STATE IMPLEMENTATION PLAN REVISION:

LIMITED MAINTENANCE PLAN FOR CARBON MONOXIDE: ALBUQUERQUE/BERNALILLO COUNTY, NEW MEXICO

SECOND HALF OF THE CARBON MONOXIDE MAINTENANCE PLAN

YEARS 2006 - 2016

FINAL VERSION—July 2004

Prepared by:

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Adopted after Public Hearing by:

Albuquerque-Bernalillo County Air Quality Control Board (AQCB)

July 14, 2004

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PREFACE

This request is submitted pursuant to Section 175A (b) of the Clean Air Act (CAA), which requires that an area revise its maintenance plan eight years after redesignation to attainment status. Albuquerque/Bernalillo County was redeisgnated to attainment status for carbon monoxide (CO) in 1996, and must revise its maintenance plan in 2004. The first half of the maintenance plan, submitted in 1995, covers the first ten years of the twenty-year maintenance commitment—1996-2006.

This submittal covers 2006-2016, the second half of the twenty-year commitment. This document was taken to public hearing before the Albuquerque/Bernalillo County Air Quality Control Board (AQCB) on June 9th, 2004. Appropriate notices and opportunities for public comment were provided.

ACKNOWLEDGEMENTS

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ACRONYMS

AQCB	Albuquerque/Bernalillo County Air Quality Control Board
AQD	Air Quality Division
BART	Best Available Retrofit Technology
BBER	Bureau of Business & Economic Research (UNM)
CAA	The Clean Air Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2	Carbon Dioxide
EHD	Environmental Health Department
EI	Emissions Inventory
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
FR	Federal Register
I&M	Inspection and Maintenance Program
LMP	Limited Maintenance Plan
LUM	Land Use Measure
MRCOG	Mid-Region Council of Governments
MTP	Metropolitan Transportation Plan
MVEB	Motor Vehicle Emissions Budget
NAAQS	National Ambient Air Quality Standard
NMAC	New Mexico Administrative Code
NMSA	New Mexico Statutes Annotated
NOx	Nitrogen Oxides
PM	Particulate Matter
PPM	Parts per Million
PSD	Prevention of Significant Deterioration
SIP	State Implementation Plan
TCM	Transportation Control Measure
TIP	Transportation Improvement Program
TPD	Tons per Day
TPY	Tons per Year

ACRONYMS (continued)

US	United States
VMT	Vehicle Miles Traveled
VPMD	Vehicle Pollution Management Program

GRAPHS

Graph 1 Average 8-hour CO Readings: 1994-2003
Albuquerque/Bernalillo County, NM

Graph 2 Average 1-hour CO Readings: 1994-2003
Albuquerque/Bernalillo County, NM

Graph 3 Area Design Value as Percentage of 8-hour CO Standard
Albuquerque/Bernalillo County, NM

Graph 4 Area Design Value as Percentage of 1-hour CO Standard
Albuquerque/Bernalillo County, NM

FIGURE

Figure 1 Albuquerque/Bernalillo County 2002 Monitoring Network

TABLES

Table 1 CO Emissions by Source Category (in tons/day)

Table 2 Design Values by Site and Standard, Design Value for Area

Table 3 Locations of CO Monitor Stations and Years in Operation

TABLE OF CONTENTS

I. Purpose 1

II. The Limited Maintenance Plan Option 1

III. Background 2

IV. Attainment Inventory 3

V. Maintenance Demonstration 3

VI. Monitoring Network Verification 8

VII. The Carbon Monoxide Control Program 9

VIII. The Contingency Plan 12

IX. Conformity Determinations 13

X. Commitments 14

XI. CAA Compliance/Conclusion 15

APPENDICES

Appendix A	U.S. Environmental Protection Agency (EPA) Office of Air Quality Planning & Standards (OAQPS) Memorandum, November 16, 2004
Appendix B	Federal Register Notices: Vol. 61, No. 33- February 16, 1996 Vol. 61, No. 115- June 13, 1996
Appendix C	U.S. Environmental Protection Agency (EPA) Memorandum: Ozone and CO Design Value Calculations June 18, 1990
Appendix D	Carbon Monoxide (CO) Monitor Data, 1994-2003
Appendix E	Inspection & Maintenance (I&M) Program Regulation 20.11.100 NMAC, Motor Vehicle Inspection Decentralized
Appendix F	Oxygenated Fuels Regulation 20.11.102 NMAC, Oxygenated Fuels

I. PURPOSE

The technical information presented here supports the request that the Albuquerque/ Bernalillo County Air Quality Control Board (AQCB) approve a required revision to the Carbon Monoxide Maintenance Plan for Albuquerque/Bernalillo County, New Mexico. The AQCB proposes the following action:

> Approval of the revision entitled Limited Maintenance Plan for Carbon Monoxide: Albuquerque/Bernalillo County, New Mexico.

Section 175A (b) of the Clean Air Act requires that areas revise their Carbon Monoxide Maintenance Plans eight years after redesignation to attainment status for the National Ambient Air Quality Standard (NAAQS) for carbon monoxide (CO). As an attainment area under a maintenance plan, Albuquerque/Bernalillo County must submit a revision to its Carbon Monoxide Maintenance Plan to the Environmental Protection Agency (EPA).

A maintenance plan is a twenty year commitment. The redesignation request/first half of the maintenance plan covers the initial ten-year planning period (1996-2006) and demonstrates maintenance of the NAAQS for CO in Bernalillo County. The plan revision presented herein must demonstrate that the NAAQS for CO will be maintained for ten years beyond (2006-2016) the initial planning period.

Federal and State laws delegate authority for ambient air quality in Bernalillo County to the Albuquerque/Bernalillo County Air Quality Control Board (AQCB) per the New Mexico Air Quality Act, NMSA 1978 Sections 74-2-4 and 74-2-5. If approved by the AQCB and subsequently by the EPA, this revision will be incorporated into the portion of the New Mexico State Implementation Plan (SIP) for air quality applicable to Bernalillo County.

II. THE LIMITED MAINTENANCE PLAN OPTION

The Environmental Protection Agency (EPA) offers the option of pursuing a Limited Maintenance Plan (LMP) (EPA, 1994-see Appendix A). A LMP, which does not contain a full maintenance demonstration, is appropriate for nonattainment or maintenance areas that do not have recent violations of a National Ambient Air Quality Standard (NAAQS). To qualify, an area must show that the design value of all monitors does not exceed 85% of the relevant NAAQS. Albuquerque/Bernalillo County has opted to pursue a LMP for the second half (2006-2016) of its carbon monoxide (CO) maintenance plan, which means it must demonstrate that design values will not exceed 85% of the 1-hour and the 8-hour CO standards.

A Limited Maintenance Plan (LMP) consists of five key elements:
An attainment inventory, a maintenance demonstration, a monitoring network verification, a contingency plan and a discussion of conformity determination. This document, the Limited Maintenance Plan for Carbon Monoxide (CO): Albuquerque/Bernalillo County, NM, will address each element individually starting with Chapter IV.

III. BACKGROUND

Carbon Monoxide (CO) is a by-product of the incomplete combustion of carbon-containing compounds such as coal, wood and fuels (e.g. gasoline). Industrial processes, woodburning and motor vehicles produce CO. In urban areas such as Albuquerque/Bernalillo County, most CO emissions come from motor vehicles. During the winter, vehicles emit more CO due to cold starts, longer warm-up periods and the fact that optimal gasoline combustion occurs with warmer temperatures. Also, the Rio Grande Valley, where the city of Albuquerque is located, is prone to temperature inversions that contribute to poor dispersion of pollutants.

The National Ambient Air Quality Standards (NAAQSs) for CO[1] are 9 parts per million (ppm) for an 8-hour average concentration and 35 ppm for a 1-hour average concentration. Both are not to be exceeded more than once a year. CO levels in Bernalillo County exceeded both the NAAQS for CO during the late seventies and early eighties. The 1-hour CO standard was violated seven times; the highest value was 43 ppm in 1980. The 8-hour standard was also frequently violated, with values as high as 29.8 ppm. Bernalillo County was initially designated as a nonattainment area for the 8-hour CO standard in 1978 (FR Vol. 43, March 3, 1978)[2]. The 1990 Clean Air Act Amendments, Section 186, established various nonattainment categories. Bernalillo County was subsequently classified as a "low-moderate" nonattainment area (FR Vol. 56, January 6, 1992)[3].

During the eighties, monitored CO levels began to decline steadily. The last violation of the 8-hour NAAQS for CO occurred in December 1991. By the end of 1993, two complete years had transpired without a violation—a prerequisite to achieving attainment status. The 1993 Emissions Inventory (EI) and a CO Maintenance Plan were submitted to the Environmental Protection Agency (EPA) in May 1995 to request redesignation to attainment status.

The Carbon Monoxide Redesignation Request and Maintenance Plan for Albuquerque/ Bernalillo County, New Mexico explains how Bernalillo County intended to meet the goal of achieving and maintaining compliance with the National Ambient Air Quality Standards (NAAQS) for CO. Also referred to as the "first half of the Maintenance Plan", this document consists of the existing control program elements, a contingency plan, and a maintenance demonstration. After a public hearing held on April 13, 1995, the Albuquerque/Bernalillo County Air Quality Control Board (AQCB) approved the plan.

Bernalillo County is currently classified as an attainment area for both the 1-hour and the 8-hour NAAQS for CO. A proposed rule to redesignate Albuquerque/Bernalillo County to attainment was published in the Federal Register (FR) on February 16, 1996 (FR Vol. 61, No. 33). Through publication of a final rule in the Federal Register on June 13, 1996 (FR Vol. 61, No. 115), Bernalillo County was redesignated from a low-moderate nonattainment area to attainment status under a maintenance plan (see Appendix B).

[1] A NAAQS for a criteria pollutant, such as CO, is often referred to as "the standard" for that pollutant.
[2] Federal Register citations prior to 1995 listed only the Volume, not the Volume and Number.
[3] See Appendix B for various Federal Register notices.

IV. ATTAINMENT INVENTORY

Emission Inventories (EIs) for carbon monoxide (CO) contain estimates of how much CO is produced by all source categories—highway mobile, off-road mobile, area and stationary. As part of The Carbon Monoxide Redesignation Request and Maintenance Plan for

Albuquerque/Bernalillo County, New Mexico, Bernalillo County committed to completing periodic emissions inventories (PEIs) for CO every three years.

CO PEIs for Bernalillo County exist for 1993, 1996 and 1999. The periodic inventories provided a basis from which to develop CO budgets and the CO baseline level. The CO budgets are a summary of total estimated CO emissions in tons per day (tpd) from all source categories by year. The CO baseline level is the total amount of CO in tpd under which an area's emissions must remain in order to not exceed the NAAQS for CO.

CO budgets were an important component of the first half of the maintenance plan and essential to the maintenance demonstration. The Environmental Health Department (EHD) demonstrated maintenance of the NAAQS for CO by showing that projected seasonal CO emissions for every third year of the first planning period (1996-2006) were less than the 1993 baseline emissions level. Under a limited maintenance plan, however, budgets are no longer required. A cap on total emissions is not needed; therefore, neither a baseline level nor emissions estimates by category are needed for budget purposes (EPA, 1994-See Appendix A).

Though this is the case, emission estimates may be provided for informational purposes. The estimates in the following table are from the 2002 CO PEI.

Table 1
CO Emissions by Source Category

Category	Tons per day (tpd)	Pounds per day
On-Road Mobile	364.14	728,280
Off-Road Mobile	34.45	68,900
Area	71.51	143,020
Stationary (Major)	3.236	6,472
Total	473.34	946,672

* this table not for budget purposes.

The total estimated 2002 CO emissions are 473.34 tons per day, or 946,672 pounds per day.

V. MAINTENANCE DEMONSTRATION

A. Introduction:

Perhaps the most important element of a maintenance plan is the maintenance demonstration. In the Carbon Monoxide Redesignation Request and Maintenance Plan for Albuquerque/Bernalillo County, New Mexico (1995), the Environmental Health Department (EHD) demonstrated that carbon monoxide (CO) levels will maintain compliance with the National Ambient Air Quality Standards (NAAQS) for CO through 2006. Maintenance of the

NAAQS is demonstrated by showing that total projected daily emissions for each milestone year are less than emissions for the baseline year. For Bernalillo County, projected emissions levels for all years in the first planning period (1996-2006) were below the 1993 baseline emissions level.

Eight years after EPA approval of a maintenance plan, an area must revise it to address the second ten-year planning period. For Albuquerque/Bernalillo County, the updated maintenance demonstration must show that the NAAQS for CO will be maintained through the year 2016—which is the end of the twenty-year period that the plan must cover per section 175A (b) of the Clean Air Act (CAA). Since Albuquerque/Bernalillo County has opted to develop a limited maintenance plan (LMP), however, the updated maintenance demonstration presented here is not the same as it was for the first planning period. Nor does it require projections through 2016, as it would have under a full maintenance plan.

B. Design Values:

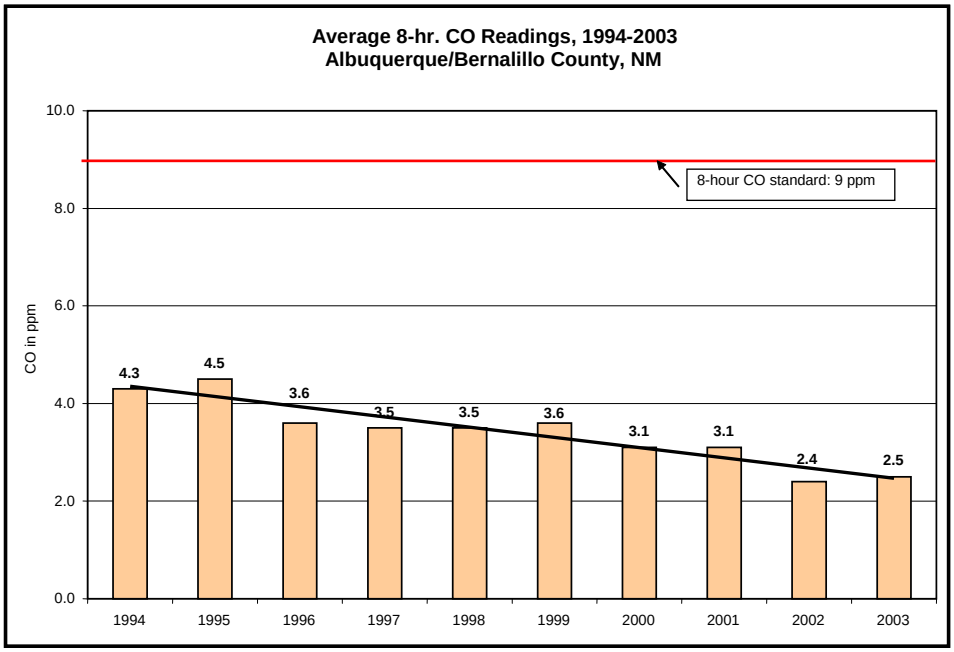
As stated, a limited maintenance plan (LMP) does not require emissions projections for the future maintenance period. Instead, an area with a LMP must demonstrate maintenance by showing that the design value of all monitors has not exceeded 85% of the relevant NAAQS. Design values for CO are based upon the highest of the second highest readings for all monitors, for the most recent two years of data (EPA, 1990-See Appendix C). Although design values are based on data for only the two most recent years by monitor, the fact that data is available over a nine-year time span (1994-2003) is useful for demonstrating that CO levels have been steadily declining in recent history.

In its LMP, Albuquerque/Bernalillo County must demonstrate that the average of the design values measured at each CO monitor has not exceeded 85% of the NAAQS for CO. The values corresponding to 85% are 29.8 ppm for the 1-hour standard and 7.7 ppm for the 8-hour standard. If an area begins a maintenance period with emissions at or below 85% of exceedance levels, EPA has determined that such emission levels combined with control measures should provide adequate assurance of maintenance over the maintenance period (see Appendix A).

C. Historical CO Trend (1994-2003):

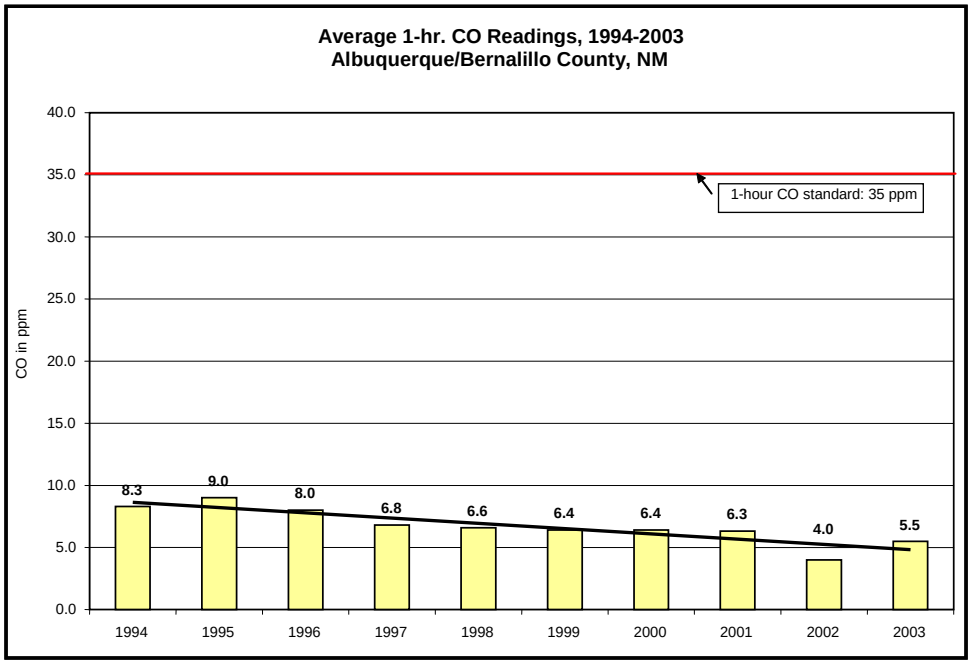
For both the 8-hour and the 1-hour standard, a trend in carbon monoxide (CO) levels becomes apparent upon examining monitored CO data over a nine-year time span (1994-2003). Graph 1 on the following page shows average monitored CO values by year, in parts per million (ppm), for the 8-hour standard. Recall that the 8-hour standard for CO is 9 ppm. The figures are derived by taking the second highest 8-hour reading from each monitor and averaging them for each year. Graph 1 demonstrates that monitored 8-hour CO levels have been declining significantly in recent years. The highest average 8-hour CO reading (4.6 ppm) occurred in 1995, and the lowest average CO reading (2.4 ppm) occurred in 2002. Despite a few insignificant increases, the overall trend is clearly downward. Note that, as CO levels continue to decline, the gap between monitored CO levels and the 8-hour CO standard of 9 ppm continues to widen.

Graph 1



Graph 2 presents average monitored CO values by year, in parts per million (ppm), for the 1-hour standard. Note that the 1-hour standard for CO is 35 ppm. Like the 8-hour example above, the 1-hour figures are derived by taking the second highest 1-hour CO reading from each monitor and averaging them for each year. Using data from a nine-year time period (1994-2003) allows a historical trend to emerge. Like the 8-hour levels, 1-hour monitored CO levels have been declining significantly in recent years. The highest average CO reading (9.0 ppm) occurred in 1995, and the lowest average CO reading (4.0 ppm) occurred in 2002. Despite a few insignificant increases, the overall trend continues downward. As CO levels continue to decline, the gap between monitored CO levels and the 1-hour CO standard of 35 ppm continues to widen.

Graph 2



Historical data (1994-2003) for both the 8-hour standard and the 1-hour standard demonstrate that monitored carbon monoxide (CO) levels are far from approaching either of the CO standards of 9 ppm and 35 ppm, respectively. Although in general the 8-hour readings are a higher percentage of the 8-hour standard than the 1-hour readings are of the 1-hour standard, both are far from approaching violation levels. It is apparent that the CO trend for both the 8-hour and the 1-hour standard is clearly downward, despite some insignificant rises within each data set.

D. Design Values & Percentages:

As stated, to demonstrate maintenance in its Limited Maintenance Plan (LMP), Albuquerque/Bernalillo County must show that the design value for the area has not exceeded 85% of the National Ambient Air Quality Standards (NAAQS) for CO. Recall that the design value for a monitoring site is the highest of the second high readings for that monitor, for the two most recent years of data. In this case, the data are from 2002 and 2003. The design value for an area is simply the highest design value of all monitors within the maintenance area (see Appendix C). Table 2 below shows both the design values by site and the design value for the Albuquerque/Bernalillo County area.

Table 2

Design Values by Site and Standard, Design Value for Area

Site ID	Site Location	Year (02 or 03)	8-hour Standard (highest of 2nd highs)	1-hour Standard (highest of 2nd highs)
2ZE	2421 Mesilla Ave. NE	2003, 2002	3.5	4.8
2ZM	4700A San Mateo NE	2002	2.9	4.0
2ZU	2200 San Pedro NE	2002	**3.9**	6.0
2ZN	6000 Anderson Ave. SE	2002	2.7	4.9
2ZV	201 Prosperity Ave. SE	2003	2.4	3.6
2ZL	10155 Coors Rd. NW	2003	2.0	**9.6**
	Design Value for Area:	(highest of design values):	**3.9**	**9.6**

It is apparent that Albuquerque/Bernalillo County's design values do not approach 85% of the NAAQS for CO. The values that correspond to 85% of the NAAQS for CO are 7.7 ppm for the 8-hour standard and 29.8 ppm for the 1-hour standard. The design values for Albuquerque/Bernalillo County are 3.9 ppm for the 8-hour standard and 9.6 for the 1-hour standard. For both the 8-hour and the 1-hour CO standards respectively, Albuquerque/ Bernalillo County's design values of 3.9 ppm and 9.6 ppm are much less than the 7.7 ppm and 29.8 ppm that correspond to 85% of the CO NAAQS.

Chart 3 and Chart 4 (on the following page) depict the percentage relationship between Albuquerque/Bernalillo County's design values and the 8-hour and 1-hour CO standards of 9 ppm and 35 ppm, respectively. Chart 3 compares the area design value of 3.9 ppm for the 8-hour standard to the 8-hour NAAQS for CO of 9 ppm. The 3.9 ppm design value is 43.3% of the standard. Chart 4, for the 1-hour standard, shows the area design value of

9.6 ppm compared to the 1-hour standard of 35 ppm. The 9.6 ppm design value is 27.4% of the standard.

Chart 3

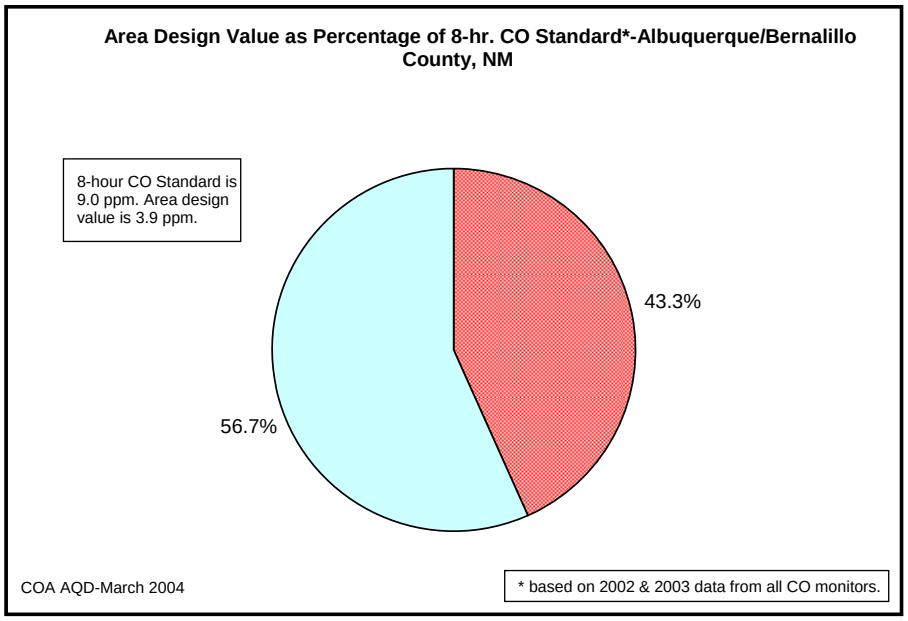
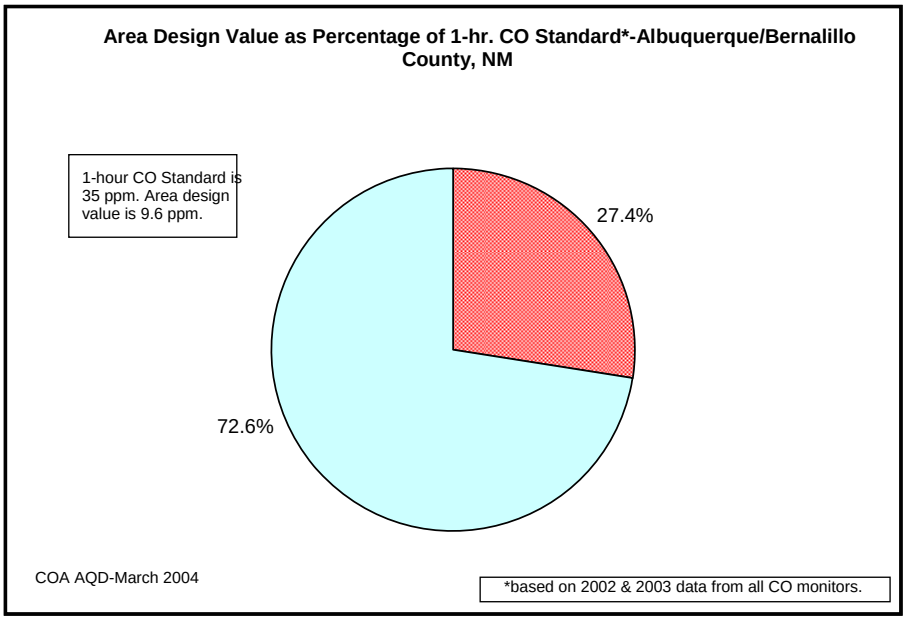


Chart 4



It is clear that Albuquerque/Bernalillo County's design values for the 8-hour and the 1-hour standard are well below the LMP requirement that design values must be at or below 85% of the standards. Therefore, this analysis shows that Albuquerque/Bernalillo County is in maintenance of the 8-hour and the 1-hour NAAQS for CO.

E. Maintenance Summary:

Monitor data for 1994-2003, for both the 1-hour and the 8-hour standards, show that CO levels in Albuquerque/Bernalillo County have been declining steadily over the last nine years. This downward historical trend supports the maintenance demonstration. Albuquerque/Bernalillo County is able to demonstrate maintenance of the National Ambient Air Quality Standards (NAAQS) for CO by showing that no design value for any CO monitor is equal to or greater than 85% of the CO standards. The number values for monitored CO levels show a clear downward trend, and the percentages show that design values (i.e. 43.3% for the 8-hour value and 27.4% for the 1-hour value) are not near approaching 85% of the CO standards. Albuquerque/Bernalillo County has been able to maintain compliance with the CO standards since its redesignation to attainment status in 1996 (FR Vol. 61, No. 115). Overall, less CO is being emitted in Albuquerque/Bernalillo County and air quality has improved with respect to CO.

VI. MONITORING NETWORK VERIFICATION

A Limited Maintenance Plan (LMP) should contain provisions for continued operation of an EPA-approved air quality monitoring network in accordance with 40 CFR part 58. Figure 1 on page 10 shows the complete Albuquerque/Bernalillo County 2002 Air Monitoring Network. The monitoring network serves to verify that carbon monoxide (CO) levels in Albuquerque/Bernalillo County have not approached violation levels in recent history. Monitor data is particularly important because an LMP does not contain emissions budgets, which are based on projections.

Based on design values, the maintenance demonstration in this document relies upon CO monitor data for the years 2002 and 2003 (See Appendix D). Although the first planning period of the maintenance plan is 1996-2006, quality assured and EPA-approved monitor data are not available for years after 2003 and are therefore not included.

Not all monitors in Figure 1 measure CO. The CO data for 1994-2003, used to develop the historical trend, are from the following monitors: 2ZE, 2ZM, 2ZN and 2ZL. Note that the 2ZU monitor replaced 2ZK in 2000, and the 2ZV monitor replaced 2ZR in 2002. To develop design values for the area, the monitors 2ZE, 2ZM, 2ZN and 2ZL plus 2ZU and 2ZV were used. The monitors correspond to the addresses as shown on this and the following page.

Table 3

Locations of CO Monitor Stations & Years in Operation

Label	Location	Years CO Monitored (1994-2002)
2ZE	2421 Mesilla Ave. NE	1994-2003
2ZK	2621 San Mateo Blvd. NE	1994-1999
2ZM	4700A San Mateo Blvd. NE	1994-2003
2ZN	6000 Anderson Ave. SE	1994-2003
2ZR	4100 Isleta Rd. SW	1994-2000
2ZL	10155 Coors Rd. NW	1994-2003

2ZU	2200 San Pedro Dr. NE	2000-2003
2ZV	201 Prosperity Ave. SW	2002-2003

The Albuquerque Environmental Health Department (EHD) will continue to monitor CO through the second planning period (2006-2016) of the maintenance plan in accordance with 40 CFR Part 58. On an annual basis, the EHD will review the EPA-approved CO monitor data to determine if emissions levels remain below the 85% design value required for a LMP. Then the AQD will report this data to the EPA.

VII. THE CARBON MONOXIDE (CO) CONTROL PROGRAM

A. Introduction:

Specific control strategies, both federal and local, comprise the control program. Individual elements of the control program are known as control strategies. Control strategies are designed and implemented to prevent a violation of the National Ambient Air Quality Standards (NAAQS), and thereby eliminate the need to impose additional controls upon industry and the public. These control strategies, which brought the area into compliance and have kept it there, are the reason for the large drop in carbon monoxide (CO) levels over the years.

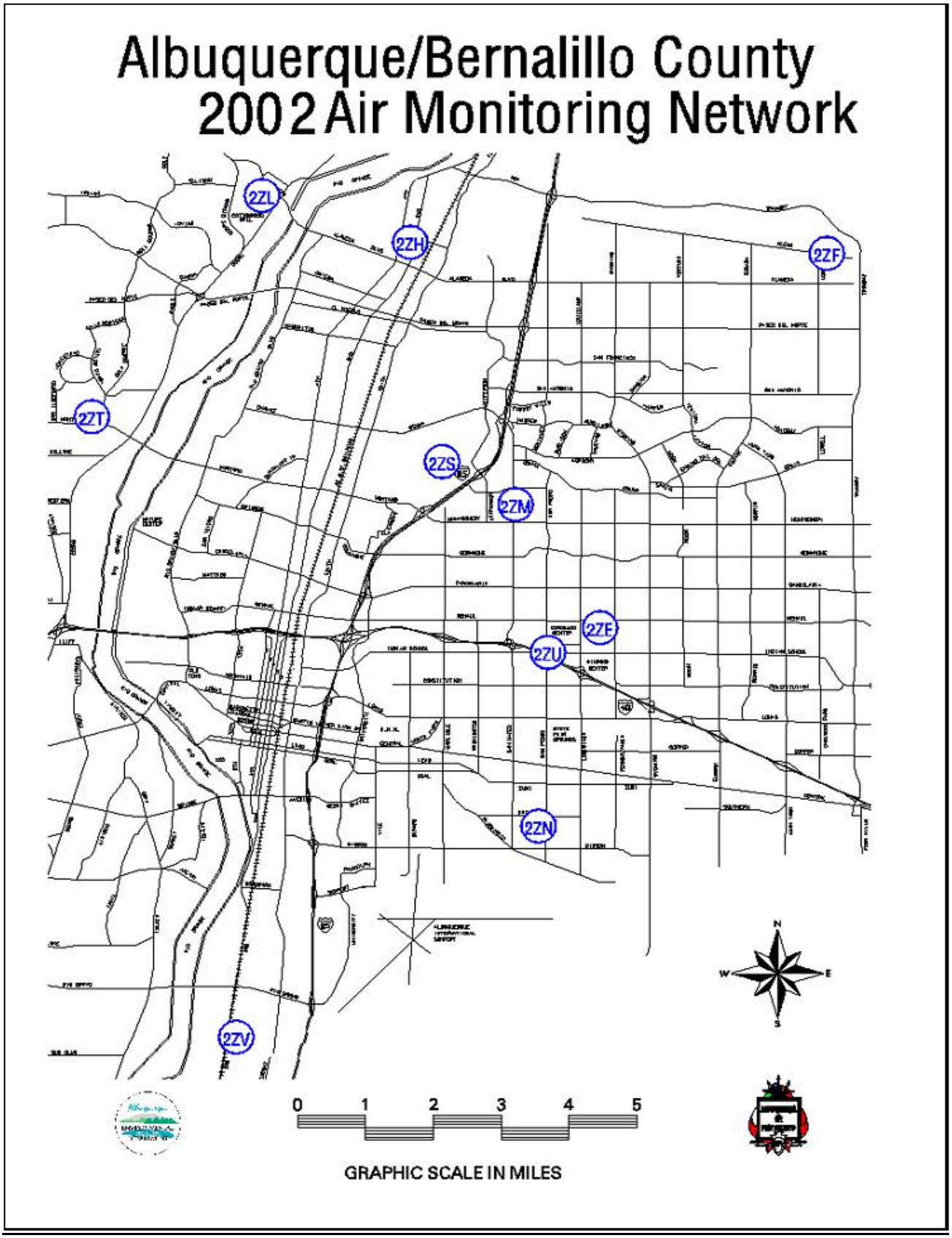
Albuquerque/Bernalillo County's control program for the first half of the maintenance plan and the control program in the Limited Maintenance Plan (LMP) utilize the same measures: the federal motor vehicle program, the Inspection and Maintenance (I&M) Program, the Oxygenated Fuels Program and the Woodburning Control Program. These control strategies are commitments made in the Carbon Monoxide Redesignation Request and Maintenance Plan for Albuquerque/Bernalillo County, New Mexico for the first planning period (1996-2006). EPA believes that the implementation of such control strategies, which remain in place today, has lowered pollution levels and will help keep an area in maintenance (EPA, 1994). Therefore, as the EPA guidance on LMPs requires, the I&M Program, the Oxygenated Fuels Program and the Woodburning Control Program will continue as commitments during the second planning period (2006-2016).

B. Limited Maintenance Plan (LMP) Control Program (2006-2016):

1. Federal Strategies: The federal motor vehicle control program. Title II of the Clean Air Act (CAA), known as the National Emissions Standards Act, established motor vehicle emission standards. The CAA Amendments of 1990 required improved emissions standards for new vehicles in 1994 (Phase I) and 2001 (Phase II). In addition, the Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements became effective February 10, 2000 (FR Vol. 65, No. 28). Tier II, designed to reduce emissions from new vehicles, required reduced gasoline sulfur levels. As newer vehicles gradually replace older vehicles, over time the federal motor vehicle control program will result in lowered CO emissions.

In addition, EPA proposed a new nonroad rule on May 23, 2003. Though not finalized as of this writing, the rule proposes a national program to regulate nonroad diesel engines and

Figure 1


Albuquerque/Bernalillo County
2002 Air Monitoring Network
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GRAPHIC SCALE IN MILES

diesel fuel. It includes new emissions standards, based on advanced emission control devices, for nonroad diesel engines. Although the most significant emission reductions are expected for nitrogen oxides (NOx) and particulate matter (PM), CO reductions are expected as well.

2. Local Strategies: The Inspection and Maintenance (I&M) Program, the Oxygenated Fuels Program and the Woodburning Control Program are the local control strategies.

The I&M program has been in effect in Bernalillo County since March 1, 1989 with the passage of the regulation Motor Vehicle Inspection-Decentralized[4]. Designed to reduce mobile source CO emissions, the I&M program requires that vehicles registered in Bernalillo County undergo biennial emissions testing. On September 17, 2003, the regulation Motor Vehicle Inspection-Decentralized was modified. The regulation now requires annual testing of all vehicles manufactured from 1975-1985, and vehicles manufactured from 1986-1995 that emit quantities of CO and/or hydrocarbons (HC) between 75% and 100% of the maximum allowable standards as listed in the regulation. This revised regulation will be submitted to the Environmental Protection Agency (EPA) as a State Implementation Plan (SIP) revision in the Spring of 2004.

On July 14, 2004, the Albuquerque/Bernalillo County Air Quality Control Board (AQCB) revised and approved 20.11.100 NMAC, Motor Vehicle Inspection-Decentralized, as part of the LMP work effort (see Appendix E). This revision eliminates annual I&M for all vehicles as a contingency measure in the event of violation of the NAAQS for CO.

The Oxygenated Fuels Program aims to reduce vehicle emissions by providing for the use of oxygenated fuel, or “oxyfuels”. Oxyfuels have been used in Bernalillo County as a wintertime CO reduction strategy since 1988. The first season for the mandatory Oxygenated Fuels Program was winter 1989-1990, when oxyfuels containing a minimum 2.0% oxygen content by weight were sold from November 15 through February. During the 1991-1992 season, oxyfuels containing a minimum 2.7% oxygen content by weight were sold. The 2.7% oxyfuel continues to be sold during the wintertime. Air Quality regulation Oxygenated Fuels, which became effective in 1989[5], sets the minimum oxygen content at 2.7%. This oxygenate requirement will continue throughout the first planning period (1996-2006).

In support of the LMP, Section 6 of 20.11.102 NMAC, Oxygenated Fuels, was revised and approved by the Air Quality Control Board (AQCB) on July 14, 2004 (see Appendix F). The revision eliminated the existing contingency measure that, in the event of a violation, the oxygenate content in fuel would increase from 2.7% to 3.0%. The new contingency measure is to increase the oxygenate content in fuel from 2.7% to 3.0% if the trigger of exceeding 85% of the CO NAAQS is activated.

Another local strategy, the Woodburning Control Program, began during the 1988-1989 winter season. Using weather forecasting, the Environmental Health Department (EHD) estimates how well emissions from woodburning activities are likely to disperse. Poor dispersion combined with high CO emissions could cause a violation of the NAAQS. EHD may declare a “no burn” period, when woodburning restrictions are in effect in Bernalillo County. Restrictions are not applicable when conditions for dispersion are favorable. The

[4] Originally known as Regulation No. 40, Motor Vehicle Inspection-Decentralized was last renumbered in 2002 and is now known as Part 100, or 20.11.100 NMAC.
[5] Originally known as Regulation No. 35, Oxygenated Fuels was last renumbered in 2002 and is now known as Part 102, or 20.11.102 NMAC.

Woodburning Control Program is credited with significantly reducing CO emissions on declared "no burn" nights. The air quality regulation Woodburning became effective in 1988.[6] It will continue throughout the first planning period (1996-2006) and the second planning period (2006-2016).

The PSD (Prevention of Significant Deterioration) requirements, as contained in 20.11.61 NMAC, serve as another local control strategy. As stated in the first half of the maintenance plan, all new major stationary sources of CO will be evaluated under the PSD program upon redesignation to attainment. Since redesignation in 1996, new major stationary sources of CO are evaluated under the PSD program and are required to use Best Available Retrofit Technology (BART) to control emissions. The PSD program will continue as a control strategy during the second planning period (2006-2016).

VIII. THE CONTINGENCY PLAN

A. Introduction:

Section 175A of the Clean Air Act (CAA) amendments of 1990 requires that maintenance plans contain contingency measures designed to promptly correct a violation of the National Ambient Air Quality Standards (NAAQS). The requirement for contingency measures is the same for both full maintenance plans and Limited Maintenance Plans (LMPs). The major difference is that, under an LMP, emission levels are not allowed to exceed a design value of 85% of the applicable NAAQS. Recall that the existence of monitored values below 85% of the standard qualifies the area for an LMP in the first place.

For the contingency plan portion of a maintenance plan, emission levels cannot exceed 100% of the applicable standard. In the contingency plan in the Carbon Monoxide Redesignation Request and Maintenance Plan for Albuquerque/Bernalillo County, New Mexico, emission levels cannot exceed 100% of the CO NAAQS (9 ppm for the 8-hour standard and 35 ppm for the 1-hour standard). For this second half of the maintenance plan, Albuquerque/Bernalillo County's LMP proposes to use the design values corresponding to 85% of the CO NAAQS as the trigger for the contingency measure.

B. Contingency Measures (1996-2006):

Contingency measures are specific control strategies that will be activated if they are triggered. The existing Carbon Monoxide Redesignation Request and Maintenance Plan for Albuquerque/Bernalillo County, New Mexico has both a primary and a secondary trigger. In the event of a violation measured at a monitor, the primary trigger is activated and two contingency measures will be implemented in Bernalillo County: 1) an annual Inspection & Maintenance (I&M) program, and 2) an increase in the oxygenate content in fuels from 2.7% to 3.0%.

The secondary trigger is activated if the total CO emissions in the periodic emissions inventory (EI) exceed emissions for the baseline inventory year, in the absence of a monitored air quality violation. If such an "exceedance on paper" occurs, the Environmental Health Department (EHD) will consider whether it is warranted to implement measures associated with the primary trigger. If such measures are considered necessary to avoid a violation of the NAAQS, the EHD will coordinate with the Albuquerque/Bernalillo County Air

[6] Originally known as Regulation No. 34, Woodburning was last renumbered in 2002 and is now known as Part 22, or 20.11.22 NMAC.

Quality Control Board (AQCB) and the Environmental Protection Agency (EPA) to implement these measures.

C. Limited Maintenance Plan (LMP) Contingency Measure:

This LMP proposes to eliminate the two contingency measures contained in the Carbon Monoxide Redesignation Request and Maintenance Plan for Albuquerque/Bernalillo County, New Mexico and replace them with one new contingency measure. In the event that monitored emission levels exceed 85% of the CO NAAQS (the 8-hour or the 1-hour), the following contingency measure will be activated and implemented in Bernalillo County no later than November 1 of the immediately following winter pollution season: the oxygenate content in fuels will increase from 2.7% to 3.0%. Air quality regulation 20.11.102 NMAC, Oxygenated Fuels, contains this requirement (see Appendix F).

In the first half of the maintenance plan, the contingency measure for the secondary trigger was for the Environmental Health Department (EHD) to coordinate with the EPA regarding possible corrective measures. With a LMP, despite the absence of a primary trigger and associated contingency measure, there is a consequence if a violation of the NAAQS occurs while a LMP is in effect. Within twelve months of a violation, the area will submit a new State Implementation Plan (SIP) element consisting of a full maintenance plan, including a maintenance demonstration. The LMP would be superceded and become invalid.

IX. CONFORMITY DETERMINATIONS

For purposes here, conformity refers to consistency between a project or plan and the emission budgets in the State Implementation Plan (SIP) for air quality. This requires that emissions resulting from a project or plan will not contribute to or cause a violation of the National Ambient Air Quality Standards (NAAQS).

A. The First Planning Period and Conformity:

Conformity was an important part of the Carbon Monoxide Redesignation Request and Maintenance Plan for Albuquerque/Bernalillo County, New Mexico, which covers the first planning period (1996-2006). Carbon monoxide (CO) levels used to be much closer to approaching the limit set by the budgets, in contrast to CO levels today and expected levels in the future. In addition, in the maintenance plan revision approved October 9, 2003 (FR Vol. 68, No. 196), the CO budgets were updated using the MOBILE6 model. Note that the resulting safety margin for the year 2006 is a substantial 65.02 tons per day (tpd) of CO, in contrast to 22.49 tpd prior to this update.

There are two types of conformity: general conformity and transportation conformity. Both correspond to specific air quality regulations: Part 4, General Conformity (20.11.4 NMAC) and Part 3, Transportation Conformity (20.11.3 NMAC). General Conformity requirements apply to federal actions, such as construction projects and new land use developments, and stipulate that such actions will not cause or contribute to a violation of the NAAQS. The goal is to ensure that the federal government does not fund any activity that does not conform to an applicable State Implementation Plan (SIP) for air quality.

Transportation Conformity requirements apply to local transportation plans. Roadway projects in local transportation plans must not produce more pollution than allowed for by the emissions budgets contained in the SIP. In other words, the transportation plan must

conform to the air quality plan. The Metropolitan Transportation Plan (MTP) produced by the Mid-Region Council of Governments (MRCOG) must conform to the CO budgets in the SIP.

As of June 2002, general Transportation Control Measures (TCMs) are listed in the Transportation Conformity regulation (20.11.3 NMAC). A TCM is a measure specifically identified in Section 108 of the Clean Air Act (CAA) that is designed to reduce emissions from transportation sources. TCMs may be included in the MTP, as needed, to reduce mobile source emissions and help the transportation plan conform to the CO budgets. During the first planning period (1996-2006), no TCMs were included in the SIP.

C. The Limited Maintenance Plan (LMP) and Conformity:

Since a Limited Maintenance Plan (LMP) does not contain emission budgets, it is not possible to compare emissions from specific federal plans or projects to an upper emissions limit. For the maintenance period of a LMP, in this case 2006-2016, emissions are not capped. EPA believes that it is unreasonable to expect that so much growth will occur in an area during the maintenance period as to cause a violation of the NAAQS (refer to the memo in Appendix A). Recall that, to qualify to undertake a LMP, an area must start with a design value 85% of the NAAQS or less.

Unlike the first half of the maintenance plan, the Albuquerque/Bernalillo County LMP does not contain emission budgets (see chapter “IV. Attainment Inventory”). Since there are no upper emissions limits to which federal plans or projects must conform, neither general conformity nor transportation conformity analyses are required. Therefore, for the 2006-2016 maintenance period covered in the Albuquerque/Bernalillo County LMP, there are no emission budgets and no conformity requirements.

The fact that transportation conformity is no longer required brings about two significant changes with respect to the interagency consultation process. The Mid-Region Council of Governments (MRCOG) will not have to perform an air quality analysis to demonstrate that the emissions produced by the projects in the Metropolitan Transportation Plan (MTP) are less than the air quality budgets for CO. Recall that an LMP is based on monitored emission levels rather than modeling.

In lieu of the prior modeled air quality conformity determination, the MRCOG will receive a letter from the Federal Highway Administration (FHWA) that verifies the most recent CO levels at air quality monitors remain below 85% of the NAAQS for CO. The FHWA will obtain this information from the Environmental Health Department (EHD). The letter will be included in the revised or new versions of the Transportation Improvement Program (TIP) and the MTP. Provided that CO levels remain at or below 85% of the NAAQS, transportation conformity and general conformity requirements will not apply for CO. If CO levels exceed 85% of the NAAQS, the LMP will become invalid and the requirements of a full maintenance plan (including conformity) will apply once again.

X. COMMITMENTS

As part of this LMP, Albuquerque/Bernalillo County will do the following:

- The regulation 20.11.100, Motor Vehicle Inspection-Decentralized, as adopted September 10, 2003 and revised on July 14, 2004 by the Air Quality Control Board (AQCB), will continue to be implemented through June 13, 2016.

- 20.11.102 NMAC, Oxygenated Fuels, as revised by the AQCB on July 14, 2004, requires an oxygenate content for gasoline of 2.7% by weight and will continue through June 13, 2016.

- As a contingency measure, if CO levels exceed 85% of the NAAQS for CO, the oxygenate content in gasoline will be increased from 2.7% by weight to 3.0% by weight.

- The Woodburning Program will continue to be implemented through June 13, 2016.

- The EHD will certify annually to EPA the monitored levels of CO and will state if levels are above, below or equal to 85% of the NAAQS for CO.

- If a violation of the NAAQS for CO occurs, Albuquerque/Bernalillo County will submit a new and full CO maintenance plan within 18 months of an EPA-certified violation of the NAAQS.

- Seasonal periodic EIs for CO will not be prepared for years during the second planning period (2006-2016).

- Transportation conformity requirements for CO will be met by inclusion of an affirmative statement by the Federal Highway Administration (FHWA) in the Metropolitan Transportation Plan (MTP) and/or Transportation Improvement Program (TIP) that monitored CO levels remain at less than 85% of the NAAQS.

XI. CAA COMPLIANCE/CONCLUSION

This document, the Limited Maintenance Plan (LMP) for Albuquerque/Bernalillo County, New Mexico, fulfills the requirement in Section 175A (b) of the Clean Air Act (CAA) amendments of 1990 that areas must revise their maintenance plans eight years after redesignation to attainment status. To qualify for the LMP option, an area must have a design value that is equal or less than 85% of the National Ambient Air Quality Standards (NAAQS) for the pollutant in question. Albuquerque/Bernalillo County has chosen to submit a LMP rather than a full maintenance plan because, for several years now, its design values for both the 8-hour and the 1-hour carbon monoxide (CO) standards have been much less than 85% of the NAAQS.

Using data contained in this LMP, Albuquerque/Bernalillo County has demonstrated maintenance of the NAAQS for CO by showing that the design values for the area are less than 85% of both the 8-hour and the 1-hour CO standards. In addition, monitored CO levels declined significantly in Albuquerque/Bernalillo County during the past nine years (1994-2003). Albuquerque/Bernalillo County has been able to maintain compliance with the CO standards since its redesignation to attainment status in 1996 (FR Vol. 61, No. 115-See Appendix B). Overall, less CO is being emitted and air quality has improved with respect to CO concentrations. It is extremely unlikely that growth in Albuquerque/Bernalillo County will be so great as to cause a violation of the NAAQS for CO. Therefore, CO levels in Albuquerque/Bernalillo County are expected to remain well below 85% of the NAAQS for CO during the second planning period (2006-2016) of the twenty-year maintenance plan.

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