory for Grant Parish. The source categories include stationary point, area, non-road mobile, and on-road mobile sources.

Table 3.1 2002 VOC Attainment Inventory—Grant Parish

	Point	Area	Non-Road Mobile	On-Road Mobile	Totals
TPY*	241.00	581.30	2057.10	463.55	3342.95

Table 3.2 2002 NO_x Attainment Inventory—Grant Parish

	Point	Area	Non-Road Mobile	On-Road Mobile	Totals
TPY	676.00	222.90	581.40	624.15	2104.45

* TPY indicates Tons per Year

3.2: Emission Projections

The state has developed interim emission projection years to show a trend analysis for maintenance of the standard. These emission projections will also be used as triggers for implementing contingency measures. The following table summarizes the projected

emission inventory for Grant Parish through 2014. The 2002 base year inventory was submitted to EPA for the National Emissions Inventory to comply with the requirements of CERR. Point source and area source growth projections were derived from EGAS 4.0. Non-road mobile growth projections for SCC codes 2275, 2280, and 2285 were derived from EGAS 4.0; other Non-road mobile growth projections were derived from the National Mobile Inventory Model (NMIM). On-road mobile projections were discussed in section 2.4.

**Table 3.3 Summary of 2002 VOC Attainment Inventory
And Emission Projections for 2008-2014 (TPY)**

	2002	2008	2011	2014
Point	241.00	303.10	332.10	359.80
Area	581.30	598.10	606.90	615.70
Non-road Mobile	2057.10	1749.20	1576.70	1438.90
On-road Mobile	463.55	292.00	229.95	189.90
Total	3342.95	2942.40	2745.65	2604.20

**Table 3.4 Summary of 2002 NO_x Attainment Inventory
And Emission Projections for 2008-2014(TPY)**

	2002	2008	2011	2014
Point	676.00	714.20	734.20	753.90
Area	222.90	233.60	239.20	244.70
Non-road Mobile	581.40	526.40	498.90	461.10
On-road Mobile	624.15	408.80	302.95	226.30
Total	2104.45	1883.00	1775.25	1686.00

3.3 Maintenance Demonstration

According to guidance, the key element of a maintenance plan is a demonstration of how the area will remain in compliance with the 8-hour ozone standard for the 10 year period following the effective date of designation as unclassifiable/attainment. The end projection year is 10 years from the effective date of the attainment designation. For Grant Parish with an effective date of designation for the 8-hour NAAQS of June 15, 2004, the end projection year is 2014.

The state has identified the level of precursor emissions in Grant Parish that is sufficient to attain the NAAQS, i.e. the 2002 attainment inventory, and established interim emission projections of ozone precursors for the years 2008, 2011 and 2014. (See Tables 3.3 and 3.4) A comparison of the emission growth projections through 2014 to the 2002 attainment inventory for the parish demonstrates compliance with the 8-hour NAAQS through 2014. Therefore, this plan fulfills the maintenance demonstration required.

On-road emissions estimates for this maintenance plan update are modeled with both 7.8 psi Reid Vapor Pressure (RVP) gasoline (Appendix B) and 9.0 RVP gasoline for three projection years: 2008, 2011, and 2014 (Appendix C). This modeling shows an insignificant increase in VOC emissions. Clearly, the relatively small increase in VOC emissions from using 9.0 RVP fuel does not obviate the overall demonstration of maintenance in the Plan. Furthermore, Table 3.5 below demonstrates that all projection-year VOC levels with 9.0 psi RVP are less than the 2002 attainment year VOC on-road emissions inventory modeled with 7.8 RVP.

**Table 3.5 RVP Comparison
Effect on VOC Emissions**

	7.8 RVP	9.0 RVP
Year	VOC (tpd)	VOC (tpd)
2002	1.27	N/A
2008	0.80	0.90
2011	0.63	0.70
2014	0.52	0.57

Guidance indicated that maintenance may also be demonstrated using other methods such as modeling. A review of EPA modeling conducted for the Clean Air Interstate Rule indicates that existing CAAA programs will bring all parishes in the state of Louisiana into attainment with the 8-hour ozone standard by 2010 with continued attainment to 2015, which follows the end of the 10 year maintenance period. This is yet another indication that Grant Parish is expected to maintain attainment with the current 8-hour ozone standard for the duration of the maintenance period.