

TECHNICAL SUPPORT DOCUMENT

CARBON MONOXIDE REDESIGNATION REQUEST AND MAINTENANCE PLAN FOR THE DENVER METROPOLITAN AREA



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DRAFT

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Table of Contents

1. INTRODUCTION.....	7
1.1. BACKGROUND.....	7
1.1.1. National Ambient Air Quality Standards for Carbon Monoxide	7
1.1.2. Health Effects of Carbon Monoxide.....	7
1.1.3. Denver Carbon Monoxide Area Designation History.....	8
1.1.4. Denver Metropolitan Attainment/Maintenance Area.....	8
1.1.5. Topography, Climate, and Air Quality Meteorology.....	11
1.2. REQUIREMENTS FOR REDESIGNATION	14
1.2.1. Attainment of the Standard	14
1.2.2. State Implementation Plan Approval.....	14
1.2.3. Improvement in Air Quality Due to Permanent and Enforceable Emissions Reductions	14
1.2.4. CAA Section 110 and Part D Requirements	14
1.2.5. Maintenance Plan.....	14
2. EMISSION INVENTORIES.....	15
2.1. EMISSION INVENTORIES USED IN THE URBAN AIRSHED MODEL	15
2.2. DEMOGRAPHIC AND TRANSPORTATION DATA	16
2.3. RESIDENTIAL WOODBURNING.....	17
2.3.1. Fireplaces emissions calculations (grams/household)	17
2.3.2. 2006 and 2013 Stove Device Emission Calculations.....	19
2.4. ON-ROAD MOBILE SOURCES.....	22
2.4.1. Control Strategy Recommendations.....	22
2.4.2. Vehicle Miles Traveled (VMT).....	22
2.4.3. Mobile5b Emission Factor Modeling	23
2.4.4. NLEV Credit Estimate.....	24
2.4.5. RSD Program.....	25
2.4.6. Oxygenated Fuel Program.....	28
2.4.7. Mobile5b Scenario Inputs.....	28
2.4.8. Carbon Monoxide Emission Factors for 2006 and 2013	28
2.4.9. Emission Inventory Calculations	28
2.5. NON-ROAD MOBILE SOURCES	29
2.6. POINT SOURCES	29
2.7. TEMPORAL DISTRIBUTION OF DAILY EMISSIONS	31
3. AIR QUALITY MODELING METHODOLOGY	33
3.1. OVERVIEW OF MODELING PROCESS	33
3.2. MODEL SELECTION	33
3.3. FLOW CHART OF AIR QUALITY MODELING PROCESS.....	34
3.4. EPISODE SELECTION.....	37
3.5. METEOROLOGICAL DESCRIPTION OF MODELING EPISODES	38
3.5.1. Modeling Episode Selection for Maintenance Plan.....	39
3.5.2. Meteorological Conditions on December 5, 1988 - "High" Episode.....	39
3.5.3. Meteorological Conditions on 15 January 1988 - "Second-High" Episode	39
3.6. MODELING DOMAIN.....	40
3.7. DIAGNOSTIC WIND MODEL (DWM)	43
3.8. URBAN AIRSHED MODEL (UAM) SETUP AND APPLICATION.....	44
3.8.1. Simulation Start and End Times (SIMCONTROL)	44
3.8.2. Initial Conditions (AIRQUALITY)	45
3.8.3. Other UAM preprocessors.....	46
3.9. CAL3QHC MODEL SETUP AND APPLICATION.....	47
3.9.1. Intersection Selection.....	48

3.9.2.	<i>CAL3QHC Input data</i>	50
3.9.3.	<i>Receptor Locations</i>	50
3.9.4.	<i>Vehicle Emission Rates</i>	51
3.9.5.	<i>Screening Procedures</i>	51
3.9.6.	<i>Refined Modeling Procedures</i>	52
3.9.7.	<i>Treatment of Calms</i>	52
3.10.	MODEL PERFORMANCE EVALUATION	53
3.10.1.	<i>Statistical Performance Measures Required by EPA</i>	55
3.10.2.	<i>Additional Performance Measures</i>	59
3.10.3.	<i>Graphical Measures</i>	61
3.10.4.	<i>Selection of CO Monitors for Use in the Performance Evaluation Required by EPA</i>	61
3.10.5.	<i>“High” Episode Performance Measures</i>	70
4.	MODELING-BASED MAINTENANCE DEMONSTRATION	79
4.1.	DESIGN CONCENTRATIONS	79
4.2.	CONTROL STRATEGY ASSUMPTIONS	80
4.3.	UAM AND CAL3QHC RESULTS	82
5.	MONITORING-BASED ATTAINMENT DEMONSTRATION	89
5.1.	DENVER AREA HISTORICAL PERSPECTIVE	89
5.2.	CARBON MONOXIDE MONITORING NETWORK	89
5.3.	MONITORING-BASED ATTAINMENT DEMONSTRATION	91
5.4.	QUALITY ASSURANCE PROGRAM	98
5.4.1.	<i>Internal Quality Assurance Programs</i>	98
5.4.2.	<i>External Quality Assurance Programs</i>	100
5.4.3.	<i>Results of the Denver Metropolitan Area Precision and Accuracy Program</i>	100
6.	DATA ACCESS	107
7.	REFERENCES	109
8.	ENDNOTES (AS REFERENCED IN THE APPROVED DENVER “CO SIP TECHNICAL SUPPORT DOCUMENT”)	111
	INDEX	113
	APPENDIX A – MOBILE SOURCE EMISSIONS MODELING: VMT SUMMARIES BY DISPERSION MODELING DOMAIN AND NONATTAINMENT AREA DOMAIN	115
	APPENDIX B – MOBILE SOURCE EMISSIONS MODELING: MOBILE5B INPUT/OUTPUT AND FORTRAN ALGORITHM FOR NLEV CREDIT ESTIMATE	129
	APPENDIX C – MOBILE SOURCE EMISSIONS MODELING: EMISSION FACTORS	253
	APPENDIX D – MOBILE SOURCE EMISSIONS MODELING: EMISSION ESTIMATES	257
	APPENDIX E – URBAN AIRSHED MODELING: HIGH EPISODE 2006 RESULTS (RUN H)	271
	APPENDIX F – URBAN AIRSHED MODELING: HIGH EPISODE 2012 RESULTS (RUN L)	330
	APPENDIX G – URBAN AIRSHED MODELING: HIGH EPISODE 2013 RESULTS (RUN O)	390
	APPENDIX H – CAL3QHC MODELING	450

APPENDIX I - FEDERAL REGISTER: MARCH 10, 1997 (VOLUME 62, NUMBER 46).....	537
APPENDIX J – TEMPORAL DISTRIBUTION OF EMISSIONS.....	555
APPENDIX K – SECTION 110 OF THE CLEAN AIR ACT	561

List of Tables

Table 1. Emission inventories for the Denver carbon monoxide Urban Airshed Modeling. ⁽¹⁾	15
Table 2. Demographic data used to develop emission inventories (modeling domain).	16
Table 3. 2006/2013 Residential Woodburning Carbon Monoxide Emission Inventory.	17
Table 4. 2006 Fireplace Emission Rate Variables/Results.	18
Table 5. 2013 Fireplace Emission Rate Variables/Results.	18
Table 6. 2006 Stove Device Calculations.	20
Table 7. 2013 Stove Device Calculations.	20
Table 8. 2006 Stove Emission Calculation Variables/Results.	21
Table 9. 2013 Stove Emission Calculation Variables/Results.	21
Table 10 . Daily VMT totals in the Denver-Boulder carbon monoxide Denver-Boulder Carbon Monoxide Nonattainment Area.	22
Table 11 . VMT totals in the Denver-Boulder carbon monoxide Urban Airshed Modeling domain.	23
Table 12. Input file in the EPA RSD model to generate the 80% credit file.	26
Table 13. Data used in model year calculations of eligible vehicles.	27
Table 14 . On-road mobile source emission estimates in tons per day (tpd) in the Denver-Boulder carbon monoxide Urban Airshed Modeling domain.	28
Table 15 . On-road mobile source emission estimates in tons per day (tpd) in the Denver-Boulder Carbon Monoxide Nonattainment Area.	29
Table 16 . Ranking of Denver carbon monoxide episodes - 1988 through 1991 – as determined for the approved CO SIP.	38
Table 17. Denver metropolitan area Urban Airshed Modeling Domain.	40
Table 18. Carbon monoxide monitoring sites used in the UAM and CAL3QHC modeling study for the Denver CO SIP.	64
Table 19. EPA's recommended statistical performance measures for the "high" episode.	72
Table 20. Comparison of modeled vs. observed CO 8-hour average concentrations for the "high" episode (Run A) - December 5, 1988.	72
Table 21. Combined UAM and CAL3QHC estimates for "high" episode - Run H: Enhanced Inspection/Maintenance 240 with new vehicles exempted for their first four years; 1.5% oxygenated gasoline; evaluation of up to 80% of the fleet with Remote Sensing Devices (80% RSD).	83
Table 22. Combined UAM and CAL3QHC estimates for "high" episode - Run L: Enhanced Inspection/Maintenance 240 with new vehicles exempted for their first four years; 1.5% oxygenated gasoline; evaluation of up to 80% of the fleet with Remote Sensing Devices (80% RSD).	85

Table 23. Combined UAM and CAL3QHC estimates for "high" episode - Run O: Enhanced Inspection/Maintenance 240 with new vehicles exempted for their first four years; 1.7% oxygenated gasoline; evaluation of up to 80% of the fleet with Remote Sensing Devices (80% RSD).....	87
Table 24. 1997 Carbon Monoxide Data Summary for the Denver metropolitan area.....	91
Table 25. 1998 Carbon Monoxide Data Summary for the Denver metropolitan area.....	92
Table 26. 1999 Carbon Monoxide Data Summary for the Denver Metropolitan Area (through June).....	92
Table 27. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Welby, Highland.....	101
Table 28. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Longmont, Boulder2 - YMCA.	102
Table 29. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Boulder Marine St., Denver CAMP.	103
Table 30. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Denver NJH, Denver Carriage.....	104
Table 31. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Denver Speer & Auraria, Arvada.	105
Table 32. Temporal allocation factors used to distribute AM-Peak, PM-Peak, and Off-Peak on-road mobile emissions for 2006 and 2013.	559

List of Figures

Figure 1. Denver Metropolitan Area CO Modeling and Nonattainment Boundary	10
Figure 2. Shaded relief map showing the topography in the Denver area	12
Figure 3. Air quality modeling process. The meteorological files and preprocessor files from the CO SIP are the basis of the UAM maintenance plan modeling	36
Figure 4. Meteorological sites	42
Figure 5. Wind/Carbon Monoxide Roses at the Arvada Site	66
Figure 6. Wind direction and UAM performance as a function of time	67
Figure 7. One-hour time series plots at CAMP and Welby	73
Figure 8. One-hour time series plots at Carriage and NJH	74
Figure 9. Eight-hour time series plots at CAMP and Welby	75
Figure 10. Eight-hour time series plots at Carriage and NJH	76
Figure 11. Eight-hour isopleths from the Urban Airshed Model	77
Figure 12. One-hour isopleths from the Urban Airshed Model	78
Figure 13. Urban Airshed Model Results for 2006 (simulation "H")	84
Figure 14. Urban Airshed Model Results for 2012 (simulation "L")	86
Figure 15. Urban Airshed Model Results for 2013 (simulation "O")	88
Figure 16. Active carbon monoxide monitoring sites	90
Figure 17. Historic trends in ambient CO concentrations at Welby and Highland	93
Figure 18. Historic trends in ambient CO concentration at Boulder (28 th St.) and Longmont ...	94
Figure 19. Historic trends in the ambient CO concentration at AMP) and Boulder (Marine) ...	95
Figure 20. Historic trends in the ambient CO concentration at Denver Carriage and NJH	96
Figure 21. Historic trends in the ambient CO concentration at Arvada and Speer/Auraria	97

1. Introduction

This document presents the emissions and air quality modeling methodologies and results on which the Denver carbon monoxide redesignation request and maintenance plan are based. It also presents a summary of carbon monoxide monitoring data for 1997, 1998, and 1999. It supports the Regional Air Quality Council (RAQC) and the State of Colorado request that EPA redesignate the Denver metropolitan carbon monoxide (CO) nonattainment area to attainment status for the CO National Ambient Air Quality Standards (NAAQS). The Denver metropolitan area has been designated as a CO nonattainment area since the 1970's but has not violated the standard since 1995, making the area eligible for redesignation.

The maintenance plan section of this document demonstrates that the area will be able to maintain the NAAQS through the year 2013. The contingency plan that will be implemented if a violation of the standard occurs in the future is presented in a separate document – “Proposed Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area.” The documentation presented here is designed to comply with requirements of the federal Clean Air Act (CAA), relevant procedures and policies of the U.S. Environmental Protection Agency (EPA), and Colorado state law.

1.1. Background

1.1.1. National Ambient Air Quality Standards for Carbon Monoxide

The EPA has two standards for CO, a rolling 8-hour average concentration of 9.0 parts per million (ppm), and a 1-hour concentration of 35 ppm. The CO NAAQS allows for no more than one exceedance of either standard in each calendar year. A violation occurs when two or more exceedances of the standard are recorded during a calendar year.

1.1.2. Health Effects of Carbon Monoxide

Carbon monoxide is a colorless, odorless, tasteless gas that enters the body through the lungs where it is absorbed by the bloodstream and then combines with hemoglobin in the red blood cells. Hemoglobin is the compound in the red blood cells that normally picks up oxygen from the lungs and carries it to the tissues. In the lungs, CO competes with oxygen for available hemoglobin. When CO binds with hemoglobin, it forms carboxyhemoglobin (COHb). Carbon monoxide attaches to hemoglobin much more readily than does oxygen. Once attached it does not disassociate from the hemoglobin as easily as oxygen. As a result, COHb levels can continue to increase in the bloodstream and the amount of oxygen being distributed throughout the body is reduced.

Blood containing CO can weaken heart contractions, lowering the blood volume being distributed through the body. Effects include fatigue, dizziness, headaches, loss of visual acuity, and mental confusion. Individuals with cardiovascular or chronic obstructive pulmonary disease, pregnant women, and children are at greatest risk from exposure to CO. Carbon monoxide also affects the central nervous system by depriving it of oxygen. Therefore, even healthy individuals can experience adverse effects from CO exposure, such as a reduced ability to concentrate. Carbon monoxide exposure in high altitude environments like the Denver area can present a greater risk because of the lower levels of oxygen present in the atmosphere.

1.1.3. Denver Carbon Monoxide Area Designation History

The Denver metropolitan area was originally designated as nonattainment for CO under provisions of the 1977 CAA Amendments. This designation was reaffirmed by the 1990 CAA Amendments, and the Denver area was classified as a moderate CO nonattainment area. The Denver metropolitan area was then reclassified as a “serious” nonattainment area by EPA in 1997 for failing to demonstrate attainment of the CO standard by the December 31, 1995 deadline for moderate areas.

The CO standard has not been violated in the metro area since 1995, making the area eligible to submit this request for redesignation to attainment status for the CO NAAQS.

1.1.4. Denver Metropolitan Attainment/Maintenance Area

The six-county Denver metro area is characterized by a broad valley along the South Platte River. The terrain to the east of the region is dominated by gently rolling plains while the Front Range foothills of the Rocky Mountains dominate the west. The elevation of downtown Denver is 5,280 feet above sea level, with somewhat higher elevations in some suburban areas.

The boundaries of the metro Denver nonattainment area are defined in Colorado's Ambient Air Quality Standards Regulation. Once redesignated, these will become the boundaries of the attainment/maintenance area. The area includes the entire City and County of Denver; those portions of Adams and Arapahoe counties west of Kiowa Creek, the portion of Douglas County below 6,000 feet, the portion of Jefferson County below 6,000 feet but including the US-6, I-70, and US-285 highway corridors; and the southeast portion of Boulder County below 6,000 feet (see Figure 1). The City of Longmont in Boulder County is a separate carbon monoxide nonattainment area. The legal description of the area follows:

Start at Colorado Highway 52 where it intersects the eastern boundary of Boulder County; Follow Highway 52 west until it intersects Colorado Highway 119; Follow northern boundary of Boulder city limits west to the 6000- ft. elevation line; Follow the 6000- ft.

elevation line south through Boulder and Jefferson Counties to US 6 in Jefferson County; Follow US 6 west to the Jefferson County-Clear Creek County line; Follow the Jefferson County western boundary south for approximately 16.25 miles; Follow a line east for approximately 3.75 miles to South Turkey Creek; Follow South Turkey Creek northeast for approximately 3.5 miles; Follow a line southeast for approximately 2.0 miles to the junction of South Deer Creek Road and South Deer Creek Canyon Road; Follow South Deer Creek Canyon Road northeast for approximately 3.75 miles; Follow a line southeast for approximately five miles to the northern-most boundary of Pike National Forest where it intersects the Jefferson County-Douglas County line; Follow the Pike National Forest boundary southeast through Douglas County to the Douglas County-El Paso County line; Follow the southern boundary on Douglas County east to the Elbert County line; Follow the eastern boundary of Douglas County north to the Arapahoe County line; Follow the southern boundary of Arapahoe County east to Kiowa Creek; Follow Kiowa Creek northeast through Arapahoe and Adams Counties to the Adams-Weld County line; Follow the northern boundary of Adams County west to the Boulder County line; Follow the eastern boundary of Boulder County north to Highway 52.

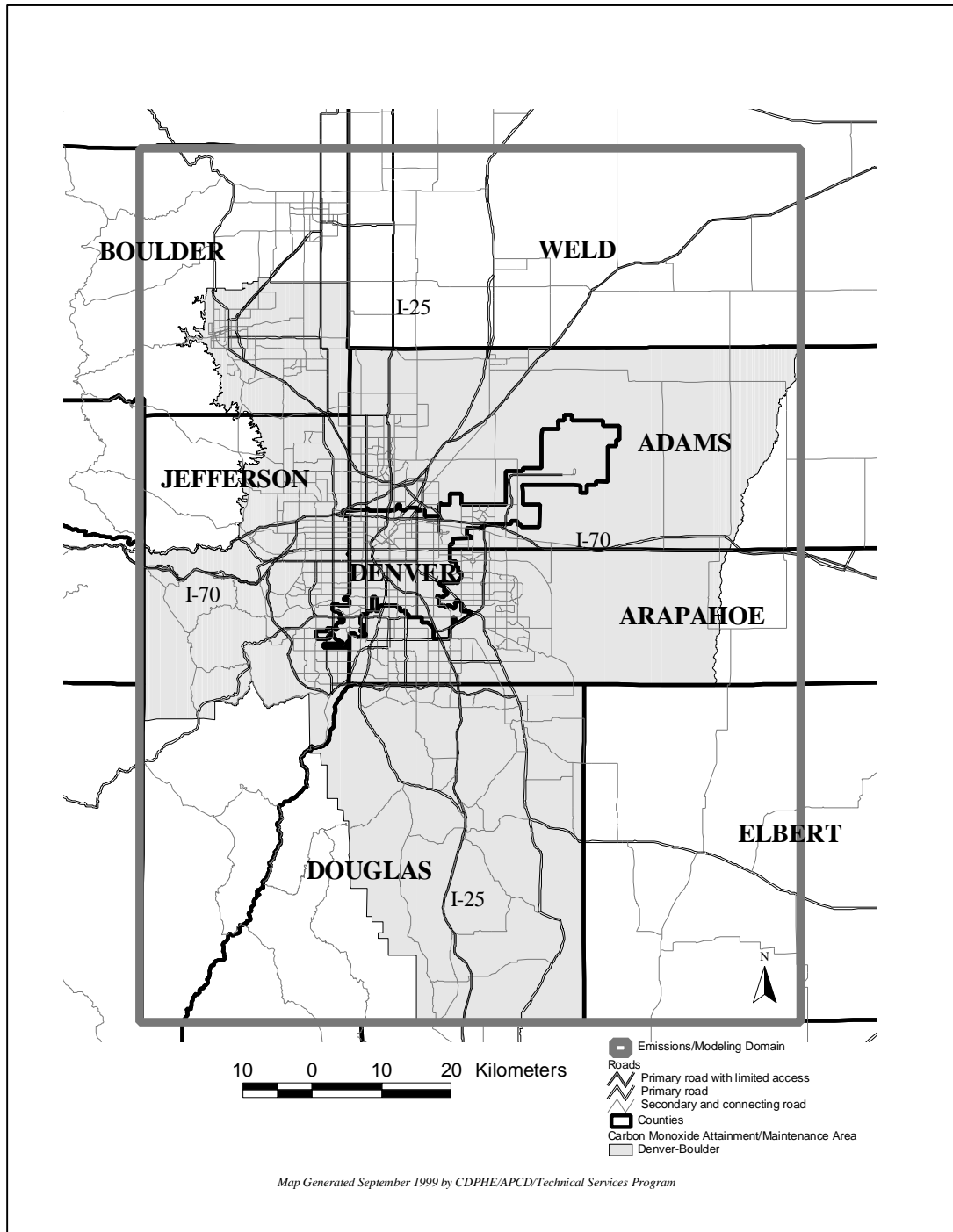


Figure 1 . Denver metropolitan area carbon monoxide (CO) Urban Airshed Model (UAM) domain and the Nonattainment Area (NAA) boundary. Once the NAA is redesignated for CO, the NAA is known as the Attainment/Maintenance Area.

1.1.5. Topography, Climate, and Air Quality Meteorology

The climate of the Denver metropolitan area is strongly affected by local and regional topographic features. Denver is situated in the plains along the South Platte River Valley approximately 80 kilometers (50 miles) east of the Continental Divide. The Rocky Mountains rise to an elevation of about 3200 to 4300 meters (10500 to 14200 feet) just to the west of the city.

The meteorological site at Denver's closed Stapleton International Airport is at an elevation of about 1611 meters (5285 feet), the meteorological site at the new Denver International Airport is at an elevation of about 1650 meters (5412 feet). Greeley, which is north of Denver in the South Platte River Valley, is at an elevation of about 1400 meters (4600 feet). About 112 kilometers (70 miles) north of Denver is an east-west rise of land called the Cheyenne Ridge. It is roughly 1800 -2000 meters (6000 to 6500 feet) in elevation. About 25 miles to the south is another east-west running ridge called the Palmer Divide which rises to 1800-2300 meters (5900 to 7500 feet). These features form a three-sided basin and work in concert to influence airflow patterns and climate in the Denver metropolitan area, as shown in Figure 2.

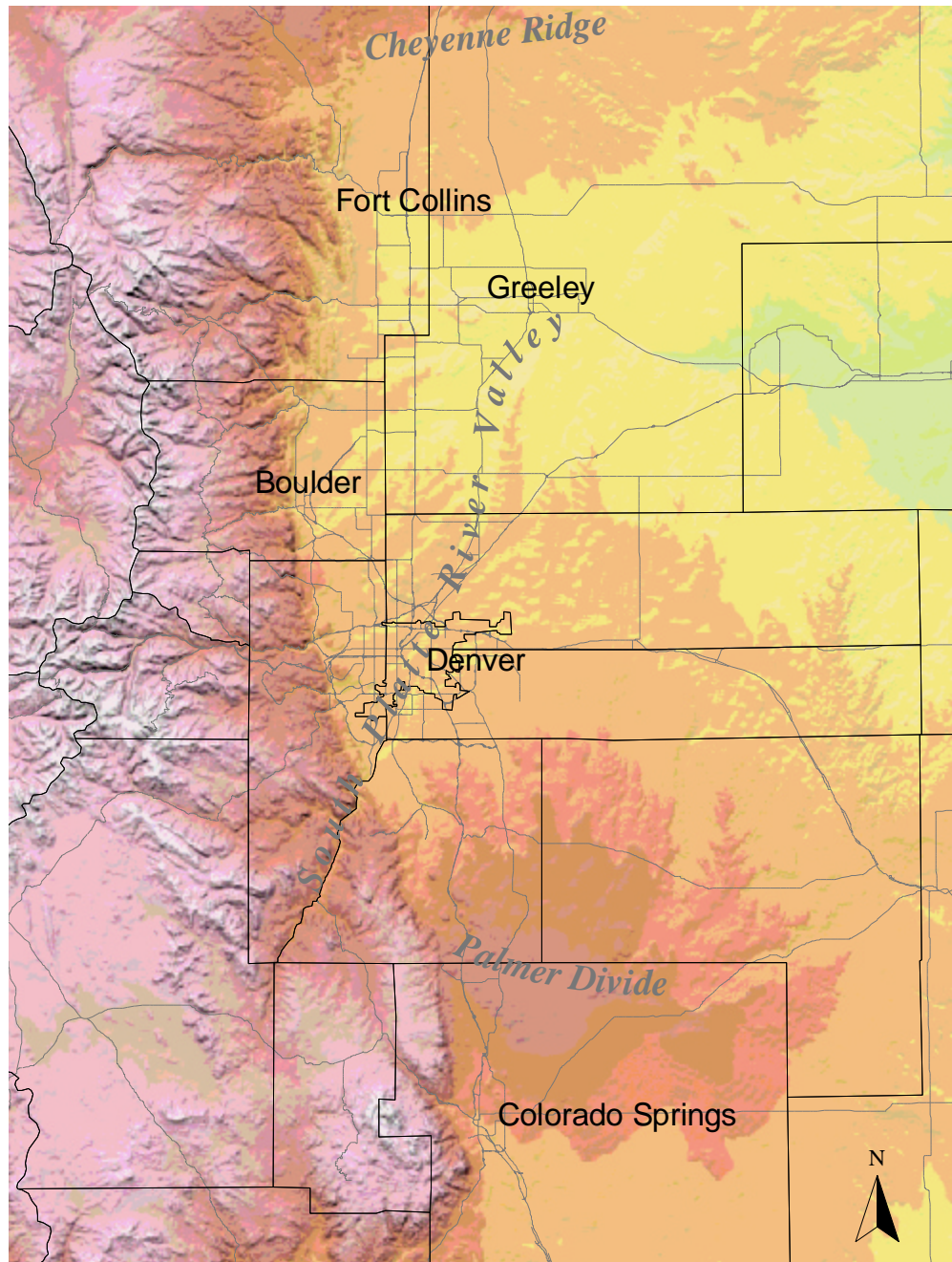


Figure 2. Shaded relief map showing the topography in the Denver area.

On average, Denver experiences low relative humidity, light precipitation, and abundant sunshine. Moisture from the Pacific must travel a long distance and over several high mountain barriers. Gulf moisture must be driven up-slope, and against the prevailing westerly winds aloft.

From 8/1/1948 to 12/31/1998, Denver's annual average maximum temperature is 17.9EC (64.2EF), the annual average minimum is 2.6EC (36.6EF), and the normal daily mean temperature is 10.2EC (50.3EF). The city receives an average of 15.6 inches of total precipitation per year and an average total snowfall of 61.9 inches of snowfall. Denver receives an average of 70 percent of the possible sunshine during the year.

The prevailing wind direction in the South Platte River Valley is out of the south. The direction of the prevailing wind is a result of frequent evening, nighttime, and morning drainage wind off of the mountains and the Palmer Divide. These winds are channeled along the Platte River Valley. The other frequent wind direction is from the north. The relatively high frequency of winds from the north is the result of flow up-valley channeled along the Platte River Valley.

Local and regional topography greatly influences not only the climate, but also the dispersion of CO. In a paper written in 1989¹, W. D. Neff identified five flow regimes which impact the dispersion of the Denver "brown cloud." Of the five, stagnation is the main one associated with elevated concentrations of CO.

W. D. Neff suggests that "stagnation periods, those with relatively light and variable winds, usually occur following a period of upvalley flow of a cold air mass. In this cycle, large-scale pressure gradient forces cause a layer of cold air that has accumulated in the lowlands to move uphill towards the foothills. As this dense air mass follows the slope, an internal pressure force develops that begins to counteract the external one. For this reason the air mass may slow down as it approaches the mountains and a period of stagnation follows. When the forces involved are fairly weak, this process will be relatively gentle and the period of calm following the return flow may last many hours. However, in cases where the initial motion towards the foothills shows more vigor, the cold air will tend to overshoot and then flow back away from the foothills. In Denver, for example, one often observes a return flow carrying pollutants to the southwest through the city, a short period of relative calm, and then an outflow as the air moves back into the lowlands."²

The Air Pollution Control Division has forecast winter season high pollution events for more than a decade. This effort has been supported by significant field study and research by scientists with the National Oceanic and Atmospheric Administration (NOAA) Wave Propagation Laboratory. This research indicates that patterns of flow and their

interaction in the region can be complex. Fortunately, these patterns have been well documented and provide a basis for understanding air quality climatology, thus assisting in formulating and evaluating air quality modeling efforts.

1.2. Requirements For Redesignation

Sections 107(d)(3)(D) and (E) of the CAA define the five required components of a redesignation request and maintenance plan. The five required components are addressed in detail in a separate document – “Proposed Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver metropolitan area.”

1.2.1. Attainment of the Standard

The State must show that the area has attained the CO NAAQS. This demonstration must be based on monitoring data representative of the location of the expected maximum concentrations of CO in the area.

1.2.2. State Implementation Plan Approval

The State must demonstrate that it has a fully approved CO SIP Element for the Denver metropolitan area under Section 110(k) of the CAA.

1.2.3. Improvement in Air Quality Due to Permanent and Enforceable Emissions Reductions

The State must demonstrate that the improvement in air quality leading to redesignation is due to permanent and federally enforceable emissions reductions.

1.2.4. CAA Section 110 and Part D Requirements

The State must meet all requirements of Section 110 and Part D of the CAA. Section 110 describes general requirements for SIPs, while Part D pertains to general requirements applicable to all nonattainment areas. Refer to Appendix K – Section 110 of the Clean Air Act – for additional details.

1.2.5. Maintenance Plan

The State must have a fully approved CO maintenance plan that meets the requirements of CAA Section 175A, including a demonstration that the area will maintain the standard for a period of at least 10 years following redesignation by EPA. The plan must also contain contingency measures that could be implemented if a violation of the standard is monitored at any time during the maintenance period.

2. Emission Inventories

2.1. Emission Inventories Used in the Urban Airshed Model

Table 1 summarizes the inventories used in the approved CO SIP and in the 2006 and 2013 maintenance plan modeling. In the following table and elsewhere in this document, the precision of the results is not intended to imply a level of accuracy.

Table 1. Emission inventories for the Denver carbon monoxide Urban Airshed Modeling.⁽¹⁾

Source Category	2001 Attainment SIP Inventory (tons per day)	2006 Interim Year Inventory (tons per day)	2013 Maintenance Year Inventory (tons per day)
Surface Point Sources ⁽²⁾	44.6	21.1	21.1
Elevated Point Sources ⁽³⁾	25.6	25.6	25.6
Woodburning	50.6	32.8	25.8
Natural Gas	7.1	9.1	10.0
Structural Fires	3.9	5.0	5.5
Agriculture Equip.	0.3	0.3	0.3
Airport - Aircraft	16.3	22.3	24.4
Airport Service Equip.	7.6	7.2	7.7
Construction Equip.	9.9	7.9	8.1
Industrial Equip.	25.1	22.8	23.7
Light Commercial Equip.	136.6	125.9	131.3
Helicopters	0.4	0.4	0.4
Railroads	0.3	0.3	0.3
On-Road Mobile	875.2	844.7	867.2
TOTAL	1203.5	1125.4	1151.4

(1) The precision of the estimates is not intended to imply a level of accuracy.

(2) Point source reduction is due to use of actual instead of allowable emissions for surface point sources.

(3) Elevated point sources have been modeled with potential-to-emit, as done in the approved CO SIP (CDPHE, 1994).

2.2. Demographic and Transportation Data

The Vehicle Mile Traveled (VMT) estimates are based on the Urban Transportation Planning System (UTPS) model run by the Denver Regional Council of Governments (DRCOG). Refer to the appendix of Chapter 7 of the approved Denver CO SIP Technical Support Document (CDPHE, 1994) for a description of the travel demand forecasting process.

In mid-1999, DRCOG updated growth projections for the region. The latest projections for population, households, and employment through 2020 are substantially higher than the previous estimate. At this time, updated transportation and demographic data sets incorporating these new projections are not available. In order to avoid understating the demographic and VMT numbers in this maintenance plan, the RAQC and the APCD were advised by DRCOG to use the current 2011 data sets as representative of 2006 and the current 2020 projections (plus 3.7%) as representative of 2013. The following table shows the 2006 and 2013 demographic and VMT data used to develop the maintenance plan emission inventories. It also presents current 2001 estimates along with the 2001 estimates made in the early 1990's for the CO SIP.

Table 2. Demographic data used to develop emission inventories (modeling domain).

Period	Population	Households	Employment	Daily VMT
2001 (SIP estimate)	2,021,000	838,000	1,181,000	51,796,000
2001 (Current estimate)	2,364,000	970,000	1,415,500	58,156,000
2006	2,616,000	1,097,000	1,568,000	66,760,000
2013	2,889,000	1,244,000	1,718,000	77,187,000

2.3. Residential Woodburning

A survey of Denver metropolitan area woodburning devices and habits was conducted in 1988 by Community Response. Information from this survey was used to formulate an estimate of residential woodburning emissions for the UAM modeling for the Denver-Metro design day evaluation (December 5, 1988). Subsequent to the Community Response Survey, another survey of Denver metropolitan area woodburning devices and habits was conducted in 1991 by R. Bruce Hutton, Ph.D and Steven W. Hartley, Ph.D. This survey was the basis for the residential woodburning used in the 2001 UAM attainment demonstration as well as all other woodburning emission estimates subsequent to 1991. The following calculation of residential woodburning carbon monoxide emissions for 2006 and 2013 result directly from the Hutton survey as it was applied to the 1996 and 2001 inventories developed for the Colorado Carbon Monoxide State Implementation submission in 1994.

Table 3. 2006/2013 Residential Woodburning Carbon Monoxide Emission Inventory.

Source Type	Year	Emission Estimates		
		(Grams/season)	(tons/season)	(tons/design day)
Fireplaces	2006	3097317779.4	3414.15	14.68
Stoves	2006	3811651428.5	4201.56	18.07
Fireplaces	2013	2007523881.9	2212.88	9.52
Stoves	2013	3428823840.7	3779.57	16.25
Note: tons/season to tons/design day factor = .0043. This factor is based on the fraction of the 1988-1989 heating season heating degree-days that occurred on December 5, 1988. This is documented in the Carbon Monoxide State Implementation Plan Technical Support Document (CDPHE, 1994). The precision of the estimates is not intended to imply a level of accuracy.				

2.3.1. Fireplaces emissions calculations (grams/household)

2.3.1.1. Variable Definition

Variables used in fireplace emission calculations follow:

fp_06 = number of fireplaces in region
 fp_06-co = CO grams/HH rate of fireplace emissions
 fp_13 = number of fireplaces in region
 fp_13-co = CO grams/HH rate of fireplace emissions
 fp-use = percent of devices in use
 fp-cords = cords burned per year
 kilograms of wood per cord = 1100
 fireplace emission rate = 61.1 grams/KG of wood burned

2.3.1.2. Number of Woodburning fireplaces

It is assumed that the population of conventional fireplaces is replaced with gas devices at the rate of 6% percent, compounded per year:

$$fp06 = (1996 \text{ fireplaces}) * (0.54)$$

where $0.54 = 0.94^{10}$ or 6% reduction, compounded per year

$$fp13 = 1996 \text{ fireplaces} * .35$$

where $0.35 = .94^{17}$ or 6% reduction, compounded per year

2.3.1.3. Fireplace emissions

The equations used for the 2006 and 2013 fireplace emission calculations follow:

$$fp06\text{-co} = (fp06 * fp\text{-use} * fp\text{-cords} * 61.1 * 1100.) / hh06$$

$$fp13\text{-co} = (fp13 * fp\text{-use} * fp\text{-cords} * 61.1 * 1100.) / hh13$$

Table 4. 2006 Fireplace Emission Rate Variables/Results.

Region	FP96	FP06	FP-USE	FP-CORDS	HH06	FP06-CO (grams/HH-season)
1	42,540	22,972	0.620	0.517	132,392.0	3,738
2	23,150	12,501	0.600	0.926	139,505.0	3,346
3	13,520	7,301	0.720	0.582	61,520.0	3,342
4	14,692	7,934	0.760	0.470	61,033.0	3,121
5	631	341	0.620	1.300	15,432.0	1,196
6	2,098	1,133	0.330	0.927	17,377.0	1,340
7	4,101	2,215	0.370	0.919	35,114.0	1,441
8	8,747	4,724	0.480	0.804	59,065.0	2,074
9	25,909	13,991	0.610	0.537	132,820.0	2,319
10	18,935	10,225	0.630	0.999	160,784.0	2,690
11	3,307	1,786	0.560	0.999	20,063.0	3,480
12	11,393	6,152	0.720	0.644	44,269.0	4,331
13	8,810	4,757	0.670	1.018	59,397.0	3,671
14	3,584	1,935	0.840	0.710	34,704.0	2,235
15	13,343	7,205	0.615	0.762	123,478.0	1,838

Table 5. 2013 Fireplace Emission Rate Variables/Results.

Region	FP13	FP-USE	FP-CORDS	HH13	FP13-CO (grams/HH-season)
1	14,889	0.620	0.517	143,172.40	2,240.4
2	8,102	0.600	0.926	160,082.70	1,890.0
3	4,732	0.720	0.582	65,183.75	2,044.5
4	5,142	0.760	0.470	65,510.40	1,884.4
5	221	0.620	1.300	18,121.57	660.0
6	734	0.330	0.927	18,832.96	801.5
7	1,435	0.370	0.919	47,308.98	693.4
8	3,062	0.480	0.804	63,503.80	1,250.5
9	9,068	0.610	0.537	140,626.50	1,419.7
10	6,627	0.630	0.999	188,682.20	1,485.7
11	1,157	0.560	1.039	22,338.02	2,026.1
12	3,987	0.720	0.644	46,628.70	2,664.9
13	3,083	0.670	1.018	68,564.37	2,061.5
14	1,254	0.840	0.710	42,407.08	1,185.7
15	4,670	0.615	0.762	152,896.30	962.0

2.3.2. 2006 and 2013 Stove Device Emission Calculations

2.3.2.1. Variable Definition

Variables used in the stove device emission calculations follow:

conv06, conv13 = 2006 and 2013 conventional stoves

ci06, ci13 = 2006 and 2013 phase I stoves

cii06, cii13 = 2006 and 2013 phase II stoves

ciii06, ciii13 = 2006 and 2013 phase III stoves

stv-var = percentage of the 1300 Phase III allocated to the region

stv-use = percentage of stove devices that are in use

Stv-cords = cords of wood burned each season

conv06-co, conv13-co = 2006, 2013 CO grams/HH rate of conventional stove emissions

ci06-co, ci13-co = 2006 and 2013 CO grams/HH rate of phase I stove emissions

cii06-co, cii13-co = 2006 and 2013 CO grams/HH rate of phase II stove emissions

ciii06-co, ciii13-co = 2006 and 2013 CO grams/HH rate of phase III stove emissions

conventional stove CO emission rate = 115.4 gram/Kg of wood burned

phase I stove CO emission rate = 58.8

phase II stove CO emission rate = 48.7

phase III stove CO emission rate = 49.7

2.3.2.2. Device Calculations

Phase III stoves are added to the stove population at the rate of 1300 stoves per year. Eighty percent (80%) of these stoves replace the conventional stove population. Twenty percent (20%) of these phase III stoves are new to the population of phase III stoves. Eighty percent (80%) of new construction has a burning device; 95% of these devices are gas and 5% are Phase III devices. The variable 'stv-var' allocates the 1300 Phase III stoves to the various regions based on information from the survey. The population of Phase I and Phase II stoves remains static at 1991 levels since sales of those devices ceased prior to 1991.

The equations used for the 2006 stove device calculations follow:

$$\text{conv06} = \text{conv91} - (2006 - 1991) * 1300 * \text{stv-var} * .8$$

$$\text{ci06} = \text{ci91}$$

$$\text{cii06} = \text{cii91}$$

$$\text{ciii06} = \text{ciii91} + (2006 - 1991) * 1300 * \text{stv-var} * .2 + (\text{hh06} - \text{hh92}) * .8 * .05$$

Table 6. 2006 Stove Device Calculations.

Region	CONV91	CONV06	CI06	CII06	CIII06	STV-VAR
1	4,398	2,933	330	660	2,909	0.0939
2	2,314	1,544	342	684	2,094	0.0494
3	1,517	1,012	152	303	1,199	0.0324
4	787	525	0	0	1,465	0.0168
5	433	289	0	0	362	0.0092
6	0	0	54	108	62	0.0000
7	2,447	1,632	0	0	1,177	0.0522
8	4,578	3,054	281	563	1,984	0.0977
9	9,079	6,056	681	1,362	4,860	0.1938
10	5,792	3,864	0	0	5,078	0.1236
11	972	648	44	87	688	0.0207
12	3,002	2,002	0	0	1,908	0.0641
13	5,514	3,678	144	288	2,818	0.1177
14	3,057	2,039	102	204	1,648	0.0653
15	2,965	1,978	185	370	4,032	0.0633

The equations used for the 2013 stove device calculations follow:

$$\text{conv13} = \text{conv91} - (2013 - 1991) * 1300 * \text{stv-var} * .8$$

$$\text{conv13} = \text{conv91} - (2013 - 1991) * 1300 * \text{stv-var} * .8$$

$$\text{calc ci13} = \text{ci91}$$

$$\text{calc cii13} = \text{cii91}$$

$$\text{ciii13} = \text{ciii91} + (2013 - 1991) * 1300 * \text{stv-var} * .2 + (\text{hh13} - \text{hh92}) * .8 * .05$$

Table 7. 2013 Stove Device Calculations.

Region	CONV91	CONV13	CI13	CII13	CIII13	STV-VAR
1	4,398	2,250	330	660	2,157	0.0939
2	2,314	1,184	342	684	2,351	0.0494
3	1,517	776	152	303	950	0.0324
4	787	403	0	0	1,413	0.0168
5	433	222	0	0	342	0.0092
6	0	0	54	108	139	0.0000
7	2,447	1,252	0	0	945	0.0522
8	4,578	2,342	281	563	909	0.0977
9	9,079	4,645	681	1,362	2,729	0.1938
10	5,792	2,964	0	0	4,490	0.1236
11	972	497	44	87	508	0.0207
12	3,002	1,536	0	0	1,119	0.0641
13	5,514	2,822	144	288	1,611	0.1177
14	3,057	1,564	102	204	1,091	0.0653
15	2,965	1,517	185	370	4,398	0.0633

2.3.2.3. Stove Emissions calculations

The equations used to estimate stove emissions for 2006 follow:

$$\text{conv06-co} = (\text{conv06} * \text{stv-use} * \text{stv-cords} * 1100. * 115.4) / \text{hh06}$$

$$\text{ci06-co} = (\text{ci06} * \text{stv-use} * \text{stv-cords} * 1100. * 58.8) / \text{hh06}$$

$$\text{cii06-co} = (\text{cii06} * \text{stv-use} * \text{stv-cords} * 1100. * 48.7) / \text{hh06}$$

$$\text{ciiii06-co} = (\text{ciiii06} * \text{stv-use} * \text{stv-cords} * 1100. * 49.7) / \text{hh06}$$

Table 8. 2006 Stove Emission Calculation Variables/Results.

Region	STV-USE	STV-CORDS	CONV06-CO	CI06-CO	CII06-CO	CIIII06-CO
1	0.330	0.250	232	13	22	99
2	0.554	1.179	917	104	172	536
3	0.750	0.525	822	63	104	419
4	1.000	0.352	384	0	0	462
5	1.000	1.036	2,462	0	0	1,330
6	0.554	1.179	0	131	217	128
7	0.400	0.300	708	0	0	220
8	0.670	0.675	2,968	139	231	831
9	0.700	1.160	4,700	269	446	1,624
10	0.750	1.510	3,454	0	0	1,955
11	0.860	0.669	2,359	81	134	1,079
12	1.000	1.913	10,983	0	0	4,507
13	0.550	1.299	5,617	112	185	1,853
14	0.720	1.150	6,177	157	261	2,149
15	0.638	0.950	1,232	59	97	1,082

The equations used to estimate stove emissions for 2013 follow:

$$\text{conv13-co} = (\text{conv13} * \text{stv-use} * \text{stv-cords} * 1100. * 115.4) / \text{hh13}$$

$$\text{ci13-co} = (\text{ci13} * \text{stv-use} * \text{stv-cords} * 1100. * 58.8) / \text{hh13}$$

$$\text{cii13-co} = (\text{cii13} * \text{stv-use} * \text{stv-cords} * 1100. * 48.7) / \text{hh13}$$

$$\text{ciiii13-co} = (\text{ciiii13} * \text{stv-use} * \text{stv-cords} * 1100. * 49.7) / \text{hh13}$$

Table 9. 2013 Stove Emission Calculation Variables/Results.

Region	STV-USE	STV-CORDS	CONV13-CO	CI13-CO	CII13-CO	CIIII13-CO
1	0.330	0.250	165	12.3	20.4	68.0
2	0.554	1.179	613	90.2	149.5	524.3
3	0.750	0.525	595	59.3	98.2	313.6
4	1.000	0.352	275	0.0	0.0	415.0
5	1.000	1.036	1,608	0.0	0.0	1,070.4
6	0.554	1.179	0	120.7	199.9	262.8
7	0.400	0.300	403	0.0	0.0	131.0
8	0.670	0.675	2,118	129.6	214.6	354.1
9	0.700	1.160	3,405	254.3	421.2	861.4
10	0.750	1.510	2,258	0.0	0.0	1,473.5
11	0.860	0.669	1,625	72.6	120.2	715.7
12	1.000	1.913	7,998	0.0	0.0	2,510.3
13	0.550	1.299	3,732	97.0	160.6	917.6
14	0.720	1.150	3,877	128.7	213.2	1,164.1
15	0.638	0.950	763	47.4	78.5	953.1

2.4. On-Road Mobile Sources

Estimates for carbon monoxide (CO) emissions from on-road mobile sources are based on the Environmental Protection Agency (EPA) Mobile Source Emissions Model – MOBILE5b.

2.4.1. Control Strategy Recommendations

Regional Air Quality Commission Mobile Source Carbon Monoxide Control Strategy Recommendation for 2006 and 2013:

- I/M 240 program with newest 4 model-year exemption
- 1.5% oxygenated fuel program for 2006; 1.7 % oxygenated fuel program for 2013
- 80% Remote Sensing Device (RSD) program

2.4.2. Vehicle Miles Traveled (VMT)

The DRCOG 1999-2004 Transportation Improvement Conformity networks were utilized as the basis for the vehicle miles traveled (VMT) estimates. DRCOG has revised population and household growth estimates since this TIP Conformity analysis was complete in August 1998. Incorporating the revised growth rates results in 2006 and 2013 VMT estimated as follows:

- 2006 magnitude and distribution of VMT in the Denver-Boulder NAA represented by 2011 DB Network 2020 AC
- 2013 magnitude and distribution of VMT in the Denver-Boulder NAA represented by 2020 AC Network multiplied by a factor on 1.037

The VMT totals are summarized in the following two tables.

Table 10 . Daily VMT totals in the Denver-Boulder carbon monoxide Denver-Boulder Carbon Monoxide Nonattainment Area.

Year	AM Peak	PM Peak	Off-Peak	Total
2006	9,441,436	21,234,530	31,012,298	61,688,264
2013	10,740,302	24,222,119	36,304,514	71,266,935

Table 11 . VMT totals in the Denver-Boulder carbon monoxide Urban Airshed Modeling domain.

Year	AM Peak	PM Peak	Off-Peak	Total
2006	10,179,724	22,873,759	33,706,082	66,759,564
2013	11,582,081	26,104,812	39,499,790	77,186,683

The tabular summaries of vehicle miles traveled by area type and functional classification and the ten peak periods are included in Appendix A.

2.4.3. Mobile5b Emission Factor Modeling

Elements of Mobile5b Emission Factor Modeling:

- I/M 240 program with newest four model years exempt
- 1.5% oxygenated fuel program in 2006; 1.7 % oxygenated fuel program in 2013
- 80% RSD program
- National Low Emitting Vehicle(NLEV) program commencing in 2001
- Mechanics training credit
- The most stringent cut-points available in Mobile5b for an I/M 240 program

2006 I/M 240 program on light duty gasoline powered vehicles is characterized as follows:

- Start year (January 1): 1982
- Pre-1981 MYR stringency rate: 20%
- First model year covered: 1982
- Last model year covered: 2002
- Waiver rate (pre-1981): 0%
- Waiver rate (1981 and newer): 0%
- Compliance Rate: 98%
- Inspection type: Test Only
- Inspection frequency: Biennial
- Vehicle types covered: LDGV LDGT1 LDGT2
- 1981 & later MYR test type: IM240 test
- Cutpoints: HC: 0.600 CO: 10.000 NOx: 1.500

2006 I/M 240 program on heavy duty gasoline powered vehicles is characterized as follows:

- Start year (January 1): 1982

- Pre-1981 MYR stringency rate: 20%
- First model year covered: 1982
- Last model year covered: 2002
- Waiver rate (pre-1981): 0%
- Waiver rate (1981 and newer): 0.0%
- Compliance Rate: 98.0%
- Inspection type Test Only
- Inspection frequency: Biennial
- Vehicle types covered: HDGV
- 1981 & later MYR test type: 2500 rpm / Idle
- Cutpoints: HC: 220.000 CO: 1.200 NOx: 999.000

Anti-tampering program in 2006 for all gasoline-powered vehicles is characterized as follows:

- Check: ATP
- Start Model Year: 1982
- Model Years Covered: 1975-2002
- Vehicle Classes Covered: LDGV LDGT1 LDGT2 HDGV
- Inspection Type: Test Only
- Frequency: Biennial
- Compliance Rate: 98.0%
- Air pump system disablement: Yes
- Catalyst removals: Yes
- Fuel inlet restrictor disablement: No
- Tailpipe lead deposit test: No
- EGR disablement: No
- Evaporative system disablement: No
- PCV system disablement: No
- Missing gas caps: Yes

2013 I/M Programs and Anti-tampering programs are characterized similarly.

2.4.4. NLEV Credit Estimate

The emission reduction affects of the National Low Emission Vehicle program on light-duty gas vehicles (LDGV) and light-duty truck 1 vehicles (LDGT1) was estimated for purposes of this analysis through two Mobile5b emission inventory runs. Mobile5b runs are made for high altitude as described above. In order to estimate the NLEV benefit on LDGV and LDGT1, a similar run was made for low altitude with the flags set to include the NLEV program starting in 2001. The emission factors for LDGV and

LDGT1 vehicles were taken from the low altitude mobile5b runs to replace the same emission factors from the high altitude runs. The composite (vehicle mix weighted) emission factor was then re-calculated. The FORTRAN algorithm used to accomplish these calculations is included in Appendix B.

2.4.5. RSD Program

RSD Modeling Inputs:

- RSD Fleet Coverage Option 2 (Commitment to vehicle coverage)
- Program type = 5 (Clean screening remote-sensing program)
- RSD cutpoint .5% CO, 200ppm HC
- RSD clean screening with I/M 240 final cutpoint effectiveness
- 2006 Vehicle Population of 2,459,748 (Based on 2 million vehicles in 1999 with 3% annual increase)
- Fleet subject to clean screen = 100%
- 80% Clean Screen (80% of vehicle population per vehicle age)
- Colorado's registration distribution

Table 12. Input file in the EPA RSD model to generate the 80% credit file.

000	Clean screen, vehicles projected 2006, 80% rsd
001	2 Commitment to vehicle coverage
002	5 Clean screening RSD
005	Imdata.d
007	Tech12.d
015	Im.d
017	Tech.d
034	2 ELIGIBLE CLEAN SCREEN PRE 75
035	2 ELIGIBLE CLEAN SCREEN 75-80
036	2 ELIGIBLE CLEAN SCREEN 81-85
037	2 ELIGIBLE CLEAN SCREEN 86-89
038	2 ELIGIBLE CLEAN SCREEN 90 +
039	4 RSD CUTPOINTS AND LEP VALUES (1=.5/200)
044	2 RSD FINAL CUTPOINT
000	NUMBER OF VEHICLES ELIGIBLE FOR CLEAN SCREEN
000	80% RSD
000	-----
201	120734 96587 TOTAL VEHICLES, VEHICLES ELIGIBLE 0-1
202	140985 112788 TOTAL VEHICLES, VEHICLES ELIGIBLE 1-2
203	134224 107379 TOTAL VEHICLES, VEHICLES ELIGIBLE 2-3
204	146707 117365 TOTAL VEHICLES, VEHICLES ELIGIBLE 3-4
205	155424 124339 TOTAL VEHICLES, VEHICLES ELIGIBLE 4-5
206	186547 149238 TOTAL VEHICLES, VEHICLES ELIGIBLE 5-6
207	180287 144230 TOTAL VEHICLES, VEHICLES ELIGIBLE 6-7
208	153722 122978 TOTAL VEHICLES, VEHICLES ELIGIBLE 7-8
209	146709 117367 TOTAL VEHICLES, VEHICLES ELIGIBLE 8-9
210	100218 80174 TOTAL VEHICLES, VEHICLES ELIGIBLE 9-10
211	131124 104899 TOTAL VEHICLES, VEHICLES ELIGIBLE 10-11
212	125860 100688 TOTAL VEHICLES, VEHICLES ELIGIBLE 11-12
213	108005 86404 TOTAL VEHICLES, VEHICLES ELIGIBLE 12-13
214	78572 62857 TOTAL VEHICLES, VEHICLES ELIGIBLE 13-14
215	67328 53863 TOTAL VEHICLES, VEHICLES ELIGIBLE 14-15
216	60739 48591 TOTAL VEHICLES, VEHICLES ELIGIBLE 15-16
217	58171 46536 TOTAL VEHICLES, VEHICLES ELIGIBLE 16-17
218	55307 44246 TOTAL VEHICLES, VEHICLES ELIGIBLE 17-18
219	52444 41955 TOTAL VEHICLES, VEHICLES ELIGIBLE 18-19
220	30823 24658 TOTAL VEHICLES, VEHICLES ELIGIBLE 19-20
221	24506 19605 TOTAL VEHICLES, VEHICLES ELIGIBLE 20-21
222	18254 14603 TOTAL VEHICLES, VEHICLES ELIGIBLE 21-22
223	11937 9550 TOTAL VEHICLES, VEHICLES ELIGIBLE 22-23
224	4885 3908 TOTAL VEHICLES, VEHICLES ELIGIBLE 23-24
225	1432 1145 TOTAL VEHICLES, VEHICLES ELIGIBLE 24-25

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Table 13. Data used in model year calculations of eligible vehicles.

VEHICLE COUNT FOR 2006 BASED ON 3% INCREASE PER YEAR 1999 = 2,000,000										
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
2010	2011									
2000000	2060000	2121800	2185454	2251018	2318548	2388105	2459748	2533540	2609546	2687833
2768468	2851522									
VMT WEIGHTED AVERAGE VEHICLE MIX FOR 2006										
LDGV	0.582	1431573								
LDGT1	0.221	543604								
LDGT2	0.104	255814								
HDGV	0.026	63953								
TOTALS		2294945								
VEHICLE AGE										
	LDGV*	LDGV	LDGT1*	LDGT1	LDGT2*	LDGT2	HDGV*	HDGV		GRAND
		TOTALS		TOTALS		TOTALS		TOTALS		TOTALS
1	0.049	70147	0.058	31529	0.058	14837	0.066	4221		120734
2	0.065	93052	0.055	29898	0.055	14070	0.062	3965		140985
3	0.067	95915	0.044	23919	0.044	11256	0.049	3134		134224
4	0.074	105936	0.047	25549	0.047	12023	0.05	3198		146707
5	0.08	114526	0.047	25549	0.047	12023	0.052	3326		155424
6	0.083	118821	0.078	42401	0.078	19953	0.084	5372		186547
7	0.082	117389	0.071	38596	0.071	18163	0.096	6140		180287
8	0.068	97347	0.065	35334	0.065	16628	0.069	4413		153722
9	0.065	93052	0.062	33703	0.062	15860	0.064	4093		146709
10	0.043	61558	0.045	24462	0.045	11512	0.042	2686		100218
11	0.058	83031	0.056	30442	0.056	14326	0.052	3326		131124
12	0.052	74442	0.06	32616	0.06	15349	0.054	3453		125860
13	0.045	64421	0.051	27724	0.051	13047	0.044	2814		108005
14	0.034	48673	0.035	19026	0.035	8953	0.03	1919		78572
15	0.028	40084	0.032	17395	0.032	8186	0.026	1663		67328
16	0.024	34358	0.031	16852	0.031	7930	0.025	1599		60739
17	0.021	30063	0.033	17939	0.033	8442	0.027	1727		58171
18	0.019	27200	0.033	17939	0.033	8442	0.027	1727		55307
19	0.017	24337	0.033	17939	0.033	8442	0.027	1727		52444
20	0.009	12884	0.021	11416	0.021	5372	0.018	1151		30823
21	0.007	10021	0.017	9241	0.017	4349	0.014	895		24506
22	0.005	7158	0.013	7067	0.013	3326	0.011	703		18254
23	0.003	4295	0.009	4892	0.009	2302	0.007	448		11937
24	0.001	1432	0.004	2174	0.004	1023	0.004	256		4885
25	0.001	1432	0	0	0	0	0	0		1432
	1	1431573	1	543604	1	255814	1	63953		2294945
* REGISTRATION DISTRIBUTION										

2.4.6. Oxygenated Fuel Program

The Mobile5b inputs through the LAP record reflect a 1.5% oxygenated fuel program in 2006 and a 1.7% oxygenated fuel program in 2013.

2.4.7. Mobile5b Scenario Inputs

The scenario section inputs reflect the same assumptions as were used for the Denver-Boulder Carbon Monoxide State Implementation Plan. The Mobile5b scenario section inputs for 2006 and 2013 are included in Appendix D as part on the Mobile5b input files. The vehicle speeds used as Mobile5b input result from the DRCOG Transportation Improvement Plan conformity analysis transportation network modeling. These speed are also included as part of the scenario section inputs.

2.4.8. Carbon Monoxide Emission Factors for 2006 and 2013

Appendix B includes the Mobile5b inputs and outputs for 2006 and 2013. Appendix C contains the resultant emission factors summarized by road class, area type and the ten peak periods.

2.4.9. Emission Inventory Calculations

The 2006 and 2013 carbon monoxide emission inventories in the Denver-Boulder Nonattainment area and in the Urban Airshed Modeling domain resultant from the emission factors and the VMT are summarized in the following tables. The 2006 and 2013 carbon monoxide emission inventories in the Carbon Monoxide Dispersion Modeling Domain and the Denver-Boulder Nonattainment Area are summarized by road class and area type in Appendix D.

Table 14 . On-road mobile source emission estimates in tons per day (tpd) in the Denver-Boulder carbon monoxide Urban Airshed Modeling domain.

Year	AM Peak	PM Peak	Off-Peak	Total
2006	189.23	275.80	379.62	844.65
2013	185.63	282.11	399.43	867.17

Table 15 . On-road mobile source emission estimates in tons per day (tpd) in the Denver-Boulder Carbon Monoxide Nonattainment Area.

Year	AM Peak	PM Peak	Off-Peak	Total
2006	178.22	259.01	346.41	783.64
2013	173.94	263.68	363.08	800.70

2.5. Non-Road Mobile Sources

The EPA NONROAD model (Draft updated to 6/15/99) was used to project the year 2000 gridded non-road emissions to 2006 and 2013. The model was run for these three years for the counties included in the inventory. A projection factor was calculated for each of the non-road source categories by dividing the county level emissions in the future year by the emissions in the year 2000. The factor was the same for each county within each source category. The non-road projection factor for each source category was then used to multiply the emissions in each grid cell in the year 2000 inventory to obtain the future year emissions by grid cell. See the “Denver Carbon Monoxide Maintenance Air Quality Modeling and Emission Inventory Protocol for Redesignation” document for more discussion.

2.6. Point Sources

In the approved CO SIP, major sources were divided into area and elevated sources based on the effective plume height.^a This is a requirement of the UAM model. The UAM has two emissions input files: (1) surface emissions and (2) elevated emissions. The value of 25 meters was used to determine if a source is a “surface” or “elevated” one. This height approximates the thickness of the lowest layer during the periods when CO concentrations are elevated. During periods with high ambient CO concentrations, vertical mixing is constrained, therefore limiting the ground-level impact of elevated sources of CO. Therefore, the cut-off height of 25 meters allows low level emissions to be retained in the surface inventory, while appropriately limiting the impact of elevated sources.

^a Effective plume height is total of the plume rise and the stack height, and expressed in meters for this application.

Plume rise estimates in the CO SIP were based on the algorithm contained in the Emissions Preprocessor System PREPNT (i.e., preprocessor for point source emissions).³ The procedures, methods and assumptions used in the plume rise calculation are described in the attachments to the CO SIP.⁴

For the maintenance plan, the EPA Aerometric Information Retrieval System/AIRS Facility Subsystem (AIRS/AFS), which contains the currently updated and quality assured emission inventory for stationary sources, was queried during August 1999 to obtain the point source emissions. Actual emissions (AIRS field OAM at the plant and stack level) together with the UTM coordinates and stack parameters for certain sources were obtained for the latest year available for all of the CO sources in the inventory area. The OAM field represents the actual daily emissions rates for the winter season. These emissions were then summed for each grid cell in the inventory using geographical information system (GIS) data-base techniques. Elevated emissions from large sources were separated into a separate category using the stack parameter information. For the Urban Airshed Modeling, sources were also included from the portion of Weld County that is inside the modeling domain but outside the CO nonattainment area. The OAM field is not available for sources outside of nonattainment areas, and so the EEA field (estimated actual emissions) was used instead.

In the CO SIP it was assumed that no new major point sources were expected to be built in the Denver nonattainment or modeling areas by the attainment date of 2000.⁵ Since the CO SIP modeling was completed, several revisions were made to the major point source database.^{6, 7, 8, 9} These changes have been made in the AIRS/AFS database and are reflected in the August 1999 AIRS retrieval used in the UAM modeling.

In the maintenance plan modeling, the same 2001 elevated point source inventory modeled in the CO SIP has been modeled for 2006 and 2013. This means that the maximum short-term potential-to-emit was used instead of actual emissions, as was done in the CO SIP.¹⁰ While this produces emission rates much higher than actual emissions for some sources, the plumes from the elevated point sources remain above the inversion during critical time periods for the episodes modeled. Thus, emissions from elevated sources do not reach the ground during the critical hours of the episode. For example, the maximum 8-hour CO contribution from elevated point sources in the CAMP grid cell (23, 43) at the surface is 0.01 ppm for the "high" episode. The maximum anywhere in the modeling domain at level 1 in the model (i.e., at the surface) is 0.16 ppm; however, this occurs late in the afternoon in grid cell (25,47), which is several miles from downtown. Therefore, for the maintenance demonstration, elevated point sources (e.g., power plants such as Cherokee) contribute only about 0.01 ppm to the overall maximum 8-hour concentration estimate.

The actual emissions from all new CO point sources in the modeling domain have been included in the "surface" gridded inventory. That is, they have been modeled as

gridded “area” sources so that the emissions are released into the lowest grid cell of the Urban Airshed Model. For those sources modeled as elevated point sources in UAM, the emissions have been removed from the surface gridded inventory to avoid double counting.

2.7. Temporal Distribution of Daily Emissions

The UAM requires emissions for each hour of the episode. Thus, a set of 24 hourly factors was derived for each category to temporally distribute their emissions. For instance, the temporal factor for hour 0 applies to the hour from midnight to 1 A.M. These factors were used in all of the modeling inventories. Emissions from the following categories were evenly distributed throughout the day: structural fires, minor point sources, major area point sources (i.e., non-elevated major point sources). Temporal allocation factors are the same as those used in the approved CO SIP for all source categories except for on-road mobile sources. For on-road mobile sources, the morning and afternoon rush hours are longer than assumed for 2001 in the CO SIP. Thus, the AM-peak, PM-peak, and off-peak scaling factors were replaced with factors developed in August 1999. Temporal allocation factors are applied uniformly throughout the domain. Refer to Appendix J for the factors used for each source category.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

3. Air Quality Modeling Methodology

Model application is consistent with Appendix W of 40 CFR Part 51 - [Guideline on Air Quality Models](#) (EPA Guideline) and with methods approved in the Denver Carbon Monoxide (CO) State Implementation Plan (SIP) (CDPHE, 1994; Federal Register, 1997). The Federal Register discussion on the CO SIP is in Appendix I.

3.1. Overview of Modeling Process

The 1990 federal Clean Air Act Amendments (CAAA) require a state implementation plan (SIP) to demonstrate attainment of the carbon monoxide National Ambient Air Quality Standards (NAAQS) using U. S. EPA approved air quality models. The modeling analysis includes both areawide and hot spot analyses. An areawide analysis is performed to determine regional carbon monoxide (CO) concentrations. Hot spot analyses provide estimates of CO concentrations at specific roadway intersections. The concentration estimates from the areawide and hot spot analyses are combined. In the approved Denver Nonattainment Area CO SIP, the areawide model is the Urban Airshed Model (UAM). The hot spot modeling methodology is based on CAL3QHC.

UAM was applied in an inert mode with no chemical mechanisms activated.¹ Only carbon monoxide was modeled. The same approach has been used for the Denver metropolitan area maintenance plan modeling.

The overall modeling system - comprised of transportation, emission, wind, and air quality models - is initially used to replicate historic carbon monoxide high pollution episodes in order to establish base case simulations. Initially, air quality modeling is performed with a set of episode specific inputs for each historic episode. If the initial simulation fails to perform satisfactorily, input data are reviewed and refined, if appropriate.

3.2. Model Selection

The Diagnostic Wind Model version 1.1 level 900221 has been used to develop three-dimensional wind fields for the Urban Airshed Model.

¹ On a global scale, the chemical lifetime of CO with respect to OH and other reactive species is about 1 to 4 months or more (Seinfeld and Pandis, 1998; Finlayson-Pitts and Pitts, 1986). Longer lifetimes tend to occur in high latitudes during winter. On an urban scale shorter lifetimes could be expected. Nevertheless, for the time scales of CO high pollution events in Denver during winter, atmospheric reactions involving CO are not considered to significant enough to require explicit treatment in the urban modeling process.

The Urban Airshed Model (UAM) version 6.20 dated 920825 has been used. This is the same model and version as used in the approved Denver CO SIP. The Urban Airshed Model is a photochemical eulerian-grid model, which simulates the atmospheric processes that effect pollutant concentrations. It simulates the emission, dispersion, advection and photochemical reactions of gaseous air pollutants. This application utilized a version of the UAM approved by the EPA for regulatory applications and compiled for the Microsoft Disk Operating System (DOS).¹¹ This model has primarily been applied to summertime ozone applications, but its ability to handle stagnation conditions also lends it modeling carbon monoxide episodes where Gaussian models perform poorly. Denver has been the site of three previous UAM applications. The first application was during the mid-seventies to determine if transportation plans were consistent with the SIP's ozone element;¹² it was also used in two draft CO SIP submittals to the EPA.^{13, 14} While more recent versions of the Urban Airshed Model as well as more advanced grid models are now available, EPA Region VIII suggested that, in this case, the originally approved modeling system from the approved SIP element may be used for the maintenance plan modeling.

The CAL3QHC line source dispersion model version 2.0 dated 95221 has been used. An earlier level (dated version) of version 2.0 was used in the approved CO SIP.

3.3. Flow Chart of Air Quality Modeling Process

The flow chart in Figure 2 illustrates the air quality modeling process. This diagram does not show the transportation and emission modeling processes.

A day specific CO emission inventory is first developed. The gridded inventory is then temporally allocated by the APCD's FORTRAN code "PRCEMS11." This program also generates numerous graphic files. PRCEMS11 also generates the binary emissions files for input to the Urban Airshed Model.

Eleven other UAM input files are also used. These files define other aspects of the model, including initial and boundary conditions, meteorology, and other variables that control the simulation. The preprocessor files from the approved CO SIP modeling have been used in the maintenance plan modeling.

Roadway intersection modeling has been performed to assess impacts at intersections. Outputs from the UAM and CAL3QHC air quality models are combined during the post-processing phase. Hourly UAM and refined CAL3QHC concentration estimates are summed before 8-hour average concentration estimates are computed. In cases where screening-level

worst-case CAL3QHC modeling has been performed, the 8-hour average CAL3QHC concentration estimates are directly added to the highest UAM estimate at each modeled intersection.

Modeling Process

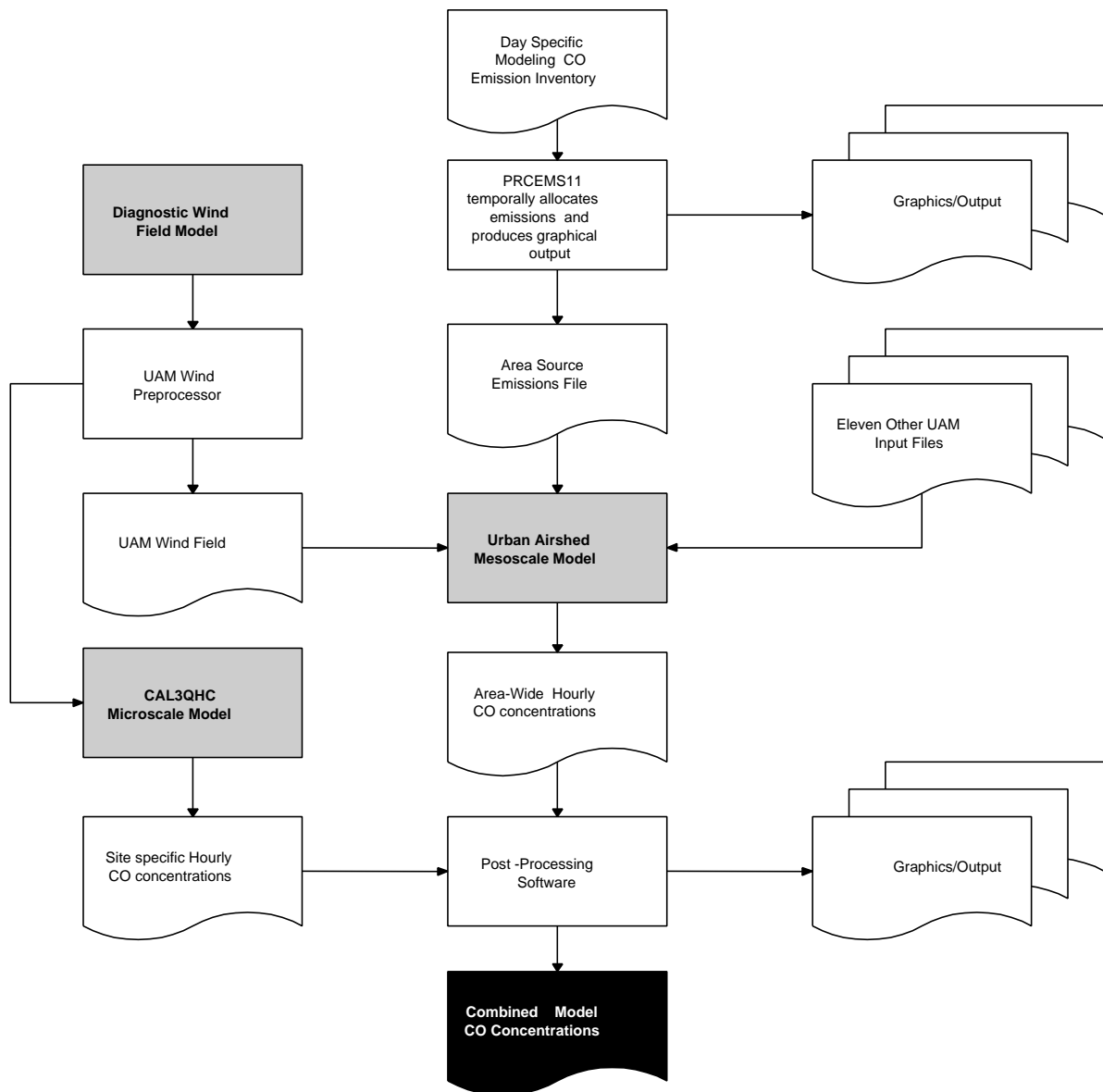


Figure 3. Air quality modeling process. The meteorological files and preprocessor files from the CO SIP are the basis of the UAM maintenance plan modeling.

3.4. Episode Selection

The modeling is based on the episodes used in the approved CO SIP (CDPHE, 1994). While emissions from vehicles have been reduced significantly since the late 1980's, meteorology is also an important factor. It's possible the climatology of the past few years has not included meteorological conditions that would cause high CO concentrations such as those modeled in the CO SIP. However, numerous stagnation episodes have occurred since 1995 which in the past have led to violations of the 8-hour CO standard. Since violations have not been monitored, it is safe to conclude monitored reductions are due to changes in emissions and in the transportation network and not due to a long period of favorable meteorology.

The episode selection process in the CO SIP is based on a review of the ten highest observed 8-hour average CO concentrations from the Denver nonattainment area for the period 1988 through 1991.¹⁵ The top ten episodes are shown in Table 16. A review of meteorological data shows that insufficient data were available for the episodes ranked 3, 6, 7, 9, and 10. Therefore, the top episodes ranked 1, 2, and 4 were chosen as modeling candidates. In agreement with EPA Region VIII, modeling was conducted for the top two episodes. The third episode was held in reserve in case an additional simulation was necessary to confirm control strategy decisions.

Subsequent to selection of the episodes in early 1990, EPA issued guidance with specific requirements for selecting episodes.¹⁶ In accordance with guidance, the episode selection process for the CO SIP was revisited.¹⁷ The review process came to the same conclusions for the top two candidate episodes. The two selected episodes are referred to as the "high" and "second-high" episodes. It should be noted that each episode can be classified as a distinct meteorological regime.

Table 16 . Ranking of Denver carbon monoxide episodes - 1988 through 1991 – as determined for the approved CO SIP.

Name of Monitor	Date	Ending Hour	Observed 8-hour Average CO Concentration		Rank
			mg per m ⁻³	ppm	
CAMP (21st & Broadway)	88/12/05	18	21.3	18.7	1 ^A
CAMP	88/01/15	19	18.5	16.2	2 ^B
CAMP	88/01/29	22	15.7	13.8	3
CAMP	91/01/31	21	14.7	12.9	4
CARRIAGE (23rd & Julian)	88/12/18	0	14.5	12.7	5
CAMP	88/01/28	20	14.3	12.5	6
CAMP	88/12/16	19	13.8	12.1	7
CAMP	90/03/08	21	13.8	12.1	8
GRANDY'S (short-term study)	88/12/17	0	13.7	12.0	9
CARRIAGE	88/01/28	23	13.5	11.8	10

^A "High" Episode in Denver CO SIP

^B "Second-High" Episode in Denver CO SIP

3.5. Meteorological Description of Modeling Episodes

Two meteorological episodes were initially simulated in the maintenance plan: 1) the "high" episode - December 4-6, 1988; and 2) the "second-high" episode - January 14-16, 1988. The simulations for each episode span a three-day window. For the "high" episode, the simulation began late in the evening on December 4, and ended at noon on December 6. For the "second-high" episode, the simulation began early in the evening on January 14, and ended early in the morning on January 16.

3.5.1. Modeling Episode Selection for Maintenance Plan

For the maintenance plan modeling, both episodes were initially modeled with both 2006 and 2013 emissions scenarios. The modeling showed the “high” episode is clearly the controlling episode. For example, the “high” episode UAM maxima for 2006 and 2013 were 8.04 ppm and 8.42 ppm for some preliminary control strategy evaluations. In contrast, the “second-high” episode UAM maxima for 2006 and 2013 were 6.45 ppm and 6.82 ppm. The concentration maxima for the “second-high” episode were sufficiently low that all subsequent control strategy evaluations as well as the maintenance plan modeling are based on the “high” episode from the CO SIP.

3.5.2. Meteorological Conditions on December 5, 1988 - "High" Episode

For December 5, 1988 the National Weather Service, which at that time was located at Stapleton International Airport, reported clear skies, snow free ground and temperatures that climbed from a low of 20°F to a high of 60°F. The morning sounding indicated a ground-based radiational inversion of 13°C over its 300 meters depth. Winds aloft were light (i.e., less than 15 knots up to 500 mb) and westerly throughout this episode. Surface winds were light and southerly, indicative of drainage flow, and persisted throughout most of urban Denver until noon Mountain Standard Time. Then the winds reversed, becoming northerly, through 5 p.m. MST. During the early evening, when hourly CO levels reached 50.5 ppm at CAMP, winds were light, variable and interspersed with periods of calm. Gradually, the southerly drainage flow came to encompass the region, affecting downtown Denver last. By the next morning another radiational inversion had developed. On a broader synoptic scale, the upper-level 500 mb ridge was centered over western Kansas on the morning of the fifth. By the next morning a weak upper-level low had moved over Colorado from the west coast. While at the surface, a great-basin high (over southern Idaho) and a low-pressure trough over western Kansas, resulted in a weak pressure gradient across Colorado. This weak gradient allowed mesoscale effects, such as drainage flows, to dominate the Denver wind field for this episode.

3.5.3. Meteorological Conditions on 15 January 1988 - "Second-High" Episode

While temperatures during the preceding two weeks averaged 19°F with lows less than 5°F on nine of those days, air flowing over the Rocky Mountains experienced down-slope warming which helped raise the temperature to 50°F on the 15th. General snow cover existed. Broken to overcast cloud cover consisted of strato, alto, and cirrocumulus as well as rotor and lenticular clouds. While strong southwesterly to westerly winds existed aloft and at some surface sites, surface winds in the Platte valley near downtown Denver were typically less than 2 mph and occasionally from the northeast. Decoupled winds aloft generally flowed over a cold pool of air in the Platte valley; meanwhile, as the wind speed decreased at the surface, the cold ground enhanced cooling of the air

immediately adjacent to it, thereby creating a stable boundary layer characterized by a shallow but strong temperature inversion which effectively trapped CO emissions 18. On a synoptic-scale, a surface lee trough in eastern Colorado with a surface high pressure ridge to the west prevailed throughout the episode. A 500 mb ridge moved over the region with the axis over Kansas by 5 p.m. MST on the 15th.

3.6. Modeling Domain

The UAM modeling domain was chosen to include the Denver and Longmont CO nonattainment areas, all current and future urbanized areas, point source emissions, air quality monitors, and hot spot intersections in the Denver metropolitan area for the two episodes. The UAM boundaries are sufficiently distant from the area of primary interest to minimize the effects of boundary conditions on calculated concentrations.

Figure 1 depicts the UAM modeling domain and the Denver CO nonattainment area. The exact specifications for the modeling domain are listed in table below.

The Diagnostic Wind Model (DWM) domain is larger than the UAM domain. It is extended 20 miles to the west and 15 miles in the other cardinal directions. DWM grid cells have the same lateral dimensions as the UAM cells. The figure on the next page shows the DWM and UAM domain along with the meteorological stations used in the modeling.

Table 17. Denver metropolitan area Urban Airshed Modeling Domain.

UTM Origin (Easting)	465,246 meters
UTM Origin (Northing)	4,331,084 meters
UTM Zone	13
Cells in X-direction	59
Cells in Y-direction	78
Cells in Z-direction	5
Cell area	1 mile ²
Cell side dimension	1 mile

Once the modeling system has been evaluated and determined to perform within prescribed levels, the same meteorological inputs may be used along with a projected emission inventory to simulate the impact of future emission scenarios.

Meteorological Stations used in Diagnostic Wind Modeling

December 5, 1988 Episode

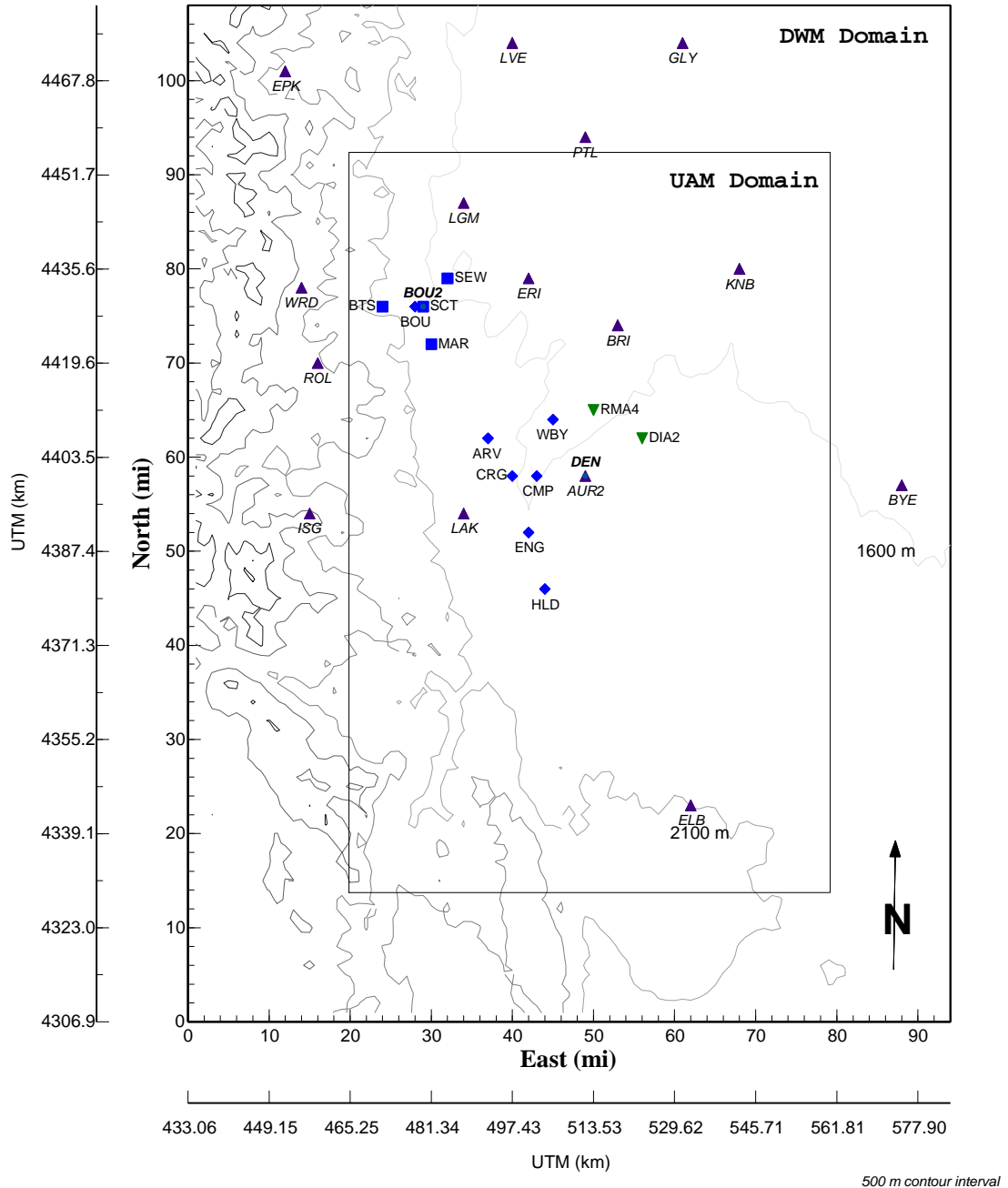


Figure 4. Meteorological observation sites used in developing and evaluating the diagnostic wind model for the “high” episode used in the maintenance plan.

3.7. Diagnostic Wind Model (DWM)

The Diagnostic Wind Model (DWM) was used to produce an hourly three-dimensional wind field. The DWM combines parameterized slope flows and observational data. Vertical velocities are minimized in the procedure. There are four principal steps in deriving a wind field for the UAM using the DWM:

1. A domain mean wind is defined and perturbations due to the effect of topography are added to it.
2. Surface and upper air observational data were interpolated with an inverse-distance-squared weighting method and combined with terrain influenced flow vectors.
3. The horizontal portion of the DWM domain, which represents the UAM domain, is extracted.
4. The DWM winds are vertically interpolated to match the UAM's vertical structure.

The DWM domain encompasses the smaller UAM domain, as recommended by guidance.¹⁹ This allows for the effects of significant terrain outside the UAM domain, to influence the wind field within it. Therefore, the DWM domain used in this application extended 15 miles beyond the UAM domain boundaries, except to the west, where it was extended for 20 miles. It was composed of 1 mile square grid cells, with 94 cells from west to east, and 108 cells from south to north. In the vertical, the "high" episode used 12 layers of differing depth, extending to a combined thickness of 1100 meters. The "second-high" episode was modeled using only 10 layers, but extending to the same height. Since Doppler sodar data was available for the "second-high" case, the layering scheme was adjusted to be consistent with it. The sodar data has constantly spaced data points, and the DWM layering scheme allowed for one data point per layer. Thus, the critical near-surface environment was well represented. Although, the top layer was quite large, extending from 400 to 1000 meters above ground level (agl), the diffusion break is below this level throughout the entire episode.

The topographic relief in the domain is over 2000 meters, from the continental divide at approximately 3500 meters, down to the Platte River valley at around 1500 meters. Since the DWM uses terrain following coordinates, this did not present a problem to the model.

A full description of the DWM wind modeling can be found in the "CO SIP Technical Support Document" (CDPHE, 1994).

3.8. Urban Airshed Model (UAM) Setup and Application

The UAM is an air quality planning tool. To utilize it in a regulatory setting, the model needs to adequately reproduce the meteorology, emissions and concentrations which occurred during selected historical episodes. The choice of episodes was discussed in a previous section. To determine if the model is getting the "right" results for the "right" reasons, the sensitivity of the model to critical input parameters is investigated. Statistical measures and graphic plots were used to interpret the results of these tests. Through this cyclical process, the performance of the model is gradually improved, until it accurately reflects the characteristics of the episodes and meets the EPA's performance criteria.

Inputs to the UAM must first be prepared by one of the UAM's 13 preprocessing programs. Input files and related discussions for all of the preprocessors can be found in the Technical Support Document for the CO SIP (CDPHE, 1994) or in this document. The Data Access Volume - Chapter 9 to the "CO SIP Technical Support Document" (CO SIP TSD) - and other chapters of the CO SIP TSD provide all the necessary files for the reader to duplicate the attached results for either episode.

This following sections and the CO SIP TSD describe the data sources, procedures, assumptions and processing used in characterizing the meteorology and air quality of episodes modeled with the UAM. The procedures described below apply to both episodes, unless otherwise noted. The primary guidance document for this modeling effort was Guideline for Regulatory Application of the Urban Airshed Model for Areawide Carbon Monoxide.²⁰ The detailed technical information on the model is contained User's Guide for the Urban Airshed Model, which has five volumes.²¹ The first three volumes are applicable to this application, neither Volumes IV nor V, which describe the Emissions Preprocessor System and the interface to the Regional Oxidant Model, were used.

3.8.1. Simulation Start and End Times (SIMCONTROL)

The start and end times for modeling episodes were chosen to test the models ability to replicate the onset and cessation of the elevated period of ambient CO concentrations. For the "high" (4-6 December 1988) episode, the model was started at 10 PM Mountain Standard Time (MST) on 4 December 1988, and ended at 12 noon MST on 6 December 1988; the duration of the run was 38 hours. For the "second-high" (14-16 January 1988) episode, the model was started at 6 PM MST on 14 January 1988, and ended at 6 am MST on 16 January 1988; the duration of the run was 36 hours. Graphs of hourly CO monitored and modeled concentrations, found in the model performance section of the CO SIP TSD, illustrate this point.

3.8.2. Initial Conditions (AIRQUALITY)

Setting the conditions at the beginning of a model run is referred to as "initializing" the model. The procedures, assumptions and data sources used in this analysis are presented below and in the CO SIP TSD.

Initial air quality values were specified for the entire modeling domain, including all surface and upper level cells, for both base and future cases. These 1-hour CO concentrations represent ambient conditions at the beginning of an episode. Routine and special study monitors of the Colorado Department of Public Health and Environment were used as the source of CO observations. These values were input to the AIRQUALITY preprocessor, which utilized an inverse radius interpolation scheme to derive initial concentrations for the entire modeling domain. Since this method distributed high urban concentrations to rural areas, a series of "pseudo" monitoring stations were positioned in these remote areas and were assigned a "background" concentration value of 0.2 ppm.²² The inputs to the AIRQUALITY preprocessor can be found in the attachments to the approved CO SIP TSD.

In determining future year initial conditions, it was assumed that all "pseudo" stations remained constant at "background" levels. This approach seems reasonable because the background concentration accounts for ambient carbon monoxide that is: (1) not accounted for in the emission inventory estimates, and, (2) unaffected by emission controls. At actual monitors, it was assumed future year initial conditions would change in proportion to changes in the modeling emissions inventories (i.e., a linear "rollback" method was used).

Therefore, for future case UAM scenarios, the ratio of the 1988 modeling inventory to the future year modeling inventory was applied to all monitors specified in the AIRQUALITY input file. The equation follows:

$$C_{\text{future}} = (C_{1988} - C_b)(E_{\text{future}}/E_{1988})$$

where

C_{future}	=	projected future year initial CO concentration
C_{1988}	=	observed 1988 initial CO concentration
C_b	=	background CO concentration
E_{future}	=	total CO emissions in a future year
E_{1988}	=	total CO emissions in 1988

If the projected future year initial CO concentration calculated from the above equation is negative, then the value was set equal to the background concentration of 0.2 ppm.

A comparison of domain-wide emissions totals for 2000-2001, as modeled in the CO SIP, and emissions for 2006 and 2013 indicate that changes in total CO emissions between 2001 and 2013 are relatively small. For example, the total CO emission rate from all source categories for 2001, as modeled in the CO SIP, is 1203 tons per day. The estimates for 2006 and 2013 for the maintenance plan are 1125 and 1153 tons per day, respectively. Thus, the original initial conditions as used in the approved CO SIP are reasonable estimates for the maintenance plan years of 2006 and 2013. In fact, the CO SIP initial conditions for 2000-2001 may slightly overestimate initial conditions for 2006 and 2013.

If initial conditions were calculated using the above methods for 2006 and 2013, it would change the maximum CO concentration estimates by less than 0.01 ppm. This is based on UAM sensitivity tests that suggest the initial concentration levels observed at the start of the simulation are transported out of the modeling domain before the emissions occur which actually lead to the high pollution events. That is, the initial condition concentrations have essentially no effect on the maximum modeled concentrations in the attainment demonstration. Minimizing the effect of initial condition assumptions is, in fact, one of the criteria used to determine the day and hour to start the simulation for an episode.

3.8.3. Other UAM preprocessors

Discussions on the other UAM preprocessors are in the Chapter 6 of the CO SIP TSD (CDPHE, 1994). All other preprocessor files were identical to those used in the approved CO SIP.

3.9. CAL3QHC Model Setup and Application

CAL3QHC roadway intersection modeling is intended to estimate CO concentration levels in the vicinity of busy intersections where high concentration gradients can occur. "In an urban area, sources of mobile emissions are especially widespread. Ambient concentrations of CO may be high near locations where vehicles tend to accumulate, slow down, and idle for a period of time (e.g., at an intersection). The extent of this problem is a direct function of the number of vehicles, their operating mode, their movement, and the length of delay. Thus, the CO distribution across an urban area is not only a function of the distribution of major urban development in the area, but also of individual intersection, street, and traffic characteristics."²³ In addition to the intersection geometry and vehicle operations, local meteorology and vehicle emission rates have a major impact on estimated CO concentrations.

Because of the time and resources necessary to model each individual intersection, EPA guidance suggests that hot spot modeling is necessary at only a select number of locations.

CAL3QHC analyses can be performed in either a conservative "screening" level mode or in a "refined" mode. Refined analyses are intended to provide more realistic concentration estimates than screening level analyses.

For the replication of the 1988 base case episodes, refined level modeling was conducted at both the CAMP and NJH monitoring sites.

For future year modeling, refined analyses were conducted as necessary to demonstrate attainment. If the combined UAM background estimate and the screening level CAL3QHC showed attainment with federal standards, refined level intersection modeling was not conducted.

For the maintenance plan modeling, the CAL3QHC model was applied to a total of five intersections to estimate the CO impacts from motor vehicles traveling at roadway intersections. The modeling approach and results are described and discussed in subsequent sections. CAL3QHC was applied in either a "refined" mode or in a "screening" level mode for future year scenarios, as appropriate.

Episode specific CO concentration estimates for 1988 at the CAMP and NJH monitors are shown in the performance evaluation section of the CO SIP TSD. In general, the results show a rise in concentrations in the afternoon, peaking during the PM rush hour.

3.9.1. Intersection Selection

For the Denver maintenance plan, intersections were selected for modeling from the highest volume and most congested intersections in the Nonattainment Area based on information from the Denver Regional Council of Governments (DRCOG). The top three intersections in each of these two categories were selected for modeling. University Boulevard and Hampden Avenue is first in congestion and second in volume, and while 28th St. and Colorado Avenue in Boulder is number 3 on the volume list, Foothills Parkway and Arapahoe Avenue in Boulder is number 4 in volume and number 2 in congestion; 28th St. and Colorado Avenue is also going to be reconstructed; thus, it was not selected for modeling. Thus, only five intersections were selected in total:

- University Boulevard and Hampden Avenue
- Foothills Parkway and Arapahoe Avenue
- University Boulevard and First Avenue (number 1 in volume)
- University Boulevard and Arapahoe Road (number 3 in congestion)
- Parker Road and Illif Avenue (number 4 in congestion).

These intersections represent the top four intersections in congestion and three out of the top four in volume.

The CAMP intersection at Broadway/Champa Avenue/21st Street (CAMP) was selected for use in the SIP attainment demonstration as the downtown intersection because on-site air quality and meteorological data were available at this location to validate the performance of the entire transportation, emissions, meteorological, CAL3QHC, and UAM modeling system. It was also the location of the maximum monitored CO levels in the Nonattainment Area. In addition, it is close to several streets. The CO concentration measured at the CAMP site is a combination of the urban background concentration, which is predicted by the UAM model, and the impact of these local streets, which is predicted by the CAL3QHC model.

A high level of uncertainty is associated with the results from the combined CAL3QHC/UAM modeling system at other downtown intersections where basecase validation could not be done due to a lack of site-specific observations. The CAL3QHC model is not designed to simulate conditions in urban “canyons” and near large buildings that affect micrometeorology around the intersection. In the Federal Register (see Appendix I) it is stated that “micrometeorological effects of high-rise office buildings significantly increase modeling uncertainties at these intersections, where on-site meteorological data was not available.” Consequently, other downtown intersections have not been selected for modeling.

With respect to the downtown intersection selection process used in the approved CO SIP, the federal register states the following:

EPA concurs with the final modeling analysis submitted by the State. This decision is supported by the supplemental CO monitoring studies that have been performed in the downtown area. These studies support the continued use of CAMP as the maximum concentration downtown site....The reason the modeling results for the two intersections in the downtown area were dropped is that the CAL3QHC model could not be applied appropriately given the effects of nearby downtown buildings on wind flow and the lack of representative on-site data. Building effects were not an issue at the six suburban intersections modeled in the SIP.

The statement above refers to CAMP as the maximum downtown site. While this was correct in 1995 and 1996, monitoring data from 1997, 1998, and 1999 show the CO monitor at Speer Blvd. and Auraria Pkwy. is the maximum downtown site, based on maximum 2nd-High 8-hour observations. The maximum 2nd-highs for 1997, 1998, and 1999 for Speer and Auraria are 6.4 ppm, 5.2 ppm, and 4.1 ppm, respectively. In comparison, for the same years, the maximum 2nd-highs for CAMP are 5.5 ppm, 4.7 ppm, and 3.5 ppm. It's important to recognize that the magnitudes of these maxima are well below the standard of 9.0 ppm.

The Winter 1997/1998 CO Saturation Study was conducted by the State to study CO concentration fields near Speer and Auraria. Nine CO samplers were placed near the intersection, two were placed near 7th and 9th Streets, three were sites in and around the Auraria campus to serve as general CO background monitors, and one was collocated with the permanent CO CAMP site. No episodes with CO concentration levels approaching the CO standard occurred during the study. Nevertheless, the data provide a better understanding of 8-hour average concentration gradients near the intersection. For example, on the day with the highest CO observations at the intersection, the samplers near the intersection had observations that varied from 2.6 to 4.8 ppm. The "background" samplers farther away from the intersection (but within the grid cell, as defined for Speer and Auraria in the CO SIP), had a range from 2.6 to 3.1 ppm on the same day. On the day with the next highest observations, the CO range at the intersection was 3.8 ppm to 4.7 ppm; the background samplers ranged from 3.0 to 3.9 ppm. On the third highest day, the CO range at the intersection was 3.6 ppm to 4.5 ppm; the background samplers ranged from 3.0 to 3.7 ppm. Thus, the data suggest there is a CO concentration gradient of up to 2 ppm near the intersection.

The saturation study provides further data to suggest that violations of CO standards have not occurred at or near the intersection of Speer and Auraria. In addition, the study has provided a better understanding of concentration gradients near the intersection.

Nevertheless, based on the low CO concentrations observed during the study, it would be difficult to make conclusive statements about what the study means in terms of future compliance with federal standards.

Finally, it's important to note that the air quality modeling system being used in the maintenance plan is based on the same model validation work and the same episodes as were used in the CO SIP. Since no new episodes have been modeled, a new basecase validation has not been performed. Thus, no downtown intersections besides the CAMP intersection have been modeled. If new basecase episodes were selected and modeled, it might be possible to include the Speer and Auraria intersection in the model validation process. In any case, based on observed CO data from 1997, 1998, and the first half of 1999, it's clear that modeling based on any episode in the 1997-99 period would result in compliance in 2006 and 2013 with the control packages presented in the proposed redesignation plan.

3.9.2. CAL3QHC Input data

CAL3QHC is a microscale air quality model and its accuracy depends on the accuracy of the input data. Therefore, high quality data have to be acquired. This section documents some of the CAL3QHC input data utilized in modeling all intersections.

In general, input data can be grouped into the following categories:

- Meteorological and site variables
- Roadway geometry
- Traffic variables
- Receptor locations
- Vehicular emission rates

3.9.3. Receptor Locations

The intent of EPA's guidance is to require receptors where "the maximum total project concentration is likely to occur and where the general public is likely to have access." As a rule, receptors should be located at a minimum of 3 meters (10 feet) from the outside lane of the traveled roadway to provide a buffer for the turbulence created by the moving vehicles.

Beyond these general rules, EPA suggests that receptors should be located at points where the public has access and is present on a more or less continuous basis for the model averaging time; and maximum pollutant concentrations are likely to occur. Typical receptor locations include sidewalks or building entrances or exits which are located outside the mixing zone of the free flow links of the intersection.

For this analysis, receptors were located according to EPA's guidance document at the beginning, middle and end of each queue link for all intersection approaches. Each receptor was modeled at a conservative distance of 10 feet from the outside lane. Receptors were also placed at specific points 10 feet from the outside lane on each departure leg to determine contributions of vehicles exiting the intersection. All receptors were modeled six feet above the ground to reflect the breathing height of individuals.

3.9.4. Vehicle Emission Rates

EPA's MOBILE 5b emission factor model was used to generate composite running exhaust emission factors. MOBILE 4.1 was used to generate idling exhaust emission factors. Critical variables for MOBILE modeling include percentage cold start vehicles, idle emission factor, the vehicle type, average vehicle speed and ambient temperature. The operating modes used for idle emissions were EPA default as was done in the approved SIP. Average vehicle speed (free flow speed) is the average speed of vehicles travelling through the intersection in the absence of delay caused by signals. Average free flow speeds were provided by DRCOG from field observations for all of the intersections except CAMP (which were based on information from the City of Denver).

Roadway geometry and traffic variables were obtained from DRCOG. Traffic counts from 1999 were used with growth factors developed from the DRCOG traffic models to develop traffic volumes.

3.9.5. Screening Procedures

Screening modeling is conducted because a full scale (i.e., refined) analysis of each of these intersections would be both time consuming and possibly unnecessary. Thus, it represents an alternative procedure that is intended to reduce the amount of time it takes to evaluate each intersection for its potential to violate the 8-hour NAAQS.

For screening level analyses, CAL3QHC is run for a single hour with worst case meteorology. A persistence factor of 0.7 is then applied to convert the 1-hour average estimate to an 8-hour value. Worst case meteorology includes wind speeds of 1 meter per second, a wind angle search of all angles from 5 to 360 degrees in 5 degree increments, D stability (neutral), and a mixing height of 1000 meters. The PM-peak emission rates and traffic volumes were used.

The screening level procedures were sufficient to demonstrate attainment for all intersections except First and University and the CAMP intersection. For the First and University intersection, hourly meteorology from the UAM modeling was used with the PM-peak emission rates and traffic volumes with CAL3QHC-R to generate the 8-hour average concentration.

3.9.6. Refined Modeling Procedures

"Refined" CAL3QHC modeling is conducted when screening level modeling indicates that the NAAQS may be threatened. It is based on hourly traffic volumes, emissions and meteorological data. Refined modeling was performed only at the CAMP intersection using the on-site meteorology from the original SIP. For the refined modeling, as was done in the original SIP, concentration estimates from the CAL3QHC model have been corrected to reference conditions as defined in the CFR for the CO standard (1013.2 mb and 298 K) by applying a correction factor of 15 percent (1.15) before the results are added to the UAM calculated background.

No altitude correction was made for the screening level modeling results because these results are already very conservative. It can also be argued that the persistence factor of 0.57 which was used for the screening level modeling in the original SIP, is more appropriate than the more conservative persistence factor of 0.7 which was used for the screening level results in this analysis.

3.9.7. Treatment of Calms

According to EPA's "Guideline on Air Quality Models," (Appendix W to 40 CFR Part 51), "treatment of calm or light and variable wind poses a special problem in model applications since Gaussian models assume that concentration is inversely proportional to wind speed. Furthermore, concentrations become unrealistically large when wind speeds less than 1 m s^{-1} are input to the model...." ²⁴

Therefore, EPA suggests that wind speeds less than 1 m s^{-1} but higher than the response threshold of the instrument should be input to a Gaussian model as 1 m s^{-1} ; the corresponding wind direction should also be input. Wind speeds less than the response threshold of the instrument are defined as "calm." That is, the wind is "indeterminate with regard to speed or direction." ²⁵

If the wind speed or direction is indeterminate, that particular hour should be treated as "missing" and short term averages should be calculated in accordance with EPA procedures.

EPA's CAL3QHC guidance document states that "a worst-case wind speed of 1 m s^{-1} should be used in the CAL3QHC model for all analyses, except when urban areawide modeling using the Urban Airshed Model (UAM) is being performed in conjunction with the CAL3QHC intersection model. In such cases, each hour modeled in the UAM simulation should be modeled with CAL3QHC using the hourly wind speed (and direction) from the UAM grid square where the intersection is located." ²⁶ However, the CAL3QHC User's guide states that the model has not been validated for wind speeds less than 1 m s^{-1} .

At CAMP, observed wind speeds are less than $1 \text{ m}\text{s}^{-1}$ for most hours of interest. According to the instrument specifications at the time of the "high" episode in 1988, the response threshold is less than 1.25 mph ($<0.6 \text{ m}\text{s}^{-1}$).

In this CAL3QHC application, all wind speeds less than $1 \text{ m}\text{s}^{-1}$ were input to the model as $1 \text{ m}\text{s}^{-1}$, regardless of the instrument threshold. This approach allowed the Division to compute hot spot concentration estimates for all hours and to compare the performance of the combined modeling system to observed values at CAMP. As can be seen in the approved CO SIP (CDPHE, 1994), model performance at CAMP was satisfactory with this approach. Therefore, the basecase validation supports the use of a similar methodology for treating calm winds for the maintenance plan. However, the impacts of not having on-site meteorology, or of substituting $1 \text{ m}\text{s}^{-1}$ wind speed during calm periods, are indeterminate at each intersection where on-site atmospheric measurements are lacking.

3.10. Model Performance Evaluation

"An underlying principle of the air quality modeling process is that there needs to be a technical foundation for judging the credibility of an air quality modeling simulation. A performance evaluation provides that technical foundation. A performance evaluation is the process of establishing that the model is working correctly and is accurately reproducing...observations."²⁷

The model performance evaluation phase "is a process consisting of several thoughtful, orderly steps all structured around the intended application of the model....it is useful to distinguish between a 'regulatory' evaluation and a 'scientific' evaluation. In a regulatory evaluation, the focus is on the intended use of the model in public decision-making. Scientific evaluation has its focus on determining how well the model reproduces the observed behavior of atmospheric pollutants."²⁸ In this carbon monoxide application, both types of evaluation are considered to be essential.

The statistical measures suggested by EPA can be broadly classified as an "operational evaluation."²⁹ That is, they are an assessment of the model's ability to estimate observed concentrations during the historic episodes being simulated. This type of evaluation does not necessarily address how well the simulation has replicated each applicable 'process.' That is, it does not explicitly address how well each individual module performed in the transportation, emission, and meteorological modeling process. Operational evaluations are certainly important, but additional tests are necessary to satisfactorily evaluate the modeling process.

EPA guidance encourages the use of operational, diagnostic,^z and mechanistic^{aa} tests to evaluate model performance.

One of the basic questions with any simulation is whether or not the model is giving the correct results for the right reasons. In other words, are there compensating errors? For example, a simulation might underestimate carbon monoxide concentrations because the on-road mobile estimates from the transportation and emission models are too low. Subsequently, the meteorological modeler might lower the mixing depth to compensate for the low emissions. Thus, in such a case, the model might be giving the right result for the wrong reason. The implications of such compensating biases are difficult to assess and, in a worst-case scenario, incorrect control strategy decisions could be made.

Consequently, in the approved CO SIP from 1994, every attempt was made, within the time and resource constraints available, to conduct operational, diagnostic and mechanistic evaluations for the meteorological and air quality models.

EPA guidance recommends that three statistically based performance measures be calculated to assess the performance of the modeling system. These are described in the following section - "Statistical Performance Measures Required by EPA." A recommended goal is set for each of EPA's required measures.

In this application, six additional performance measures are applied; none of these are required by EPA. These are described in an upcoming section - "Additional Performance Measures." The state has not set performance goals for the additional measures; rather, they are used as tools to elucidate positive and negative aspects of the simulation so that biases in the model can be studied.

As inputs for each UAM preprocessor were developed, input and output data were reviewed to assess the performance of each module. Numerous sensitivity tests were conducted as diagnostic evaluations. Such tests allow one to study the behavior of the model over ranges of variation of inputs and parameters.³⁰

^z A *diagnostic evaluation* is "an assessment of a model's ability, when functioning as a whole, to simulate reliably processes or characteristics of the system occurring during...a(n) episode.... The events and tests are chosen to challenge the science in the model." (Tesche, et al, 1990)

^{aa} A *mechanistic evaluation* is "an assessment of an individual modules' ability to reproduce the observed salient features of the process it is intended to describe. When applied to all process modules that constitute the full model, mechanistic evaluation represents a test of the correctness of the underlying science." (Tesche, et al, 1990)

A discussion of operational and mechanistic evaluations for specific modeling modules are in the CO SIP TSD and in subsequent sections of this document. A mechanistic evaluation is well suited for the emission and meteorological models. Chapter 6 in the CO SIP TSD presents a variety of tests conducted to evaluate meteorological aspects of the model.

3.10.1. Statistical Performance Measures Required by EPA

"Statistical measures provide a useful measure of model performance for spatially dense monitoring networks; however, for routine urban area CO monitoring networks, the typically sparse coverage may result in a statistically distorted view of model performance. However, on the basis of UAM applications in past areawide CO modeling, it is recommended that the following three statistical criteria be applied to all neighborhood-scale monitors (and, if applicable, roadway intersection monitors showing persistently high CO values during low traffic volumes)."²

While U.S. EPA guidance suggests that performance measures be applied to neighborhood-scale monitors, EPA Region VIII recommended that performance measures should also be calculated at microscale monitors.³ This is accomplished by combining the UAM and CAL3QHC estimates. Calculation of performance measures at microscale sites is appropriate in only those instances where CAL3QHC intersection estimates are available.

Since inclusion of combined UAM and CAL3QHC results in the model performance measures is not explicitly addressed in EPA guidance, procedures were developed by CDPHE in consultation with Systems Applications International (SAI) and EPA.

For example, EPA's CAL3QHC guidance suggests that "the UAM modeled concentration from the grid cell where the intersection is located should be entered into the CAL3QHC model as the background concentration to determine the total impact for each hour. The results should then be averaged over 8-hours to determine the maximum 8-hour concentration."⁴ While this procedure might produce a conservative summation of UAM and CAL3QHC estimates for future year estimates, it is not consistent with EPA's UAM guidance. That is, the issue of using a weighted average for the UAM "background" value

² Carr, E. L., J. L. Fieber, R. C. Kessler, "Guideline for Regulatory Application of the Urban Airshed Model for Areawide Carbon Monoxide: Volume I. Technical Report," SYSAPP-92/045a, EPA Contract No. 68D00124, prepared for U.S. Environmental Protection Agency by Systems Applications International, 11 May 1992, page 44.

³ Golden, Kevin (U.S. Environmental Protection Agency - Region VIII), letter to Bob Graves (Colorado Department of Health, Air Pollution Control Division), 21 September 1992.

⁴ U.S. Environmental Protection Agency, "Guideline for Modeling Carbon Monoxide from Roadway Intersections," EPA-454/R-92-005, Office of Air Quality Planning and Standards, November 1992, page 4-1.

is not addressed. To obtain a somewhat realistic UAM areawide concentration estimate, a weighted average from the four nearest UAM grid cells is desirable to account for strong concentration gradients from grid cell to grid cell in the areawide estimates.

Therefore, agreement was reached by CDPHE and EPA Region VIII to use a weighted average approach when computing "background" UAM estimates for use in CAL3QHC modeling.

There are several ways the CAL3QHC estimate at a given monitor could be computed. This is because, for Gaussian models in particular, "estimates of concentrations that occur at a specific time and site (i.e., receptor) are poorly correlated with actually observed concentrations...."⁵

EPA suggests that "poor correlations between paired concentrations at fixed stations may be due to 'reducible' uncertainties in knowledge of the precise plume location and to unquantified inherent uncertainties."⁶

In this application, a CAL3QHC receptor was placed near the probe inlet at each monitoring site. CAL3QHC estimates were generated only at those sites which might have a significant intersection component. Nevertheless, because CAL3QHC is a Gaussian model, some questions exist regarding exactly *how* the CAL3QHC component should be extracted from the matrix of potential receptor sites around a given monitor. Site specific intersection studies would be required to satisfactorily address this issue. This is particularly true at both the CAMP and NJH sites because of the close proximity of buildings and structures that can influence the wind field.

Thus, the CAL3QHC 1-hour average estimates from a receptor located near the probe inlet of the monitor are combined with the weighted 1-hour average UAM estimates. Then the 8-hour average estimates are computed.

EPA recommends that, at a minimum, the following three formulations be applied as measures of model performance:

⁵ U. S. Environmental Protection Agency, "Guideline on Air Quality Models (Revised) - Appendix W of 40 CFR Part 51," EPA-450/2-78-027R, version with Supplement A (7/87) and Supplement B (2/93), Office of Air Quality Planning and Standards, July 1993, page 10-3.

⁶ U.S. Environmental Protection Agency, EPA-450/2-78-027R, July 1993, page 10-3,4.

Performance Measure 1. Unpaired (time or space) highest 8-hour estimation accuracy.

This measure quantifies the difference between the highest observed 8-hour average concentration and the highest estimated 8-hour value over all hours and monitoring locations.

$$A_u = \frac{c_e(x, t) - c_o(x^{pk}, t^{pk})}{c_o(x^{pk}, t^{pk})} (100)$$

Recommended Goal: " 30-35%

where,

A_u = unpaired highest-estimated accuracy (quantifies the difference between the magnitude of the highest 8-hour observed value and the highest 8-hour estimated value)

$C_o(x^{pk}, t^{pk})$ = maximum 8-hour *observed* concentration over all hours and monitoring sites

$c_e(x, t)$ = maximum 8-hour *estimated* concentration over all hours and surface grid squares

x^{pk} = peak monitoring station location

t^{pk} = time of the peak observation

In this application, the order of the top term in the above equation (i.e., $c_e - c_o$) is reversed from the same term in EPA's measure (i.e., $c_o - c_e$).³¹ This is done so that the sign of the statistic will reflect whether the model is over- or under-estimating with respect to the observation. For example, for a model estimate that under-predicts by 20%, EPA's formulation would yield a value of +20%. We believe this could be misleading to some who are not familiar with the equation used. In the formulation used in this application, a model estimate that under-predicts by 20% would have a statistic of -20%.

Performance Measure 2. Average absolute error in 8-hour *peak* estimation accuracy paired (time and space) values greater than 5.0 ppm.

This measure quantifies the difference between the highest observed 8-hour average concentration and the highest estimated 8-hour value at the time and location of each observed maximum.

$$A_{pk} = \frac{1}{n} \sum_{i=1}^n \left| \frac{C_e(x_i, t_i) - C_o(x_i, t_i)}{C_o(x_i, t_i)} \right| (100)$$

Recommended Goal: 25-30%

where,

A_{pk} = mean paired *peak* prediction accuracy's averaged over all monitoring stations with observed values >5.0 ppm

n = number of hourly estimate-observation pairs from all valid monitoring stations

$C_o(x_i, t_i)$ = *peak observed* value >5.0 ppm at station i for the period t_i

$C_e(x_i, t_i)$ = estimated concentration at station i for the period t_i
 t_i = hour of the peak observed value at monitoring station i

Performance Measure 3. Average absolute error in the estimated *time* of the 8-hour peak concentration, paired by station values greater than 5.0 ppm.

This measure quantifies the difference between the time of the highest observed 8-hour average concentration and the time of the highest estimated 8-hour value at the location of each observed maximum within a window of time.

$$A_t = \frac{1}{n} \sum_{i=1}^n |t_o(i) - t_e(i)|$$

Recommended Goal: 2 hours

where,

A_t = mean absolute error in the estimated time of the *peak* concentration, paired by station (for all stations >5.0 ppm)

$t_o(i)$ = peak time of observed concentration >5.0 ppm at monitoring station i

$t_e(i)$ = peak time of estimated concentration at monitoring station i Graphical Performance Measures
Required by EPA

Graphical displays can provide important information on qualitative relationships between predicted and observed concentrations. At a minimum, the following graphical displays should be developed for each meteorological episode: time series plots and ground-level isopleths.

Time series plots of estimated^a and hourly carbon monoxide concentrations should be constructed for each simulation period for each monitoring station where data are available.³²

Ground-level isopleths or tile maps of the spatial distribution of estimated concentrations should be constructed for selected hours. Also, ground-level isopleths or tile maps of the carbon monoxide maxima should be constructed.³³

⁷For this purpose, EPA recommends that "the predicted value is the weighted average of the predictions from the four grid cells nearest to the monitoring site. The four-cell weighted average is derived from bilinear interpolation." (SAI, SYSAPP-92/045a)

3.10.2. Additional Performance Measures

This section describes additional performance measures applied by the APCD that were not required by EPA. Specific acceptance or rejection criteria were not established for these measures. They are intended to provide additional information about the performance of the modeling system. In this application, these additional measures have been used to help identify additional areas for study.

Performance Measure 4. Average absolute error in 8-hour estimation accuracy paired (time and space) values greater than 5.0 ppm.

This measure quantifies the difference between all observed 8-hour average concentrations and the estimated 8-hour value at the time and location of each observed value. This test can sometimes provide a more realistic view of the overall performance of the model because, unlike the "average absolute error in 8-hour peak prediction accuracy," this statistical value is not influenced by a small shift in the timing of the observed and estimated peaks. This is because the observed and estimated values are compared for every hour in which the observed estimate is over 5 ppm; not just for those hours where the peak observation exceeds 5 ppm.

$$A = \frac{1}{n} \sum_{i=1}^n \left| \frac{c_e(x_i, t_i) - c_o(x_i, t_i)}{c_o(x_i, t_i)} \right| (100)$$

where,

A = mean paired estimated accuracy's averaged over all stations with observed values >5.0 ppm

n = number of hourly estimate-observation pairs from all valid monitoring stations

$c_o(x_i, t_i)$ = *observed* concentration >5.0 ppm at station i for the period t_i

$c_e(x_i, t_i)$ = *estimated* concentration at station i for the period t_i

t_i = hour of each observed concentration at station i

Performance Measure 5. Mean normalized bias in 8-hour average prediction accuracy paired (time and space) for values greater than 5.0 ppm.

This measure quantifies the degree to which simulated 8-hour average concentrations greater than 5 ppm are *over-* or *under-*predicting.

$$A = \frac{1}{n} \sum_{i=1}^n \frac{c_e(x_i, t_i) - c_o(x_i, t_i)}{c_o(x_i, t_i)} (100)$$

Performance Measure 6. Average absolute error in 1-hour peak prediction accuracy paired (time and space) values greater than 5.0 ppm.

This measure quantifies the difference between the highest observed 1-hour average concentration and the highest estimated 1-hour value at the time and location of each observed maximum.

$$A_{pk} = \frac{1}{n} \sum_{i=1}^n \left| \frac{C_e(x_i, t_i) - C_o(x_i, t_i)}{C_o(x_i, t_i)} \right| (100)$$

Performance Measure 7. Average absolute error in the estimated *time* of the 1-hour peak concentration, paired by station values greater than 5.0 ppm.

This measure quantifies the difference between the highest observed 1-hour average concentration and the highest estimated 1-hour value at the location of each observed maximum within a window of time.

$$A_t = \frac{1}{n} \sum_{i=1}^n \left| t_o(i) - t_e(i) \right|$$

Performance Measure 8. Average absolute error in 1-hour prediction accuracy paired (time and space) values greater than 5.0 ppm.

This measure quantifies the difference between *all* observed 1-hour average concentrations and the estimated 1-hour value at the time and location of each observed value.

$$A = \frac{1}{n} \sum_{i=1}^n \left| \frac{c_e(x_i, t_i) - c_o(x_i, t_i)}{c_o(x_i, t_i)} \right| (100)$$

Performance Measure 9. Mean normalized bias in 1-hour average prediction accuracy paired (time and space) for values greater than 5.0 ppm.

This measure quantifies the degree to which simulated 1-hour average concentrations greater than 5 ppm are *over-* or *under-*predicting.

$$A = \frac{1}{n} \sum_{i=1}^n \frac{c_e(x_i, t_i) - c_o(x_i, t_i)}{c_o(x_i, t_i)} (100)$$

3.10.3. Graphical Measures

In addition to the statistical measures above, color tile maps were generated for each episode. These maps show the overall maximum 8-hour concentration estimates for each UAM grid cell. This type of graphical analysis is useful for comparing the modeled estimates against emission estimates, meteorological variables, and conceptual models.

3.10.4. Selection of CO Monitors for Use in the Performance Evaluation Required by EPA

CO monitoring sites within the modeling domain form the basis of the performance evaluation. While most data are from CDPHE monitors, data from the Denver Brown Cloud Study (1987/88) and the Boulder Air Quality Study (1988/89) are also used. All monitoring data are based on EPA reference method monitors and have been quality assured. Table 18 shows the CO monitors used in this study. Although model performance was assessed at all monitors, final performance measures - as defined by EPA - have been computed for an appropriate subset of monitors.

A CDPHE FORTRAN code (P_STATS) logically selected all sites required by performance measures 2 - 9. Performance measure number 1 was calculated separately. P_STATS selected all sites with an observed 1-hour or 8-hour concentration greater than 5 ppm, regardless of whether or not the site should be included in computing measures for comparison against EPA's performance goals. Final performance measures for comparison with EPA's performance goals were computed for an appropriate subset of sites.

Computation of measures for only those hours where the observed concentration exceeded 5 ppm is done to focus the evaluation on only those hours where elevated CO concentrations existed. It prevents the statistics from being skewed by observed values in the low concentration range. Results from P_STATS can be found in the attachments to the CO SIP Technical Support Document (CDPHE, 1994).

Before final statistics were calculated for comparison with EPA's performance goals, the performance at each site was reviewed to study the appropriateness of including the site in the overall operational performance statistics. In some cases, it was appropriate to remove a site and recompute the measures. This does not imply that the results of the performance evaluation at certain sites were ignored, it means that a critical review was performed to decide if certain sites would skew the overall performance measures; that is, sites influenced by sub-grid scale phenomena that were outside the high emissions density area near downtown Denver were carefully reviewed. This approach is consistent with the intent of EPA's guidance. In addition, EPA Region VIII concurred with this approach. Subsequent sections describe the review process in detail.

For the "high" episode - December 4-6, 1988, the performance measures required by EPA were initially based on the following sites: CAMP, NJH, Welby, Carriage, Grandys, and Arvada; as determined by P_STATS. After reviewing each site, Grandys in Boulder and Arvada were eliminated as candidates for purposes of demonstrating that the model meets EPA's performance criteria. Both sites are outside the central business district where the controlling concentration levels are found.

Grandys was removed because it is a microscale site where CAL3QHC modeling was not conducted. As can be seen in the time series plots for the site (i.e., GRDS) in the attachments, UAM substantially under-estimated the CO concentration. Since it was a microscale monitor, it is not appropriate to compare the observations to UAM areawide estimates unless a CAL3QHC component is also included. Grandys was a special study site.

Unlike the Grandys site in Boulder, there was no obvious explanation for the poor model performance at the Arvada site. For the purpose of comparing the performance measures against EPA's goals, EPA Region VIII suggested that the Arvada monitor could

be removed when the statistics were calculated. This decision was based in part on the fact that the highest CO levels existed in the greater downtown area during this episode and not in outlying areas such as Arvada. Also, it was recognized that poor performance at one site can strongly influence the overall statistics. However, EPA Region VIII indicated that the state would be required to submit an analysis as to why the model failed to perform well at the Arvada site. A detailed discussion about performance at the Arvada site can be found in later in this section.

For the "second-high" episode - January 14-16, 1988, the performance measures required by EPA were initially based on the following sites: CAMP, Tivoli, NJH, Welby, Carriage, and Arvada; as determined by P_STATS. As with the "high" episode, performance was poor at the Arvada site. Therefore, for consistency with procedures adopted for the "high" episode, the Arvada site was excluded from the list of final sites at which performance statistics were computed. As stated earlier, a detailed discussion about the Arvada monitor with respect to the air quality modeling can be found in a subsequent section.

Table 18. Carbon monoxide monitoring sites used in the UAM and CAL3QHC modeling study for the Denver CO SIP.

Site Name	Abbreviation	Location			
		UTM (meters) - Zone 13		UAM Grid Cell	
		Easting	Northing	x	y
Tivoli (Special) ²	TIV ^A	499564	4399396	22	43
CAMP ^{1,2}	CMP	501084	4399952	23	43
Welby ^{1,2}	WBY	504364	4409703	25	49
Carriage ^{1,2}	CRG	497360	4400000	20	43
NJH-E ^{1,2}	NJH	505195	4398561	25	42
Englewood ¹	ENG	500161	4389516	22	37
Arvada ^{1,2}	ARV	491500	4405400	17	47
Boulder ^{1,2}	BOU	477219	4429024	8	61
Boulder (Special) ¹	GRDS ^B	478005	4429885	8	62
Aurora ²	AUR	513595	4396144	31	41
Aurora (Special) ¹	AURS ^C	513183	4389716	30	37
Palmer School (Special) ²	PLM ^D	506488	4397796	26	42
Highland ^{1,2}	HLD	503673	4379691	24	31
Brighton (Special) ²	BTN ^E	520018	4425877	35	59
Federal Building (Sp.) ²	FED ^F	501100	4400000	23	43

¹ CO monitoring sites used in the "high" episode simulation of December 4-6, 1988

² CO monitoring sites used in the "second-high" episode simulation of January 14-16, 1988

^A Special study site (Auraria Campus) during the Denver Brown Cloud Study

^B Special study site (Grandys) near 28th between Walnut and Pearl St.

^C Special study site (Denny's) near the intersection of I-225 and Parker Rd.

^D Special study site at 10th and Grape; inlet located on top of two story building

^E Special study site during the Denver Brown Cloud Study

^F Special study site during Denver Brown Cloud Study; the inlet was located 72 m above ground level (i.e., on top of the Federal Building)

3.10.4.1. Basis for the Exclusion of the Arvada CO Monitor

The CDPHE Arvada CO monitor is located approximately 7 miles NW of downtown Denver in the suburb of Arvada.^{cc} The surrounding area is residential with commercial area to its north. This monitor is classified as a neighborhood scale monitor sited for determining population exposure.³⁴ Neighborhood scale CO monitors are representing an area of "relatively uniform land use with dimensions of in the 0.5 to 4.0 kilometer range."³⁵ The eight-hour CO NAAQS has not been violated at the site since 1986, yet its 8-hour second maxima remain high (i.e., 6.9 ppm in 1992).³⁶ Elevated levels of ambient CO are typically monitored during the morning rush hour and less frequently during the evening. When the wind speed was light and its direction was from west through north (i.e., out of the NW quadrant), the UAM model performed poorly at this site. The results of our investigation, concerning the UAM's poor performance at the Arvada monitor, are presented below.

Monitoring Data at the Arvada Site - The next figure contains wind roses and CO roses for the Arvada monitor. The CO rose shows the frequency of occurrence of CO concentrations greater than 3 ppm, as a function of wind speed and direction. A bidirectional pattern is evident with maxima in the NW and SE quadrants. Using the same data set with a higher cutoff value of 8 ppm, the CO rose has a more unidirectional distribution of CO occurrence. The Arvada monitor is on the edge the Denver metropolitan emissions locus with few sources to its NW.^{dd}

^{cc} The Arvada monitoring stations has an Aerometric Information Retrieval System - Air Quality Subsystem (AIRS/AQS) site number of 08-059-0002.

^{dd} The Arvada monitor is located in UAM grid cell 2731, which translates to X = 17, Y = 47 in the UAM domain coordinate set.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

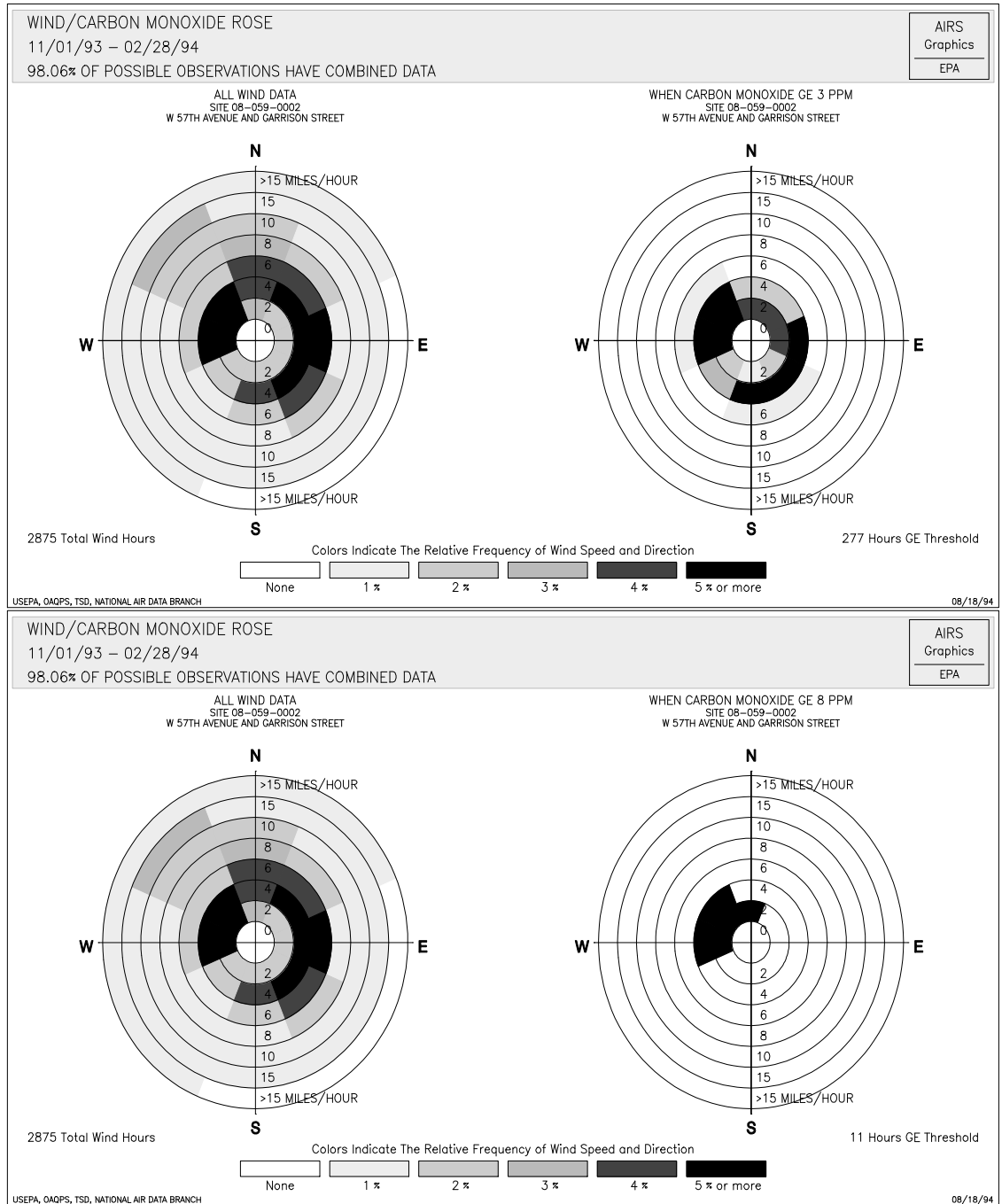


Figure 5. Wind/Carbon Monoxide Roses at the Arvada Site. These show the frequency of occurrence of CO concentrations greater than 3 ppm or 8 ppm, as a function of wind speed and direction. High CO is largely constrained to the NW quadrant, with wind speeds of 4 mph or less.

UAM Results at the Arvada Site - The performance of the UAM, as described by the difference between modeled and monitored hourly CO concentrations, is presented for both modeling episodes in the following figures. In the following figure, wind direction is shown by a line with markers and references the left-hand y-axis. It represents the direction the wind is coming from. The bar in these plots is formed by subtracting the observed from modeled concentrations and represents

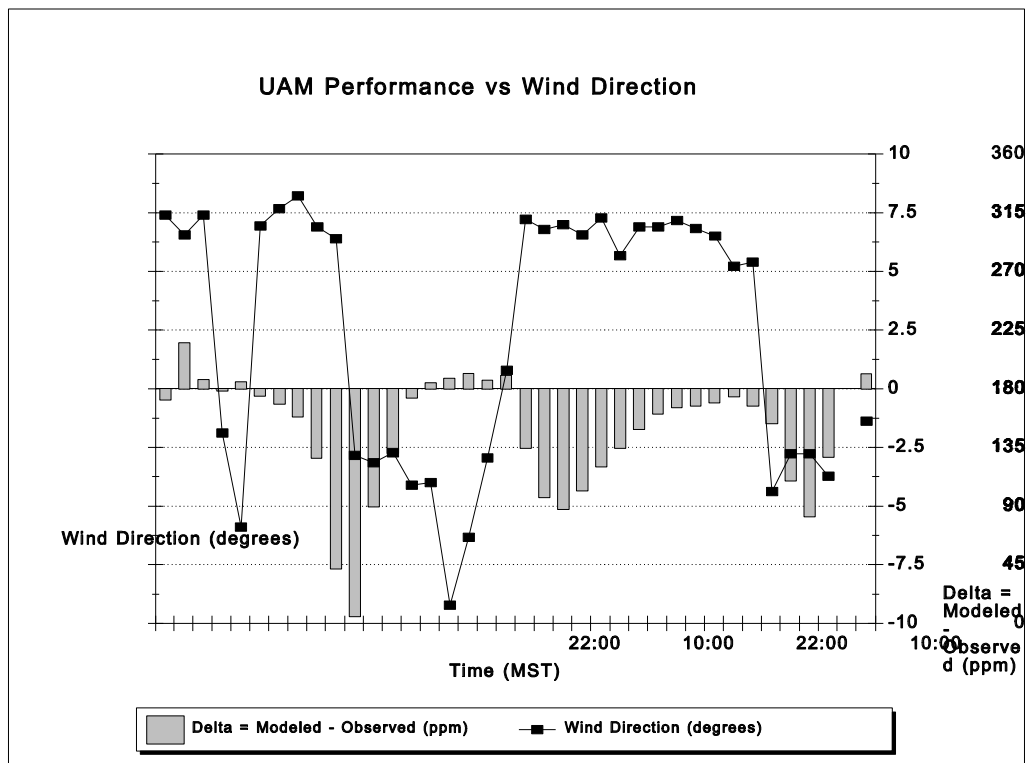


Figure 6. Wind direction and UAM performance are displayed as a function of time for the "high" episode. Model performance is based on the difference between hourly monitored and modeled CO concentrations; a negative value means the model is under-predicting.

how well the model is performing. It references the right-hand y-axis, which ranges from -10 to 10 ppm. The shorter the bar the better the model is replicating monitored values. If the model is under predicting, a negative value or "delta" is indicated, and over prediction is shown by positive values. It shows that UAM tends to under predict concentrations at this monitor, particularly when the wind is between 270 and 360 degrees (i.e., the NW quadrant).

The UAM concentrations for the Arvada monitor are bilinear interpolations of the four nearest grid cell values. These values are volume averages, each representing a 1 mile² area with depth varying according to mixing depth (i.e., DIFFBREAK). The bilinear weighting factor, which is applied to each of the hourly grid cell values, is inversely proportional to the distance center-of-the-cell to the interpolated point. These values are interpolated by the UAM postprocessor DPLOT written by Systems Applications International (SAI). Therefore, the CO concentrations calculated for a site by the DPLOT postprocessor represent four grid cells, not one.

***Site Specifics** - A CO emissions inventory, for the UAM grid cell containing the Arvada monitor and its eight neighboring cells, can be found in the appendix to Chapter 6 in the CO SIP Technical Support Document. In each of these cells, the on-road mobile source category is clearly the largest category. The on-road mobile source emissions were partitioned into the UAM grid cells by a geographic information system (GIS). The number of vehicle-miles-traveled (VMT) is the principal determinant of the quantity of on-road mobile emissions allocated to a given cell. The VMT data used by the inventory were produced by the Urban Transportation Planning System model run by the Denver Regional Council of Governments. To better understand the source of pollutants impacting the Arvada monitor from the NW, a detailed map was made for the area. This map can be found in the attachments to Chapter 6 of the CO SIP Technical Support Document (CDPHE, 1994). It shows:*

- the location of the Arvada monitor,*
- surrounding land uses,*
- the DRCOG transportation network used in creating the inventory,*
- the names of streets,*
- The location of the UAM grid cell boundaries, and*
- creeks, ponds and irrigation ditches.*

The area surrounding the Arvada monitor is dominated by residential and commercial land uses. The principal drainage in the area is Ralston Creek. In the northwestern portion of the map, another "creek" is shown to cross Ralston Creek, this is an irrigation ditch. Since an irrigation ditch roughly follows a contour, the path it follows describes the shape of the Ralston Creek drainage. Ralston Creek flows to the SE, draining the nearby foothills and is a tributary of Clear Creek, which flows into the South Platte River. When atmospheric drainage flows develop, they will tend to follow this same drainage pattern. Notice the alignment of the Ralston Creek and Ralston Road, which are due NW from the Arvada monitor. Further, Ralston Road is a heavily traveled thoroughfare, as described by the

DRCOG VMT estimates. At the intersection of Ralston Road and 58th Avenue, Ralston has an average daily traffic (ADT) of approximately 26,000 and 58th has an ADT of about 21,000.

Arvada Site Conclusions - *The CDPHE Arvada monitor is classified as neighborhood scale. Therefore, it is expected to be influenced by sources within a range of 0.5 to 4.0 kilometers. It is surrounded by an area dominated by residential and commercial land use, with no known major point sources of CO. The highest CO concentrations monitored at the site are experienced when flow is light and northwesterly. This wind regime has been described as a "drainage flow" of colder air that flows down slopes and valleys. The cooling of the surface allows for an inversion to form and the surface layer to decouple from the overlying atmosphere. A weak surface pressure gradient allows for drainage flows to develop. Generally, the drainage flow begins in the late afternoon and lasts through midmorning. The largest source category in the area is on-road mobile. Under drainage flow conditions, when the wind flowing down Ralston Creek will be picking up pollutants from the heavy traffic along Ralston Road, transport will be directly toward the Arvada monitor. Also upwind during drainage conditions is a busy intersection of Ralston Road and 58th Avenue that is only 1500 feet from the monitor. Therefore, under light northwesterly drainage flow conditions, the most likely source of the high hourly CO concentrations experienced by the Arvada monitor, are the heavily traveled intersections and streets found immediately upwind from the site.*

Emissions for a grid cell are uniformly dispersed throughout its volume by the UAM. A localized source of emissions, smaller than a UAM grid cell, will have its emissions dispersed in the entire volume of the cell. This is called "artificial" dispersion, as it artificially reduces the concentrations attributed to it by the model. This under-prediction of CO concentrations by the UAM, under drainage flow conditions, is consistent with an upwind subgrid-cell sized emissions source that is close to the monitor. The intersection of 58th Avenue and Ralston Road, and the portion of Ralston Road that parallels the creek, are definitely of subgrid cell size. So, one could reasonably expect for these sources to effect the monitored CO concentrations, but not those calculated by the UAM. Therefore, the Arvada CO monitor should be excluded from the group of stations used in determining if the UAM is meeting the EPA's performance criteria.

3.10.5. "High" Episode Performance Measures

This section presents the performance statistics required by EPA guidance and additional data that summarize the modeling systems operational performance. A summary of EPA's statistical performance measures for the "high" episode are presented in Table 19. As discussed earlier, these statistics are based on the performance at four sites: CAMP, Welby, Carriage, and NJH. Although a range of goals are listed in some cases, the intent is that the calculated performance statistic should be within the limits of the upper bound of the range.

For the sites listed above, the simulation for the "high" episode meets the goals recommended by EPA.

As discussed earlier, all performance measures except the first are computed by the APCD's FORTRAN code P_STATS. The first measure quantifies the difference between the highest estimated 8-hour average CO concentration and the highest observed concentration anywhere in the modeling domain. In this episode, the maximum estimate is 17.51 ppm in the grid cell (i.e., X=22, Y=43), which includes the Auraria Campus. The highest observed 8-hour concentration occurred at the CAMP site, which is in an adjacent grid cell (i.e., X=23, Y=43). Note that, during this episode, a monitor was not located in the grid cell with the highest modeled concentration estimate. The "unpaired (time or space) highest 8-hour estimation accuracy" is -6.5%:

$$\frac{17.51\text{ppm} - 18.73\text{ppm}}{18.73\text{ppm}}(100) = -6.5\%$$

Graphical plots, site specific results, and results for the six other statistical measures can be found in the "CO SIP Technical Support Document" (CO SIP TSD) (CDPHE, 1994). Graphical plots can be found in the attachments. Note that the modeling results for the "high" episode (December 4-6, 1988) are referred to as simulation "A."

Table 20 shows the maximum modeled estimate and the corresponding observed 8-hour concentrations for all monitoring sites. Estimates and observations at each site are paired in time. Poor performance at the Grandy's Special Study site occurred because microscale hot spot modeling (CAL3QHC) was not performed at nearby intersections. More discussion concerning the Grandy's site is in the section named "Selection of CO Monitors for Use in the Performance Evaluation Required by EPA" in the CO SIP TSD.

Following are a series of figures showing 1-hour and 8-hour average time series plots for those sites used to generate the statistical measures required by EPA. Time series plots for other sites can be found in the attachments. Although 1-hour average concentration plots are presented, the reader should note that EPA's required statistical measures apply to 8-hour average estimates only.

Isopleths of the hour during which the highest estimated 1-hour and 8-hour averages occurred are presented in the following set of figures.

A review of the 1-hour average estimates at the CAMP site shows that the model: 1) under-estimates the observed concentration of 45.0 ppm during hour 16 by about 55%; 2) under-estimates the observed peak of 50.5 ppm during hour 17 by about 40%; 3) slightly under-estimates the observed concentration of 30.0 ppm during hour 18 by about 1%; 4) and over-estimates the observed concentration of 3.9 ppm during hour 19 by over 500%. Thus, the model has difficulty simulating the rapid rise in the 1-hour average CO concentrations at the CAMP site. The model also has difficulty simulating the rapid decline in observed concentrations (i.e., 30 to 3.9 ppm in a 1-hour period). See Figure 7 for a graphical representation of the 1-hour average concentration estimates and observed 1-hour concentrations at CAMP.

There are several possible explanations for the behavior of the model at CAMP. A lack of sufficient site-specific data on spatial variability of the wind field, uncertainties surrounding the hourly mixing depths and other meteorological data, uncertainties surrounding the CAL3QHC estimates, and other factors - including uncertainties in both the transportation modeling and on-road mobile emission estimates - make it difficult to state a definitive reason.

Nevertheless, when 8-hour average concentration estimates are computed, the combination of over- and under-estimations from the 1-hour average estimates in the model produce an 8-hour estimate that satisfactorily replicates the observed behavior of 8-hour average concentrations. Although the 8-hour peak is shifted in time with respect to the observed peak, the magnitude of the maximum model estimate (i.e., 17.2 ppm) is close to the observed maximum of 18.7 ppm.

Table 19. EPA's recommended statistical performance measures for the "high" episode.

Performance Measure	Performance Statistic	EPA's Performance Goal
1. Unpaired (time or space) highest 8-hour estimation accuracy, A_u .	-6.5%	± 30 -35%
2. Average absolute error in 8-hour <i>peak</i> estimation accuracy paired (time and space) values >5.0 ppm, A_{pk} .	21.2%	25-30%
3. Average absolute error in the estimated <i>time</i> of the 8-hour peak concentration, paired by station values >5.0 ppm, A_t .	2 hours	2 hours

Table 20. Comparison of modeled vs. observed CO 8-hour average concentrations for the "high" episode (Run A) - December 5, 1988.

Monitor	Maximum MODELED 8-hour Average Concentration (ppm)			OBSERVED ¹ 8-hr Average Concentration (ppm)
	UAM areawide	CAL3QHC hot spot	UAM + CAL3QHC	
CAMP – 2105 Broadway	16.3	0.9	17.2	17.7
National Jewish Hospital	6.5	2.6	9.1	11.3
Carriage – 23rd/Julian	8.1	NM ²	NA ³	9.9
Welby - 78th/Steel	8.4	NM	NA	8.7
Englewood - 3300 S. Huron	2.9	NM	NA	3.4
Boulder - 2320 Marine St	1.6	NM	NA	2.1
Boulder(Grandy's) 28th/Pearl	1.6	NM	NA	7.1
Arvada – W.57th/Garrison	2.8	NM	NA	3.2
Highland - 8100 S. Univ.	1.4	NM	NA	1.4
Aurora(Denny's) Parker/Peoria	4.7	NM	NA	4.2

¹ Estimated and Observed concentrations are paired in time (i.e., the monitored concentrations are for the same 8-hour averaging period as the modeled estimates).

² NM - Not Modeled with CAL3QHC.

³ NA - Not Applicable.

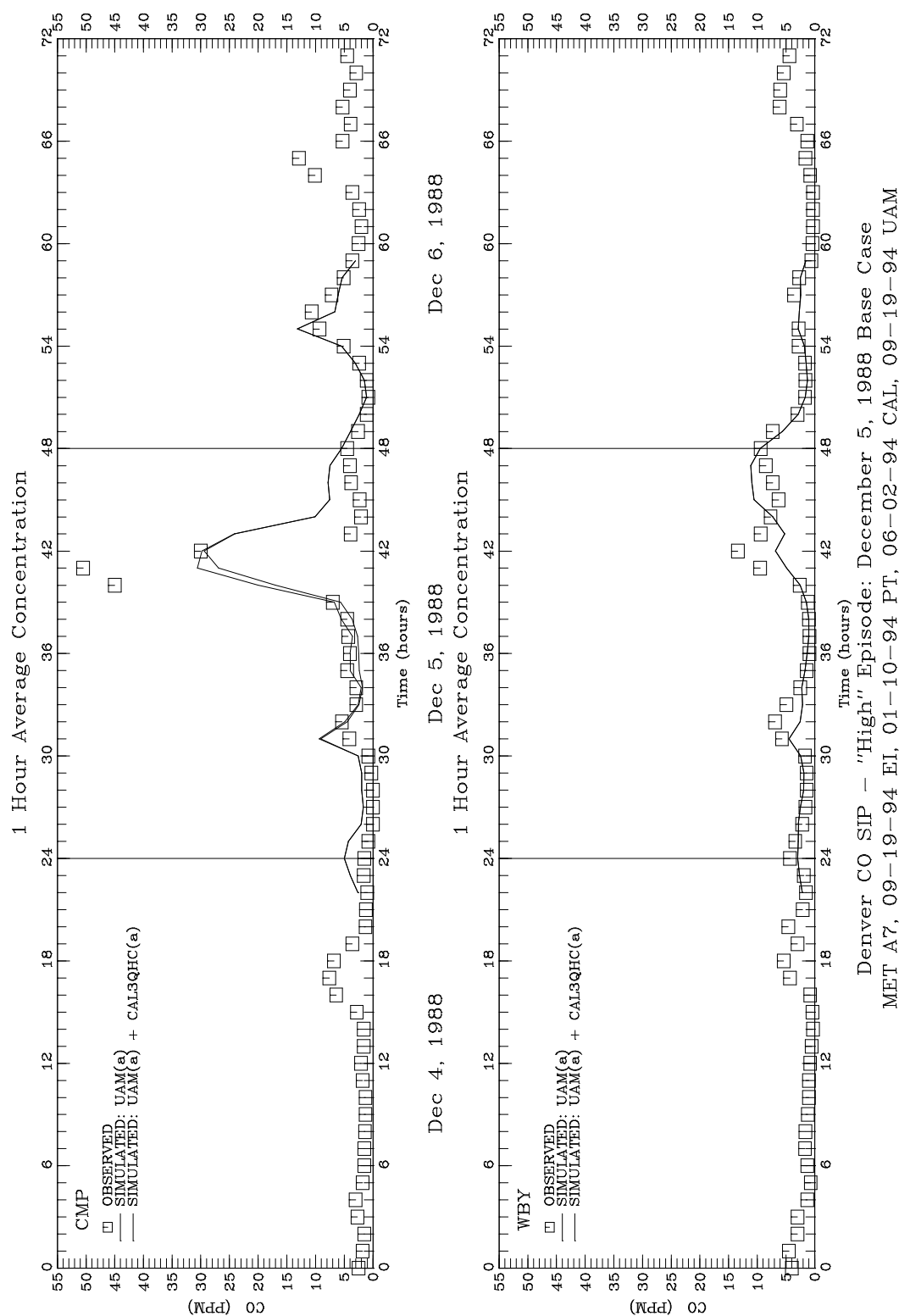


Figure 7. One-hour (1-hr) time series plots showing observations (boxes) and model estimates (lines) at CAMP (CMP) and Welby (WBY).

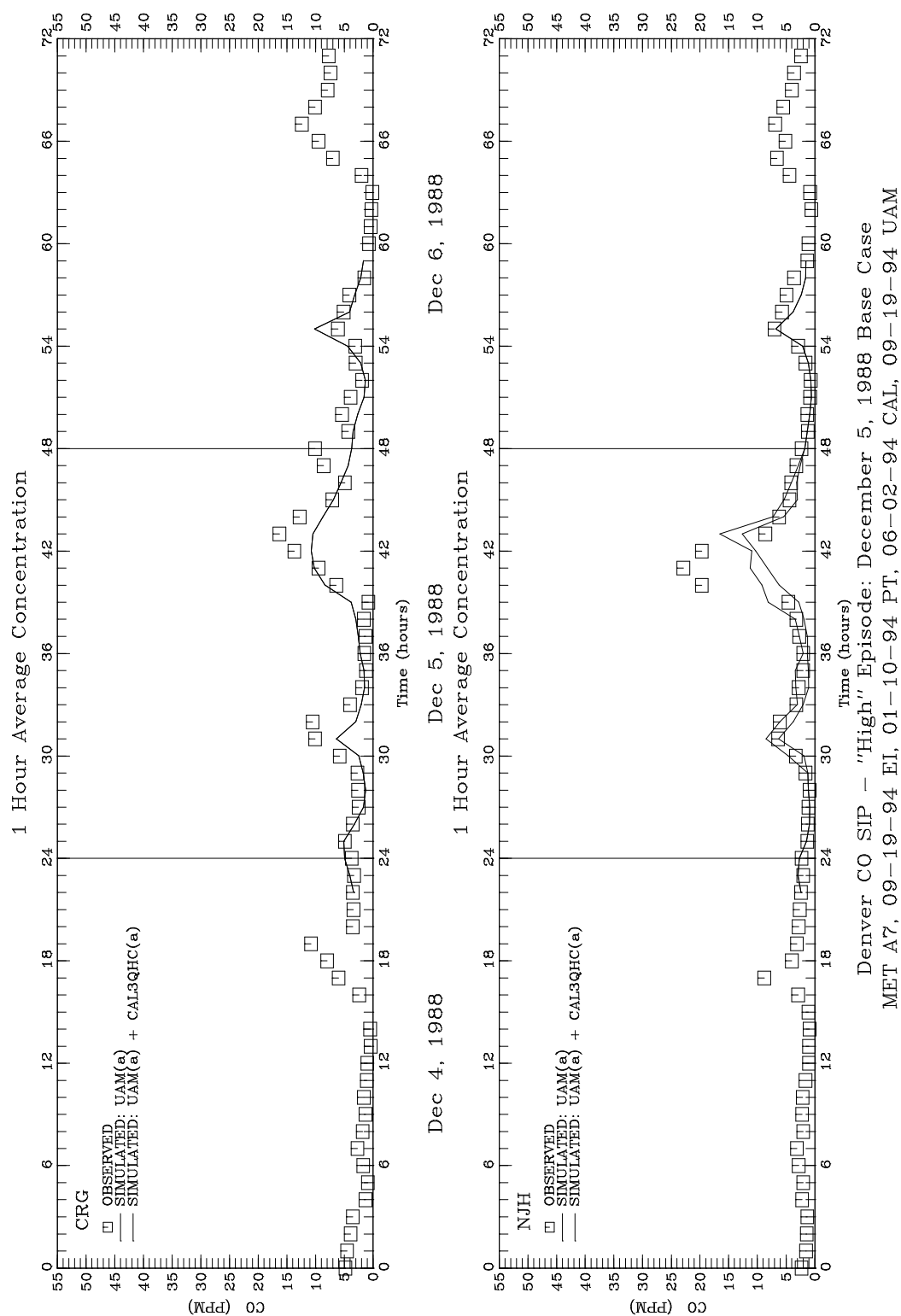


Figure 8. One-hour (1-hr) time series plots showing observations (boxes) and model estimates (lines) at Carriage (CRG) and NJH.

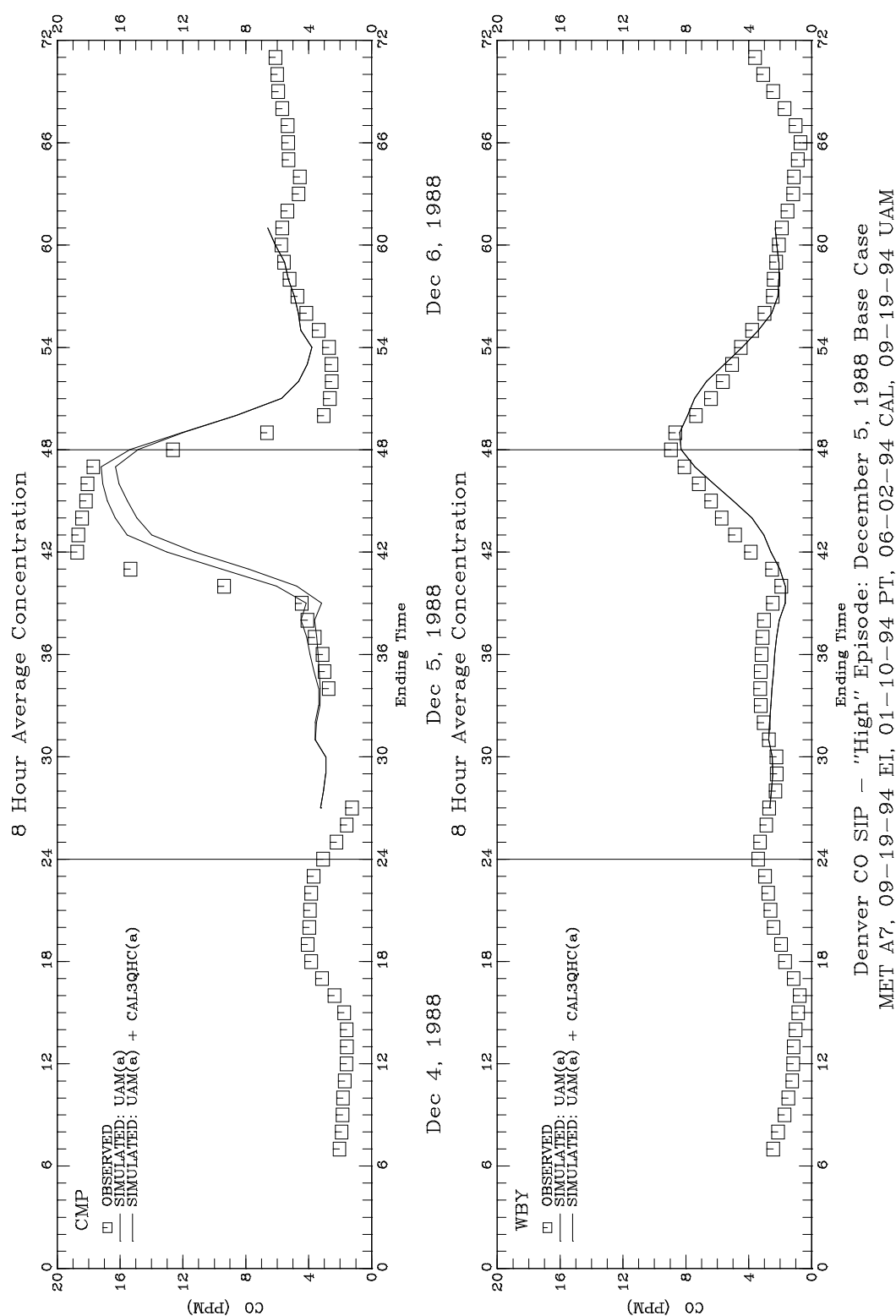


Figure 9. Eight-hour (8-hr) time series plots showing observations (boxes) and model estimates (lines) at CAMP (CMP) and Welby (WBY).

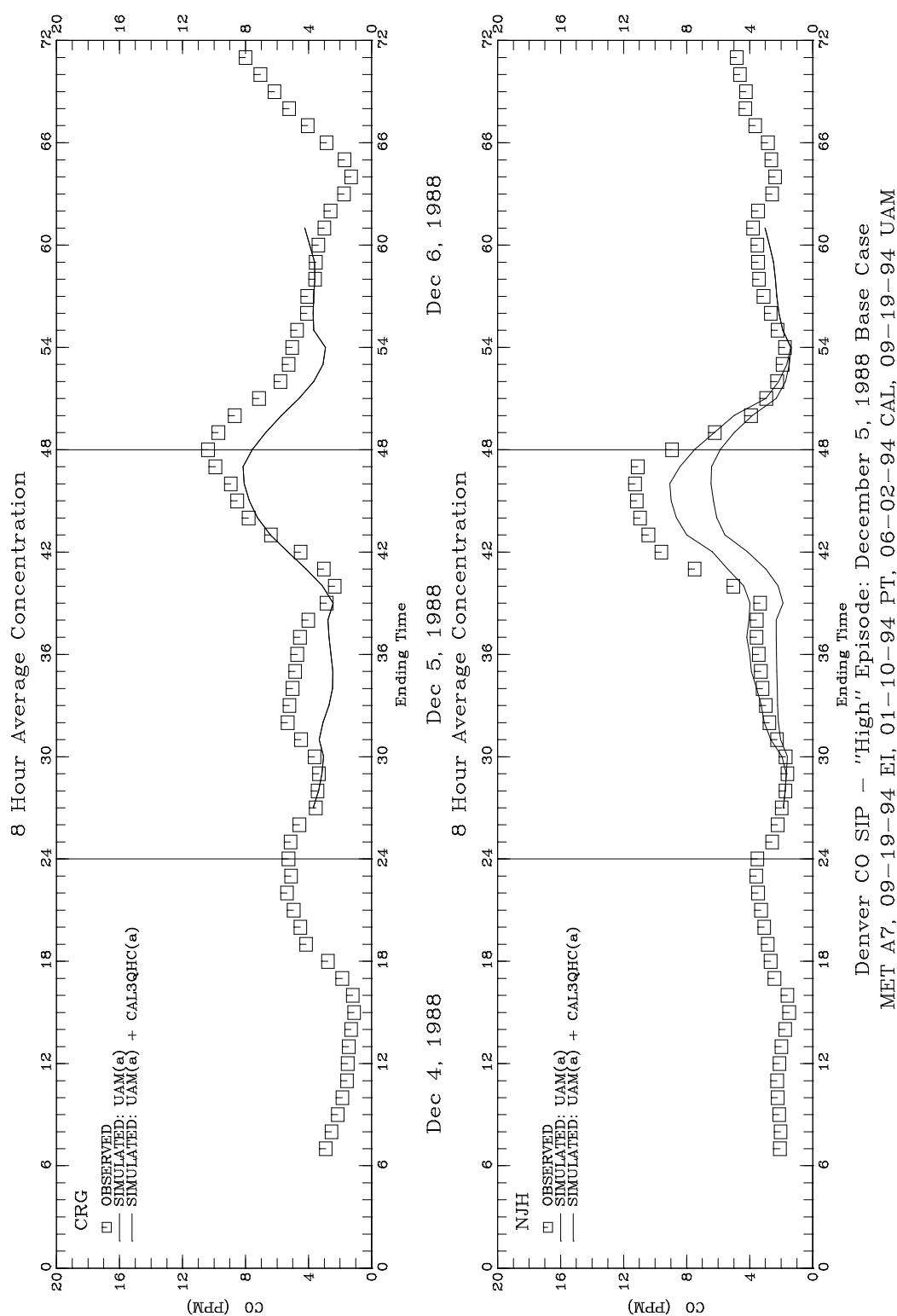
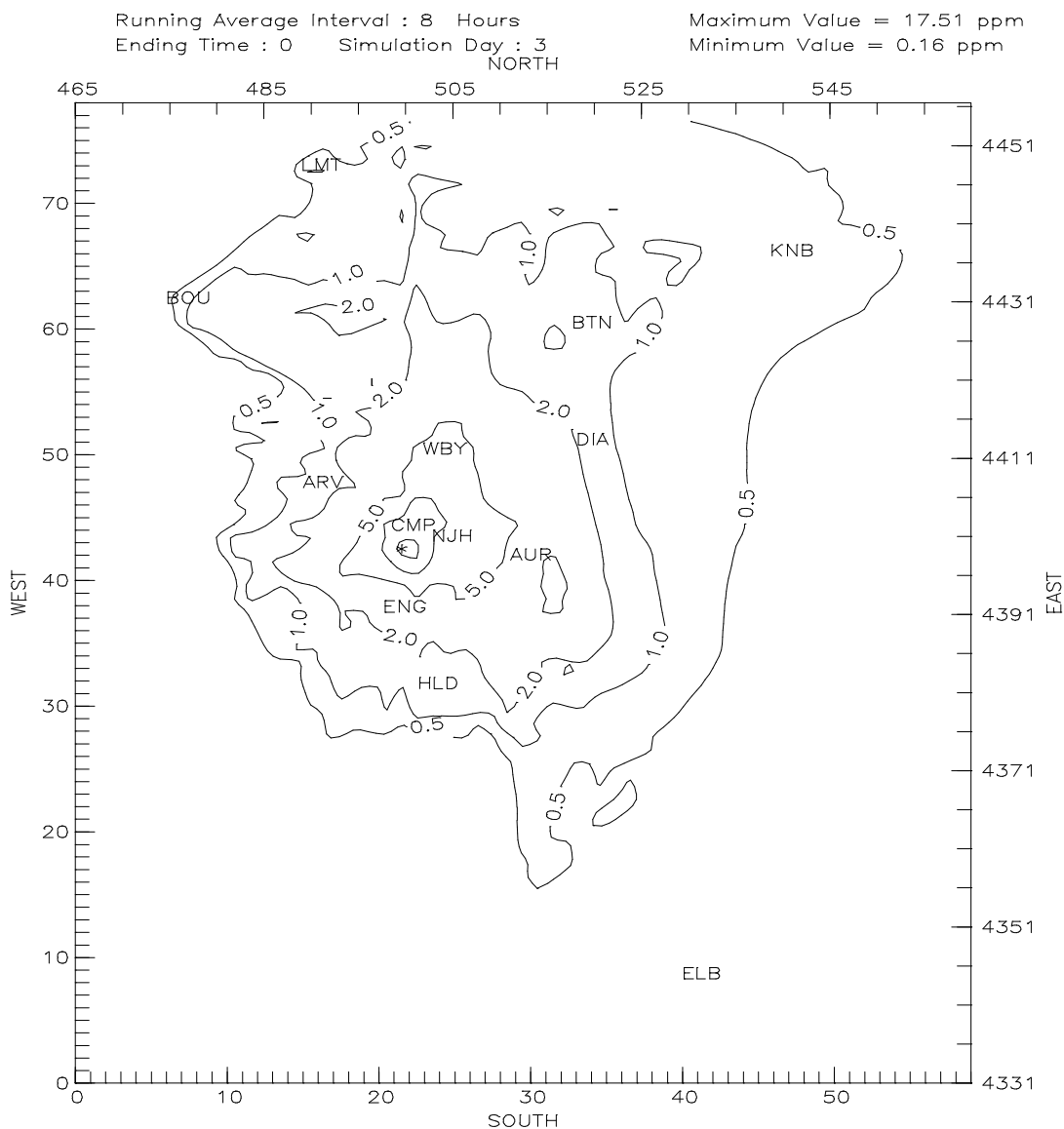


Figure 10. Eight-hour (8-hr) time series plots showing observations (boxes) and model estimates (lines) at Carriage (CRG) and NJH.



Denver CO SIP — UAM "High" Episode; Level 1; 09-19-94 EI
 December 5, 1988 Base Case
 MET A7: DWMZ=12,UAMZ=5,DB=40-225,SimDrainJet,ModEC, 11-01-93
 UAM: 09-19-94, PTS: 01-10-94, Contours at: 0.5,1,2,5,9,15,25

Figure 11. UAM 8-hour CO concentration isopleths for the hour during which the maximum UAM predicted 8-hour concentration occurred during the "high" episode (December 5, 1988).

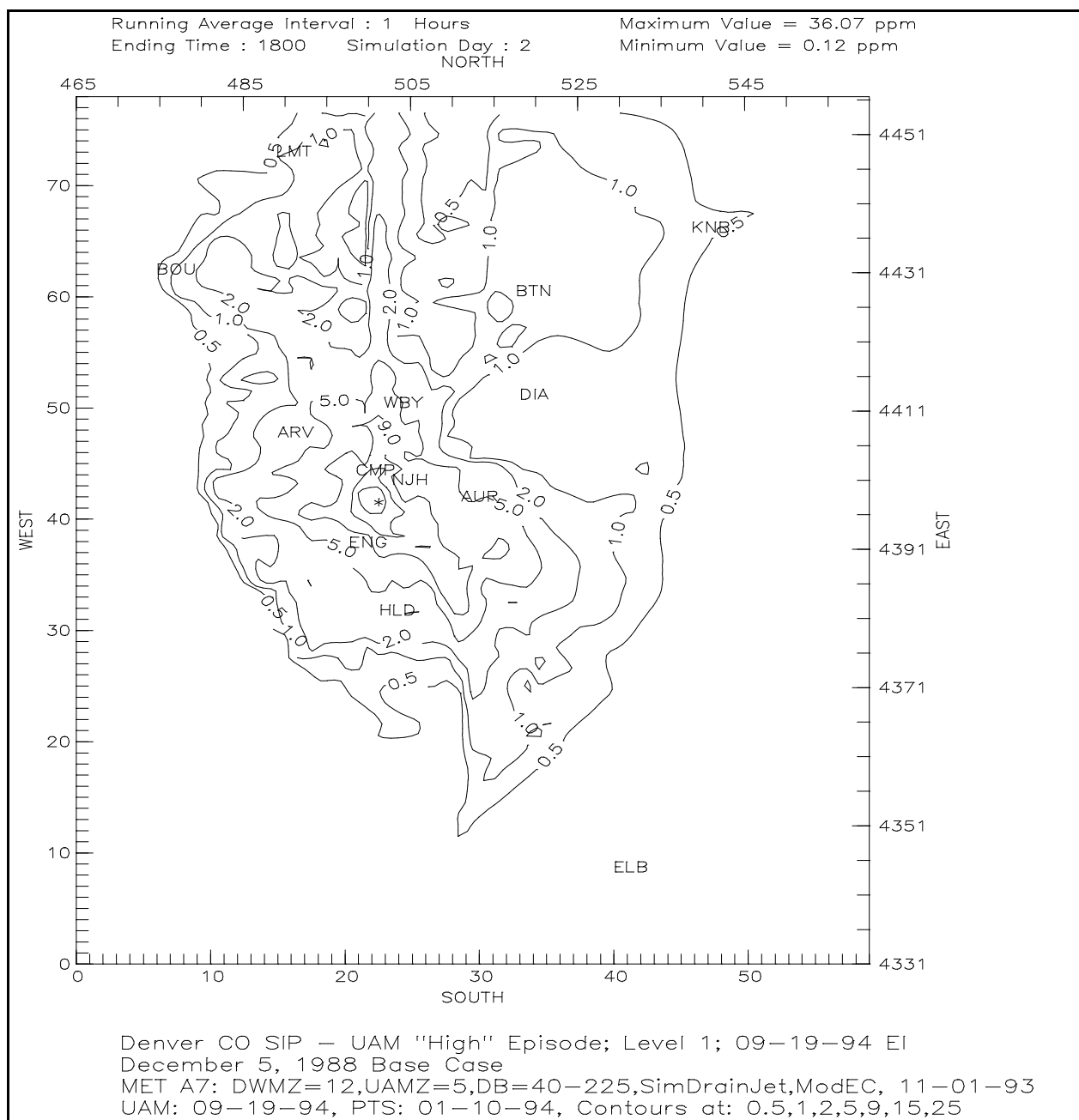


Figure 12. UAM 1-hour CO concentration isopleths for the hour during which the maximum UAM predicted 1-hour concentration occurred during the "high" episode (December 5, 1988).

4. Modeling-Based Maintenance Demonstration

4.1. Design Concentrations

The methodology used to demonstrate attainment in future years is the same as outlined in the approved CO SIP. The maintenance demonstrations are based on the “high” episode, which is the worst-case CO episode. Refer to Section 3.5.1 of this report for a discussion about why modeling results from “second-high” episode are not presented as part of the final maintenance plan.

The modeling approach demonstrates compliance on a typical weekday. Special events and weekend days have not been modeled.

As required by CAA Section 175A(a), each request for redesignation shall be accompanied by a SIP revision which provides for maintenance of the NAAQS for at least 10 years after redesignation. Following EPA guidance and policy which requires the same level of modeling for maintenance plans as that which was performed for the attainment demonstration, this maintenance demonstration is made through the use of areawide dispersion modeling, along with selected intersection hot spot modeling, for the years 2006 and 2013. The combined results of the dispersion and intersection modeling show no 8-hour maximum CO concentration greater than or equal to 9.0 ppm anywhere in the modeling domain with the implementation of the proposed control measures.

The 2006 and 2013 emission inventories were used as modeling inputs along with meteorological data from the CO SIP design day.

Consistent with EPA modeling guidance, intersections were selected for modeling based on the latest information from DRCOG regarding the highest volume and most congested intersections in the nonattainment area. These intersections differ in some cases from those modeled in the original attainment demonstration. As in the attainment demonstration, the CAMP intersection was modeled to provide a hot spot analysis for downtown, which is where the maximum CO concentrations in the region are measured.

The approach to demonstrating attainment in the CO SIP is explained below in an excerpt from the “CO SIP Technical Support Document” (CDPHE, 1994)

The CAAA of 1990 require carbon monoxide (CO) nonattainment areas designated as "moderate" or "serious" to demonstrate attainment of the CO National Ambient Air Quality Standards (NAAQS) through air quality modeling or any other analytical method determined to

be at least as effective. Denver's future-year attainment demonstration is based on CO estimates generated by the Urban Airshed Model (UAM) and the CAL3QHC roadway intersection model.

The Urban Airshed Model is a three-dimensional grid model designed to calculate the concentration of both inert and chemically reactive pollutants by simulating physical and chemical processes in the atmosphere that affect pollutant concentrations.³⁷ In this application, carbon monoxide has been modeled as an unreactive species.

CAL3QHC is a modeling methodology designed to predict the level of CO from motor vehicles traveling near roadway intersections. It is an extensively revised version of CAL3Q, which was a consolidation of two other models: the CALINE-3 line source dispersion model and an algorithm for estimating vehicular queue lengths at signalized intersections.³⁸

In order to "demonstrate attainment of the carbon monoxide NAAQS, the combined results from the area wide and roadway intersection modeling should show no predicted 8-hour maximum carbon monoxide concentration greater than 9.0 ppm anywhere in the modeling domain for the episode modeled".³⁹ Furthermore, attainment demonstrations are required for each meteorological episode. EPA has required the Denver metropolitan area to submit future-year attainment demonstrations based on the meteorological conditions that occurred on December 5, 1988 ("high" episode) and January 15, 1988 ("second-high" episode). Episode selection procedures are discussed elsewhere.

The primary purpose for conducting UAM area wide and CAL3QHC roadway intersection modeling is to demonstrate the effectiveness of CO emission control strategies in attaining the 8-hour average NAAQS for carbon monoxide.⁴⁰ The attainment demonstration consists of four parts:

- C Development of attainment-year base case emission inventories; this inventory reflects the net effect of federally mandated controls and growth projections for all source types;
- C Development of future-year emission inventory with control strategies;
- C Performing attainment year model simulations to assess inventories and control strategies;
- C Use of modeling results to demonstrate attainment.

For the Urban Airshed Modeling, the estimated volume averaged CO concentrations from each of the 4,602 grid cells in the Denver modeling domain must show attainment of federal standards. For the UAM and CAL3QHC combined modeling system, the sum of the UAM area wide and CAL3QHC hot spot estimates must show attainment at each selected intersection.

4.2. Control Strategy Assumptions

The metro Denver area will rely on the control programs listed below to demonstrate maintenance of the CO standards through 2013. No emission reduction credit has been taken in the maintenance demonstration for any other current State or local control programs

and no other such programs, strategies, or regulations shall be incorporated or deemed as enforceable measures for the purposes of this maintenance demonstration. For a more detailed description of proposed control strategies and of the contingency plan, refer to the separately published “Proposed Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver metropolitan area.” The enforceable control measures for the maintenance plan are as follows:

- a) Federal tailpipe standards and regulations, including those for small engines and non-road mobile sources. Credit is taken for these federal requirements but they are not part of the Colorado SIP.
- b) Gasoline vehicle inspection and maintenance (I/M 240) program as modified and described in a separately published redesignation and maintenance plan documents.
- c) Oxygenated gasoline program as modified and described in a separately published redesignation and maintenance plan documents.
- d) Woodburning controls (AQCC Regulation No. 4).
- e) Industrial source controls (AQCC Regulations No. 3 & 6 and Common Provisions). In accordance with State and federal regulations and policies, the State/federal nonattainment NSR requirements currently in effect for the Denver area will revert to the State/federal attainment PSD permitting requirements once EPA approves this redesignation request and maintenance plan.

In general, the maintenance plan modeling is based on 1.5% oxygenated fuels for 2006 and 1.7% oxygenated fuels for 2013. The I/M240 Program includes a four year exemption for new model vehicles. The remote sensing devices (RSD) program includes evaluation of up to 80% of the fleet.

4.3. UAM and CAL3QHC Results

The maximum 8-hour average carbon monoxide (CO) concentration for 2006 and 2013 is located in Urban Airshed Model grid cell (23,43). This is the grid cell that includes most of downtown and the CAMP monitoring site.

In the approved CO SIP, the maximum grid cell (i.e., cell (23,43)) occurred in the cell directly west of the CAMP cell (i.e., cell (22, 43)). The shift is due to changes in emissions density in the downtown area. This is due in part to changes in the transportation network.

The maximum concentration estimate for 2006 is 8.71 ppm. It is based on combined UAM and CAL3QHC estimates at the intersection of Broadway/Champa/21st (i.e., the CAMP intersection).

The maximum concentration estimate for 2012 is 8.98 ppm. It is based on combined UAM and CAL3QHC estimates at the intersection of Broadway/Champa/21st (i.e., the CAMP intersection). The concentration maximum for 2012 is slightly higher than 2013 because the modeling is based on 1.5% oxygenated fuels instead of the 1.7% used for 2013.

The maximum concentration estimate for 2013 is 8.96 ppm. It is based on combined UAM and CAL3QHC estimates at the intersection of Broadway/Champa/21st (i.e., the CAMP intersection).

4.3.1.1. UAM Results for 2006 (UAM simulation "H")

Table 21. Combined UAM and CAL3QHC estimates for "high" episode - Run H: Enhanced Inspection/Maintenance 240 with new vehicles exempted for their first four years; 1.5% oxygenated gasoline; evaluation of up to 80% of the fleet with Remote Sensing Devices (80% RSD).

Location	Maximum 8-hour Average CO Concentration Estimates for the Year 2006		
	CAL3QHC	UAM	UAM + CAL3QHC
Maximum UAM cell (23,43)	NA	8.08 ppm (1)	NA
Broadway & Champa St. (i.e., CAMP intersection)	1.12 ppm (2)	7.59 ppm (3)	8.71 ppm (2,3)
Foothills & Arapahoe	<i>0.9 ppm (4)</i>	<i>0.9 ppm (5)</i>	<i>5.7 ppm (4,5)</i>
1 st and University	<i>4.0 ppm (4)</i>	<i>4.0 ppm (5)</i>	<i>8.3 ppm (4,5)</i>
Hampden & University	<i>1.9 ppm (4)</i>	<i>1.9 ppm (5)</i>	<i>5.5 ppm (4,5)</i>
Parker & Iliff	<i>2.7 ppm (4)</i>	<i>2.7 ppm (5)</i>	<i>5.8 ppm (4,5)</i>
Arapahoe & University	<i>1.3 ppm (4)</i>	<i>1.3 ppm (5)</i>	<i>5.0 ppm (4,5)</i>

NA = Not Applicable (Note: This value is the maximum from the UAM simulation. There is no CAL3QHC component because UAM and CAL3QHC are separate models.)

NOTES:

- Modeling results at intersections where conservative CAL3QHC screening-level modeling has been performed are shown in *italics*; in addition, only one decimal place of precision is included.
- The precision of the results is not intended to imply a level of accuracy.
- The estimate at "Broadway & Champa St. (i.e., CAMP intersection)" is from the maximum hot spot receptor at the intersection near the CAMP monitor.

- 1) UAM maximum grid cell estimate
- 2) Refined CAL3QHC estimate
- 3) Weighted UAM average
- 4) Screening-level CAL3QHC estimate
- 5) Maximum weighted UAM average

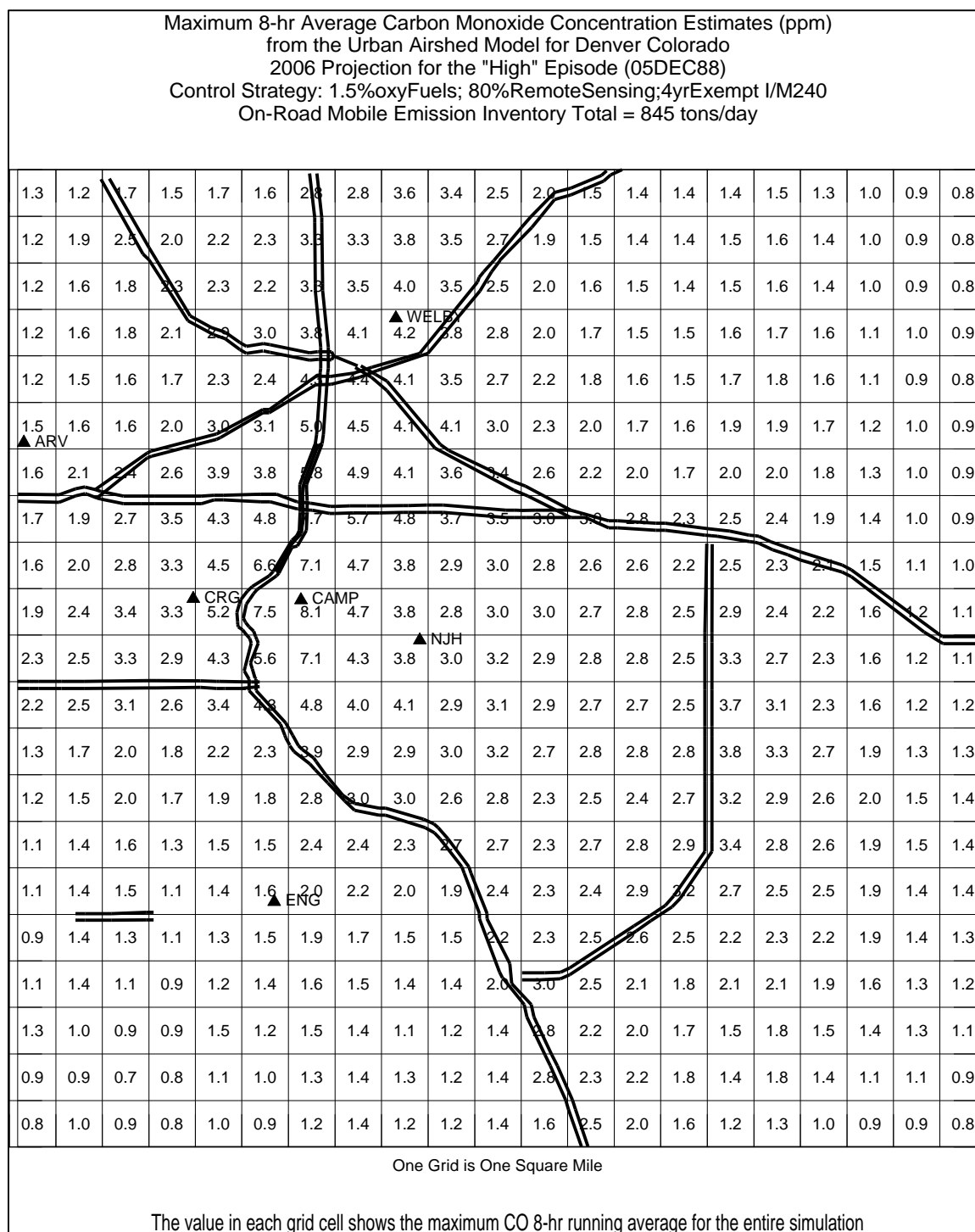


Figure 13. Urban Airshed Model Results for 2006 (simulation "H").

4.3.1.2. UAM Results for 2012 (UAM simulation "L")

Table 22. Combined UAM and CAL3QHC estimates for "high" episode - Run L: Enhanced Inspection/Maintenance 240 with new vehicles exempted for their first four years; 1.5% oxygenated gasoline; evaluation of up to 80% of the fleet with Remote Sensing Devices (80% RSD).

Location	Maximum 8-hour Average CO Concentration Estimates for the Year 2012		
	CAL3QHC	UAM	UAM + CAL3QHC
Maximum UAM cell (23,43)	NA	8.34 ppm (1)	NA
Broadway & Champa St. (i.e., CAMP intersection)	1.09 ppm (2)	7.89 ppm (3)	8.98 ppm (2,3)

NA = Not Applicable (Note: This value is the maximum from the UAM simulation. There is no CAL3QHC component because UAM and CAL3QHC are separate models.)

NOTES:

- The precision of the results is not intended to imply a level of accuracy.
- The estimate at "Broadway & Champa St. (i.e., CAMP intersection)" is from the maximum hot spot receptor at the intersection near the CAMP monitor.

- 1) UAM maximum grid cell estimate
- 2) Refined CAL3QHC estimate
- 3) Weighted UAM average

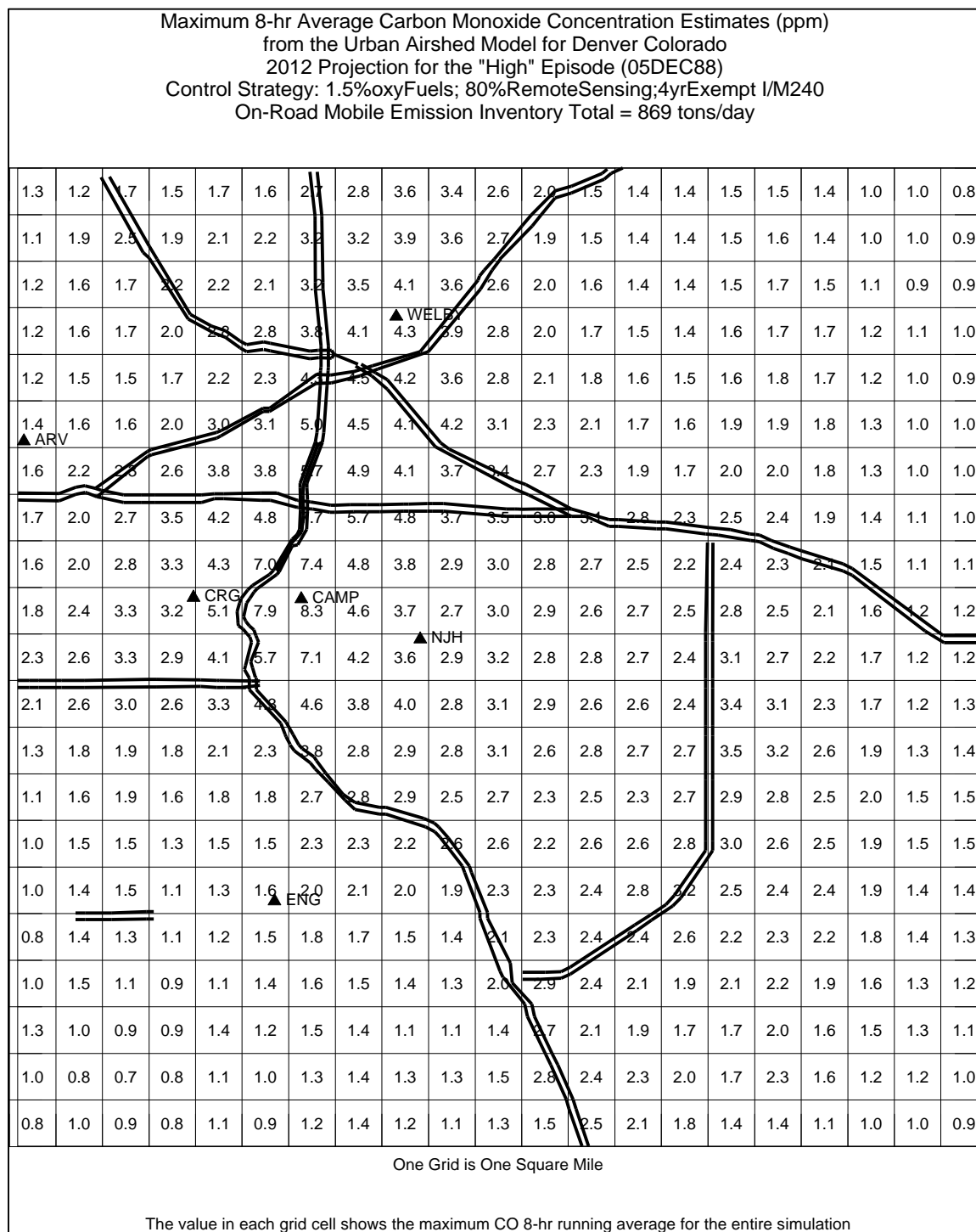


Figure 14. Urban Airshed Model Results for 2012 (simulation "L").

4.3.1.3. UAM Results for 2013 (UAM simulation "O")

Table 23. Combined UAM and CAL3QHC estimates for "high" episode - Run O: Enhanced Inspection/Maintenance 240 with new vehicles exempted for their first four years; 1.7% oxygenated gasoline; evaluation of up to 80% of the fleet with Remote Sensing Devices (80% RSD).

Location	Maximum 8-hour Average CO Concentration Estimates for the Year 2013		
	CAL3QHC	UAM	UAM + CAL3QHC
Maximum UAM cell (23,43)	NA	8.32 ppm (1)	NA
Broadway & Champa St. (i.e., CAMP intersection)	1.08 ppm (2)	7.88 ppm (3)	8.96 ppm (2,3)
Foothills & Arapahoe	<i>4.7 ppm (4)</i>	<i>0.9 ppm (5)</i>	<i>5.6 ppm (4,5)</i>
1 st and University	<i>4.2 ppm (4)</i>	<i>3.9 ppm (5)</i>	<i>8.0 ppm (4,5)</i>
Hampden & University	<i>4.3 ppm (4)</i>	<i>1.9 ppm (5)</i>	<i>6.2 ppm (4,5)</i>
Parker & Iliff	<i>3.0 ppm (4)</i>	<i>2.6 ppm (5)</i>	<i>5.6 ppm (4,5)</i>
Arapahoe & University	<i>3.9 ppm (4)</i>	<i>1.3 ppm (5)</i>	<i>5.3 ppm (4,5)</i>

NA = Not Applicable (Note: This value is the maximum from the UAM simulation. There is no CAL3QHC component because UAM and CAL3QHC are separate models.)

NOTES:

- Modeling results at intersections where conservative CAL3QHC screening-level modeling has been performed are shown in *italics*; in addition, only one decimal place of precision is included.
 - The precision of the results is not intended to imply a level of accuracy.
 - The estimate at "Broadway & Champa St. (i.e., CAMP intersection)" is from the maximum hot spot receptor at the intersection near the CAMP monitor.
- 1) UAM maximum grid cell estimate
 - 2) Refined CAL3QHC estimate
 - 3) Weighted UAM average
 - 4) *Screening-level CAL3QHC estimate*
 - 5) *Maximum weighted UAM average*

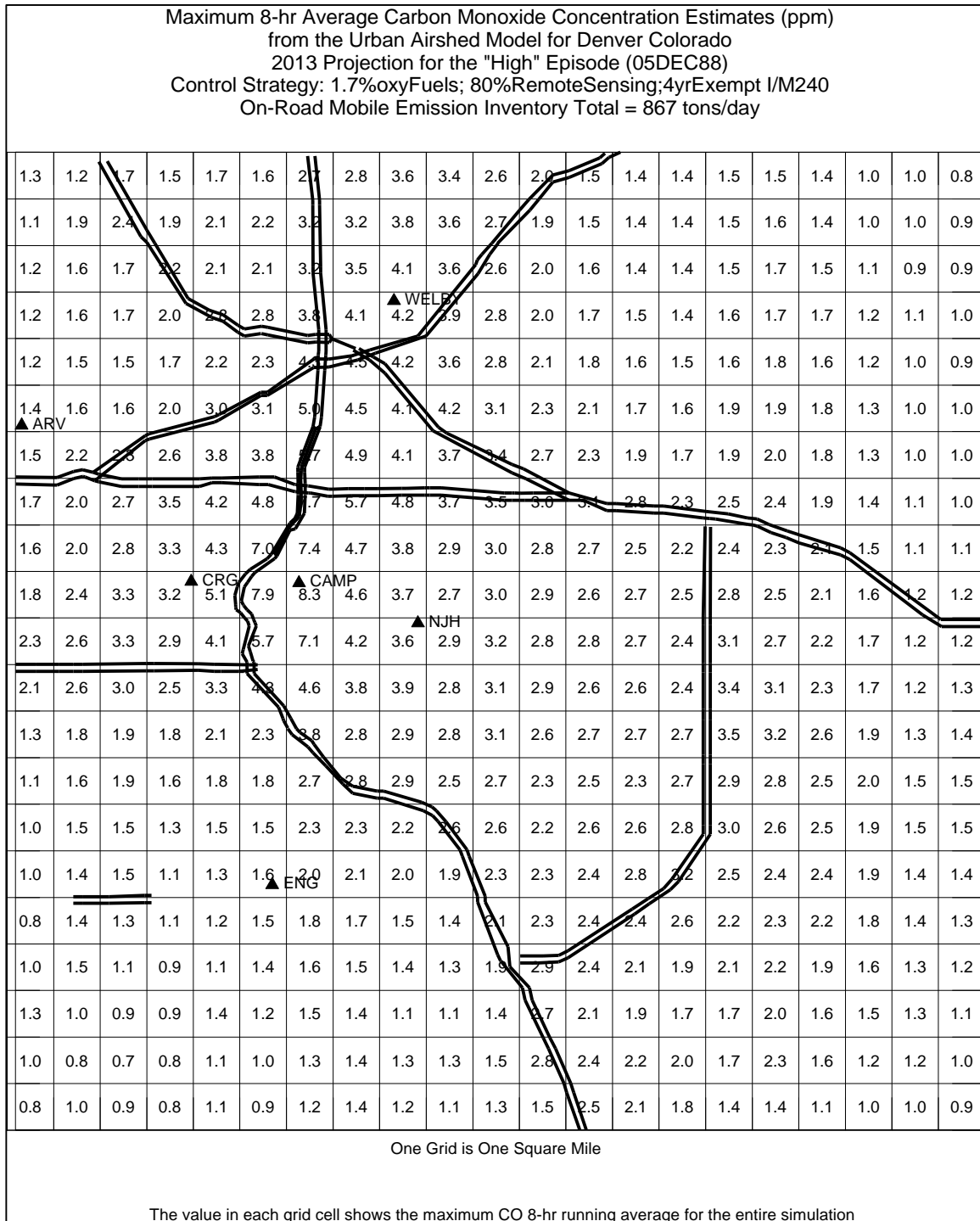


Figure 15. Urban Airshed Model Results for 2013 (simulation "O").

5. Monitoring-Based Attainment Demonstration

Attainment of the CO NAAQS is demonstrated when two years of monitoring data for each site show no more than one exceedance per year of the 8-hour (9 ppm) and 1-hour (35 ppm) standards. The following information demonstrates, as required by Section 107(d)(3)(E) of the CAA, that the Denver metropolitan area has attained the CO NAAQS. This is based on quality assured monitoring data representative of the location of expected maximum concentrations of CO in the area (downtown Denver).

5.1. Denver Area Historical Perspective

Historically, the CO standards were exceeded frequently throughout the Denver metropolitan area. With the implementation of emission control programs aimed at reducing automobile, truck, and woodburning emissions, CO concentrations began to decrease substantially. The last recorded violation of the 8-hour standard occurred in 1995 and the last violation of the 1-hour standard occurred in 1990.

5.2. Carbon Monoxide Monitoring Network

The current CO ambient air monitoring network in the Denver area consists of one National Air Monitoring Station (NAMS) and seven State and Local Air Monitoring Stations (SLAMS) operated by the APCD. The monitoring sites are listed, along with summary data from 1997, 1998 and 1999, in the tables that follow. The following map shows the location of CO monitors active between 1997 and mid-1999. The Marine Street monitor in Boulder was shut down on December 31, 1998.

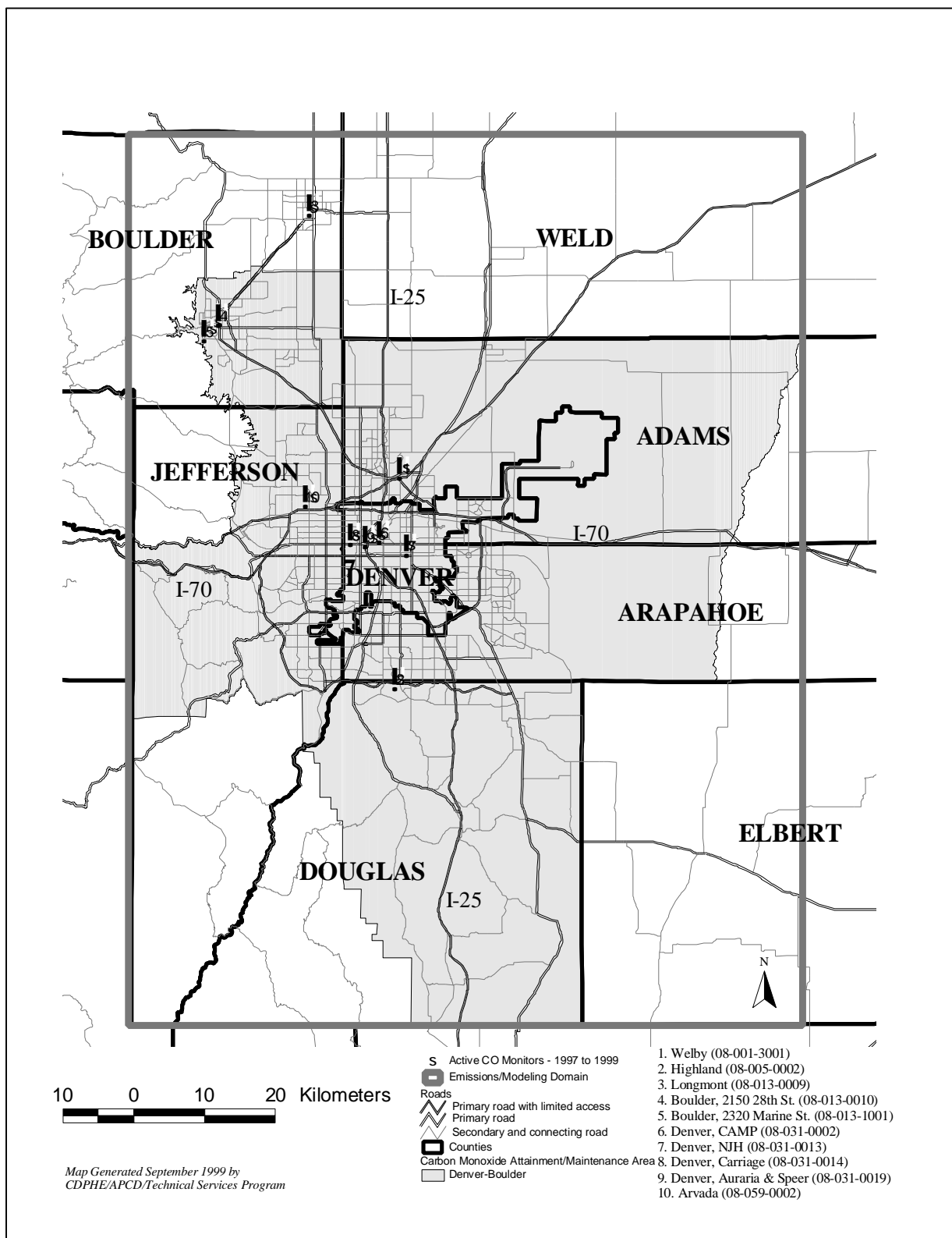


Figure 16. Active carbon monoxide monitoring sites in the Denver metropolitan area from 1997-1999.

5.3. Monitoring-Based Attainment Demonstration

The monitoring data presented in the tables that follow verify that the Denver area has been in attainment with the CO NAAQS for the most recent two year period (1997-98), in accordance with the federal requirements of 40 CFR 50.8. In fact, the area has been in attainment with the CO NAAQS since 1996.

The 1999 data through June demonstrate continued attainment of the CO NAAQS. Data recovery rates for the monitors exceed the seventy-five percent (75%) completeness requirements for all years, and all state and federal quality assurance procedures have been complied with, further substantiating their validity as indicators of ambient CO levels in the Denver metropolitan area. The following figures presents the long-term record for each monitor in the network.

Table 24. 1997 Carbon Monoxide Data Summary for the Denver metropolitan area.

Site Name	Data Capture (%)	1-Hour		8-Hour	
		Maximum ppm	2 nd Maximum ppm	Maximum ppm	2 nd Maximum ppm
Welby, 78 th Ave & Steele St.	99%	8.3	6.6	5.0	4.3
Highland, 8100 S. University Blvd. ⁸	97%	4.3	4.0	3.0	2.0
Boulder, 2150 28 th St	99%	9.0	8.2	5.5	3.9
Boulder, 2320 Marine St.	97%	7.1	6.9	5.1	3.3
Denver CAMP, 2105 Broadway	99%	11.4	10.0	5.7	5.5
Denver, NJH, 14 th Ave. & Albion St.	99%	11.6	10.6	4.8	4.7
Denver Carriage, 23 rd Ave & Julian St.	99%	9.5	8.4	7.0	6.2
Speer & Auraria, Firehouse #6	95%	11.2	11.2	6.6	6.4
Arvada, 57 th Ave. & Garrison St.	99%	9.2	7.7	5.1	4.9

Standards: 1-hour: 35 ppm*; 8-hour: 9-ppm**

* Due to mathematical rounding, a value of 35.5 ppm or greater is necessary to exceed the standard.

** Due to mathematical rounding, a value of 9.5 ppm or greater is necessary to exceed the standard.

⁸ Carbon Monoxide monitoring at Highland was discontinued at the end of 1997 due to historically low concentration levels.

Table 25. 1998 Carbon Monoxide Data Summary for the Denver metropolitan area.

Site Name	Data Capture (%)	1-Hour		8-Hour	
		Maximum ppm	2 nd Maximum ppm	Maximum ppm	2 nd Maximum ppm
Welby, 78 th Ave & Steele St.	99%	6.6	6.1	3.7	3.5
Boulder, 2150 28 th St	99%	11.1	10.6	5.1	4.8
Boulder, 2320 Marine St.	98%	5.2	4.1	2.5	2.1
Denver CAMP, 2105 Broadway	97%	11.6	9.9	5.8	4.7
Denver, NJH, 14 th Ave. & Albion St.	99%	8.5	8.1	4.3	4.3
Denver Carriage, 23 rd Ave & Julian St.	99%	8.3	8.1	5.0	4.4
Speer & Auraria, Firehouse #6	96%	10.1	10.1	5.6	5.2
Arvada, 57 th Ave. & Garrison St.	99%	7.2	6.6	3.7	3.6

Standards: 1-hour: 35 ppm*; 8-hour: 9-ppm**

* Due to mathematical rounding, a value of 35.5 ppm or greater is necessary to exceed the standard.

** Due to mathematical rounding, a value or 9.5 ppm or greater is necessary to exceed the standard.

Table 26. 1999 Carbon Monoxide Data Summary for the Denver Metropolitan Area (through June)

Site Name	Data Capture (%)	1-Hour		8-Hour	
		Maximum ppm	2 nd Maximum ppm	Maximum ppm	2 nd Maximum ppm
Welby, 78 th Ave & Steele St.	99%	4.8	4.5	3.3	3.0
Boulder, 2150 28 th St	99%	5.7	5.4	2.6	2.5
Denver CAMP, 2105 Broadway	99%	8.8	6.3	4.4	3.5
Denver, NJH, 14 th Ave. & Albion St.	99%	10.5	8.0	3.5	3.4
Denver Carriage, 23 rd Ave & Julian St.	99%	5.9	5.7	3.7	3.6
Speer & Auraria, Firehouse #6	99%	7.7	6.4	4.7	4.1
Arvada, 57 th Ave. & Garrison St.	99%	13.2	7.5	4.9	3.0

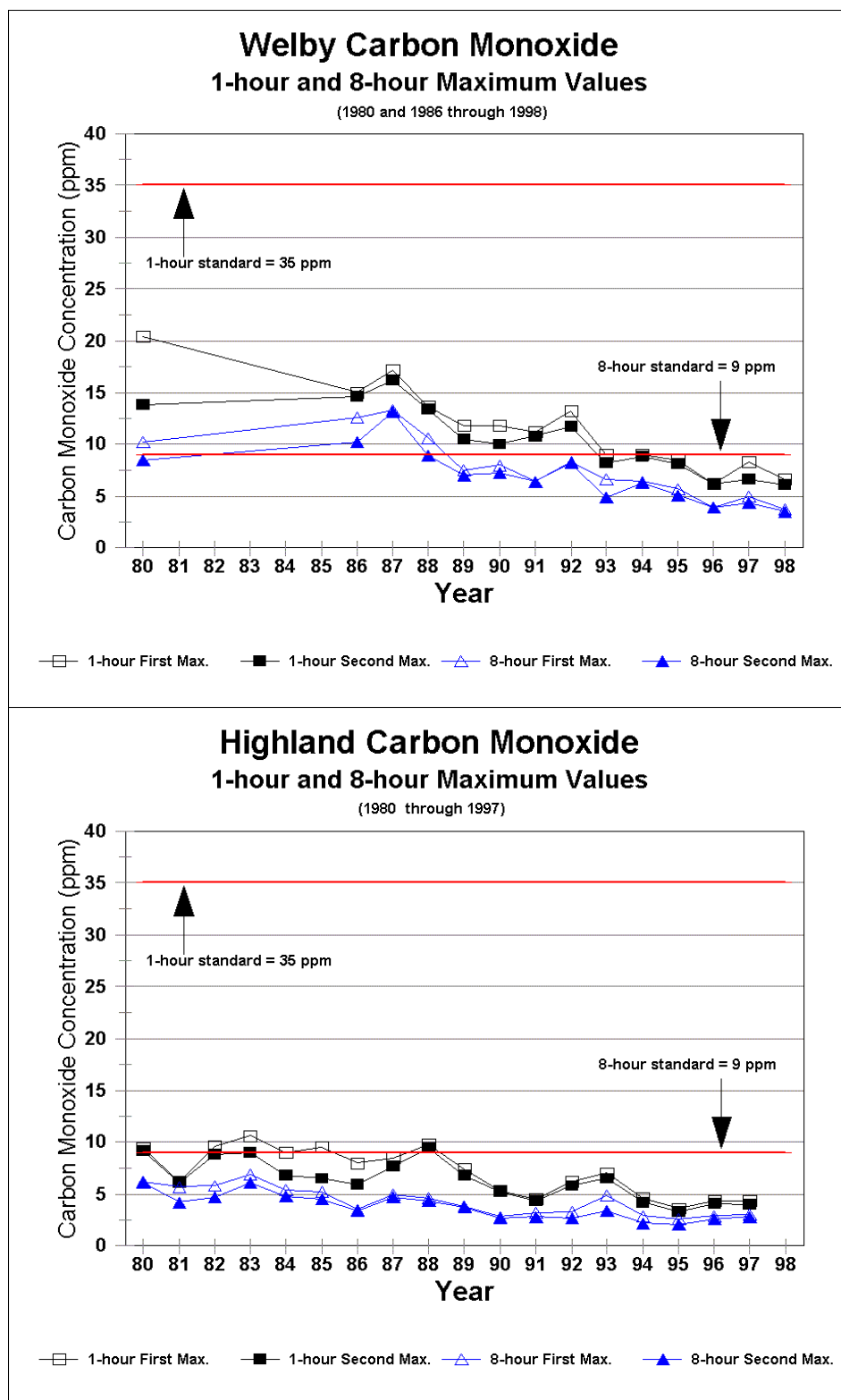


Figure 17. Historic trends in ambient CO concentrations at Welby and Highland.

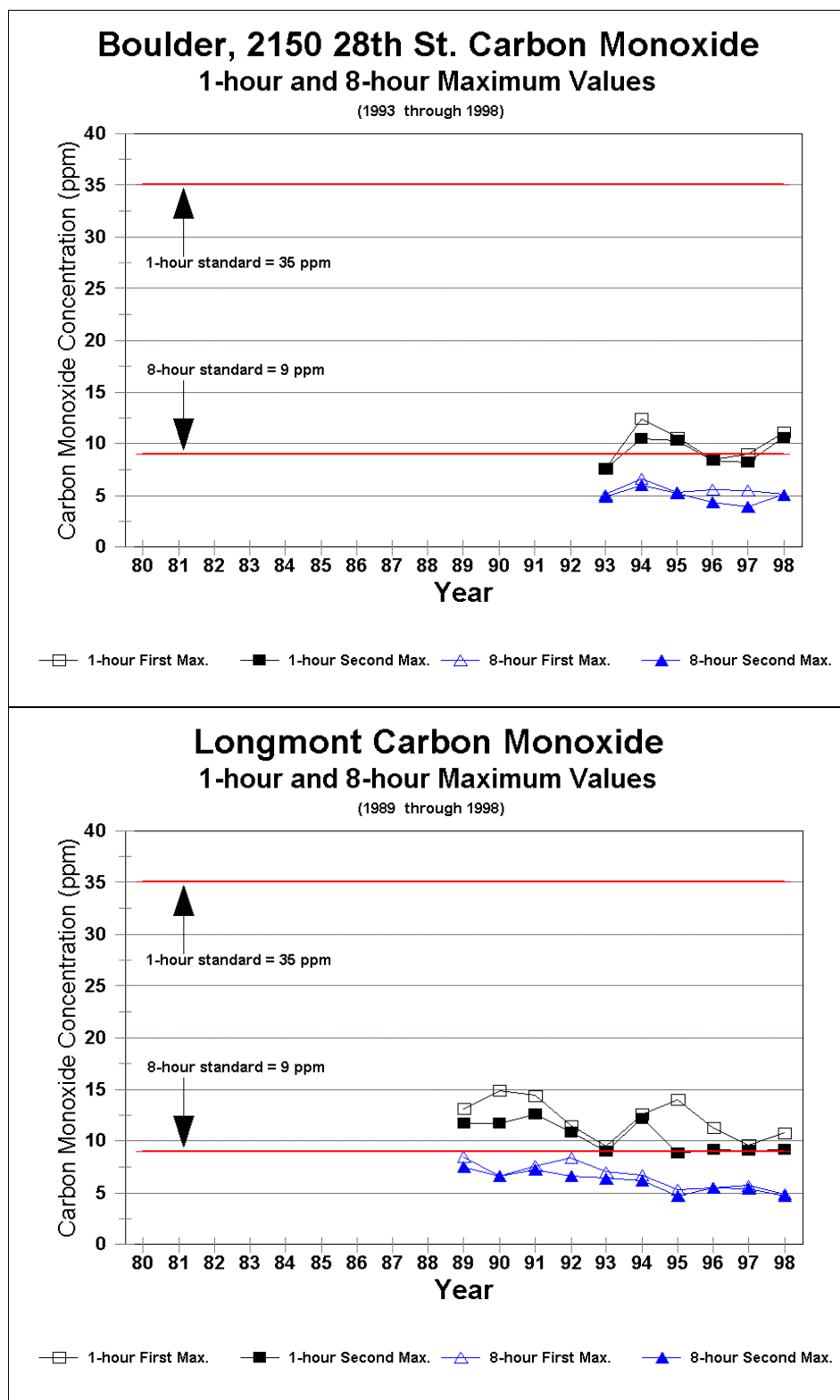


Figure 18. Historic trends in ambient CO concentration at Boulder (28th St.) and Longmont.

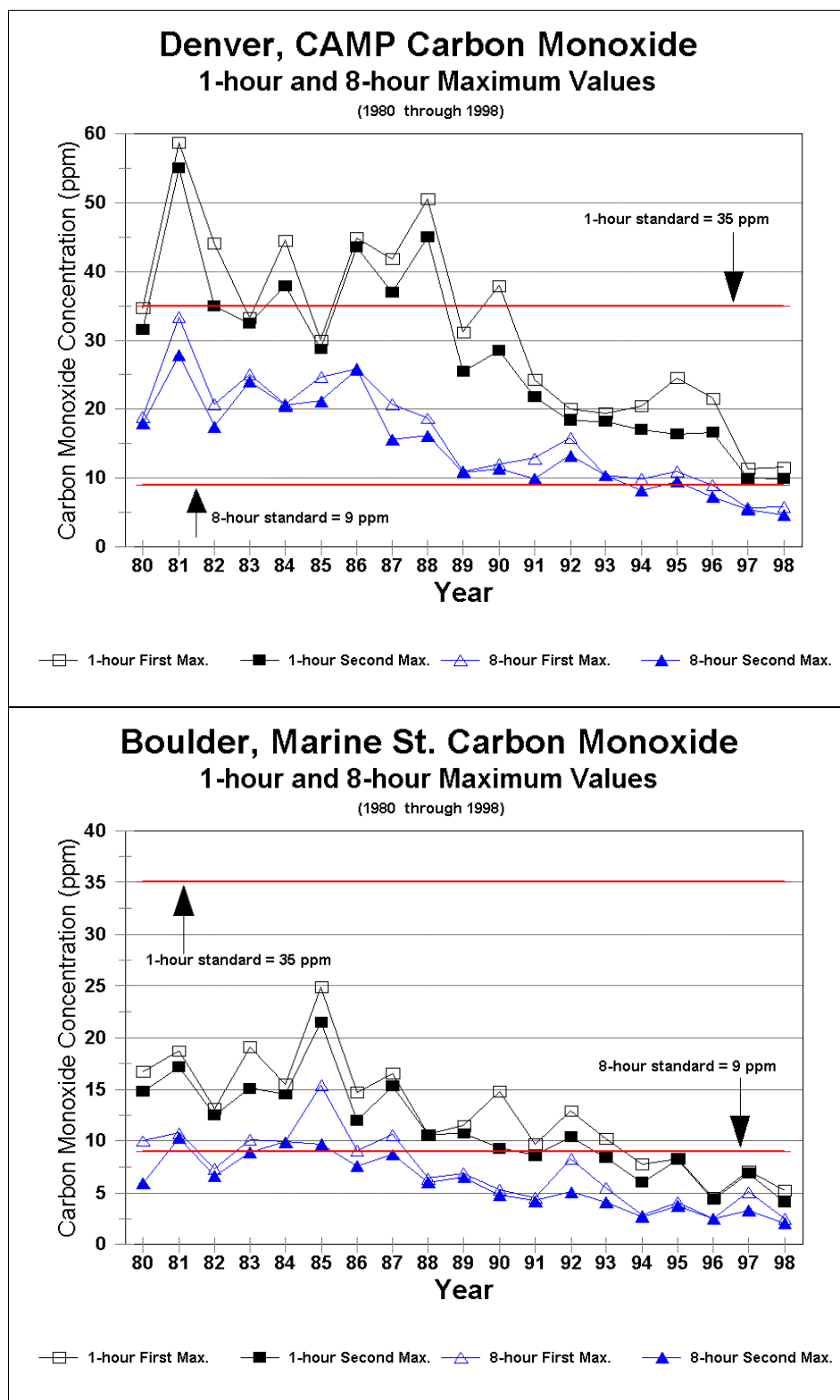


Figure 19. Historic trends in the ambient CO concentration at Denver (CAMP) and Boulder (Marine St.).

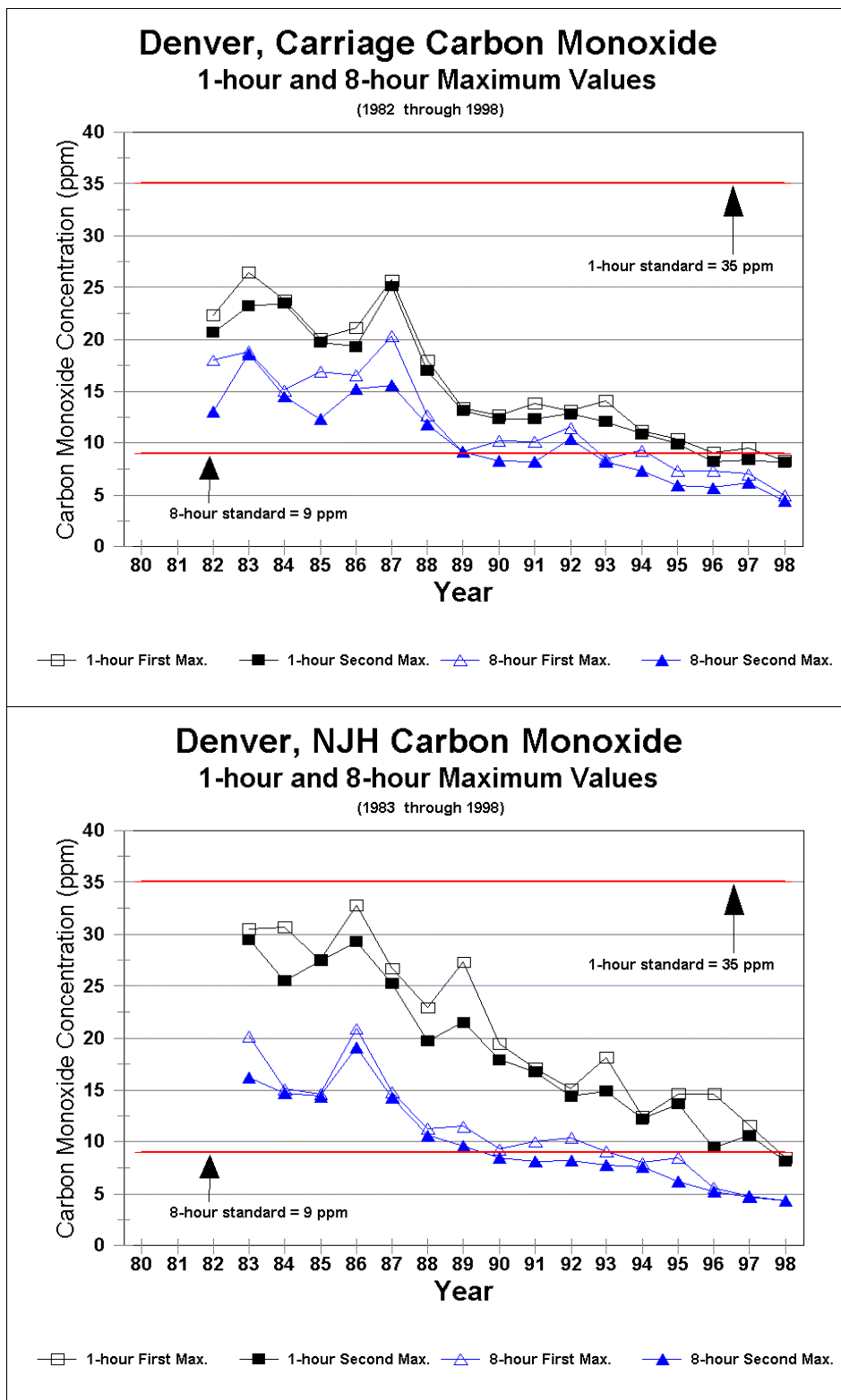


Figure 20. Historic trends in the ambient CO concentration at Denver Carriage and NJH.

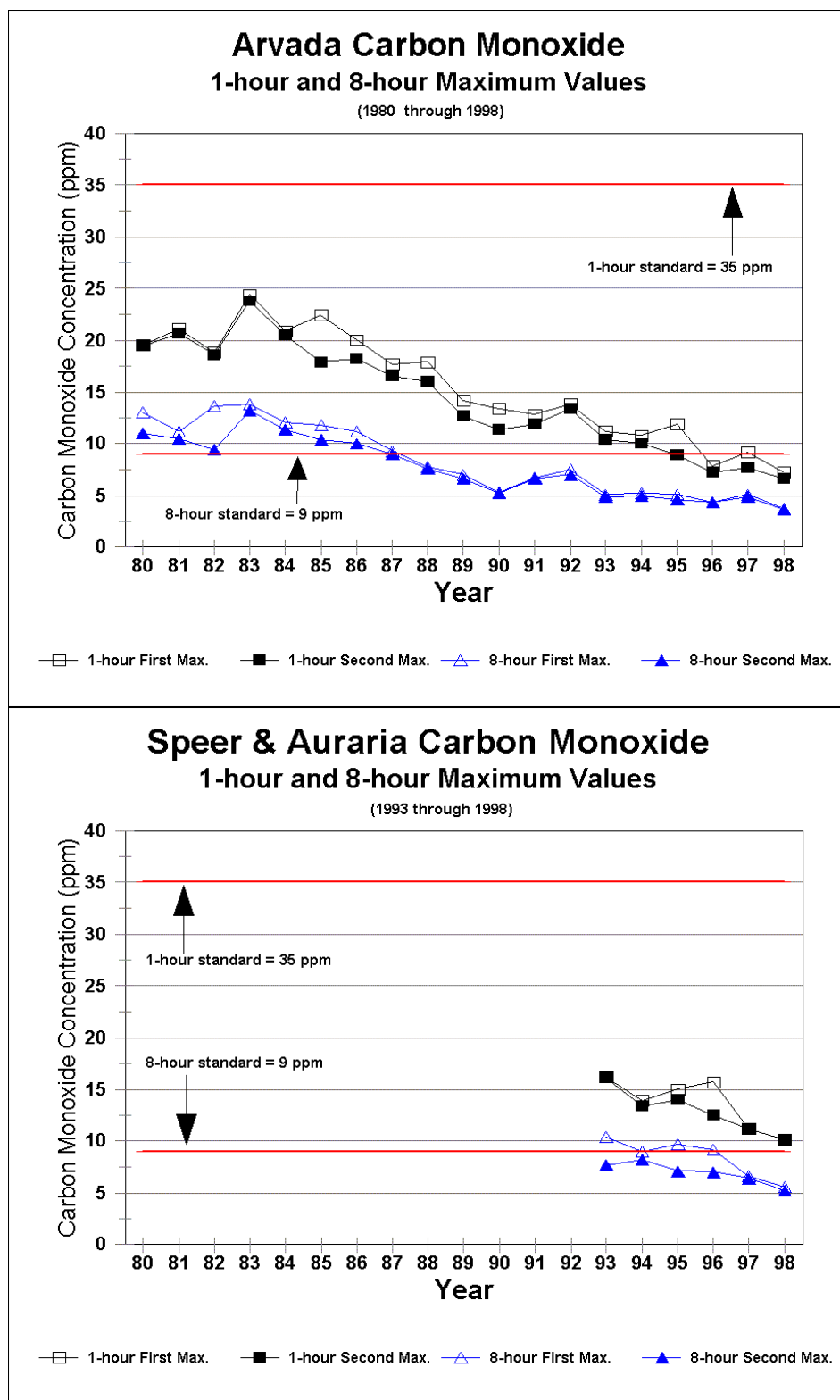


Figure 21. Historic trends in the ambient CO concentration at Arvada and Denver (Speer & Auraria).

5.4. Quality Assurance Program

The Air Pollution Control Division (APCD) is required to develop and implement a quality assurance program for continuous carbon monoxide monitoring. The program must encompass policies, procedures, specifications and standards, and must provide the documentation necessary to: (1) yield data of adequate quality to meet monitoring objectives, and (2) minimize the loss of air quality data due to sampler malfunctions or out-of-control situations.

Minimum quality assurance requirements for State and Local Air Monitoring stations (SLAMS) as well as for National Air Monitoring stations (NAMS) are specified in 40 CFR, Part 58, Appendix A. These requirements are implemented through the EPA guidance document *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part 1 - Ambient Air Quality Monitoring Program Quality System Development*, and the APCD's *Standard Operating Procedures Manual*.

5.4.1. Internal Quality Assurance Programs

The APCD's routine quality assurance program provides operational procedures for the following topic areas:

- **Selection of methods, analyzers or samplers:** The analyzers used at the Denver metropolitan area sites have been designated as reference methods for carbon monoxide by EPA.
- **Operator training:** The APCD has an on-going operator training program under the direction of the Continuous Monitoring and Data Systems Support Unit of the APCD Technical Services Program. This training is detailed in the APCD Standard Operating Procedures Manual.
- **Selection and control of calibration standards:** Carbon monoxide calibration standards are directly traceable to gaseous standard reference materials produced by the National Institute of Standards and Technology. Determination of carbon monoxide cylinder concentrations is made by the gas vendor in accordance with the Revised EPA Protocol for Assay and Certification of Compressed Gas Calibration Standards.
- **Calibrations:** Continuous carbon monoxide samplers operated by the APCD are calibrated at least once per calendar quarter. More frequent calibrations are conducted in response to audit failures, instrument replacement or major maintenance.
- **Control checks and their frequency:** Station operators perform weekly site visits to ensure that analyzers are operating within the instrument manufacturers specifications.
- **Zero/span checks and their frequency:** Continuous carbon monoxide analyzers operated by the APCD are subjected to daily zero and span checks that are automatically initiated near midnight. During these checks, the analyzer samples scrubbed ambient air to obtain a zero concentration value and is followed by a

span, or upscale test, where the analyzer samples bottled carbon monoxide gas with a concentration of about 35 ppm.

- **Control limits for zero/span checks and corrective actions:** The APCD has established acceptance limits for zero and span response from continuous carbon monoxide analyzers. The daily zero and span values for each analyzer are plotted and are evaluated with respect to these acceptance limits. The limits are detailed in the APCD Standard Operating Procedures Manual and provide a means to quickly identify malfunctions or out-of-control situations. In the event of analyzer performance outside the acceptance limits, corrective actions will occur and may include instrument maintenance, repair or replacement, and possibly re-calibration.
- **Preventive and remedial maintenance:** The APCD Continuous Monitoring and Data Systems Support Unit follows a weekly, monthly, quarterly and semi-annual preventive maintenance program for continuous carbon monoxide analyzers. Details on these procedures are provided in the APCD Standard Operating Procedures Manual.
- **Recording and validating data:** The output of continuous analyzers operated by the APCD are recorded by a data acquisition system and transmitted either hourly or daily to the APCD central computer. An electronic strip chart recorder on each analyzer serves as a backup/secondary data logger. The raw data are routinely reviewed for anomalous results by the Continuous Monitoring and Data Systems Support Unit as detailed in the APCD Standard Operating Procedures Manual before submission to the EPA Aerometric Information Retrieval System (AIRS). In addition, data may be deleted in response to failed audits, malfunctions or out-of-control situations which are identified through routine quality control checks.
- **Data quality assessment (precision and accuracy):** The APCD is required to perform a biweekly precision test on each continuous carbon monoxide analyzer. This test involves introducing an analyte gas of known concentration (~ 8-10 ppm CO) and determining the analyzer response. To meet EPA protocol, these tests must be performed manually on a random basis, either during site visits or initiated remotely. Additionally, they are automatically initiated once per week by the data logger to ensure meeting the EPA minimum requirement of once every two weeks. The precision test is designed to assess the ability of an analyzer to repeatedly measure a known analyte gas at a lower level than the full scale range of the analyzer and is typically near the level of the National Ambient Air Quality Standard. The results of these precision tests are submitted to AIRS within 90 days of the end of each calendar quarter. The accuracy audit involves challenging a continuous analyzer with analyte gases of known concentrations. These accuracy audits are required to be performed at least annually using personnel and equipment independent of those used for the analyzer calibration. Carbon monoxide analyzers are challenged with analyte gases in three concentration ranges; Level1 (3-8 ppm CO), Level 2 (15-20 ppm CO) and Level3 (35-45 ppm CO). The results of these accuracy audits are also submitted to AIRS within 90 days of the end of each calendar quarter.

- **Quality control procedures documentation:** Detailed information about the quality control procedures discussed above are provided in the APCD Standard Operating Procedures Manual. The APCD also prepares an annual Quality Assurance Report which provides detailed information on the results of precision and accuracy testing, and of data validation conducted by the APCD's Continuous Monitoring and Data Systems Support Unit.

5.4.2. External Quality Assurance Programs

In addition to the routine quality assurance procedures discussed above, the APCD participates in two other independent quality assurance programs, the EPA inter-laboratory comparison studies and external field audits. These are described below:

- **EPA inter-laboratory comparison program:** This program is conducted by EPA contractors under the aegis of the EPA National Performance Audit Program (NPAP). The inter-laboratory comparison studies involve challenging the APCD carbon monoxide analyzers with audit concentrations generated with EPA equipment and gases. These audit concentrations are unknown to APCD personnel conducting the assessment. The inter-laboratory results are conducted annually on a subset of APCD carbon monoxide analyzers with the results being transmitted by NPAP to APCD and to the EPA Regional Office. The results of these inter-laboratory comparisons are documented in the annual APCD Quality Assurance Report.
- **External field audits:** Audits of the APCD continuous carbon monoxide monitoring system are periodically conducted by EPA Regional Office staff or by EPA contractors under the aegis of the EPA National Performance Audit Program (NPAP). These external field audits provide an independent assessment of the quality of the APCD monitoring network. These results are documented in the annual APCD Quality Assurance Report.

5.4.3. Results of the Denver Metropolitan Area Precision and Accuracy Program

The precision and accuracy data submitted to AIRS are used to calculate precision probability limits as well as accuracy probability limits at the three levels. The results of these tests conducted at the Denver metropolitan area carbon monoxide sites in 1997 and 1998 are presented in the table below. The upper and lower 95 percent probability limits indicate the range of percent difference from the "actual value" that would include 95 percent of the "indicated values". About five percent of the results of precision or accuracy tests on an analyzer would exceed these limits. Ideally, the probability ranges are very small and are centered around zero, indicating that the ambient data collected by the analyzer are both precise and accurate.

A review of the precision data for the Denver metropolitan area sites for 1997 and 1998 indicate that almost all the annual probability limit data are within a range of " 10 percent of the actual value. The accuracy audit data show more variability mainly due to the small number of audits that are required to be performed each year. However, the majority of the accuracy audit probability limit data are also within a range of " 10 percent of the actual value.

Table 27. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Welby, Highland.

			Accuracy Audit Level		
	# of Prec. Tests	Precision	Level 1	Level 2	Level 3
Welby 78th Ave & Steele St. 08-001-3001					
1997	46	-02, +03	-02, -02	+02, +05	+01, +06
1997 Qtr. 1	13	-02, +03	APCD accuracy audits: 30 January 1997 10 July 1997		
1997 Qtr. 2	13	+00, +02			
1997 Qtr. 3	13	+00, +02			
1997 Qtr. 4	7	-06, +07			
1998	26	-04, +05	+01, +23	+04, +10	-01, +08
1998 Qtr. 1	7	+00, +04	APCD accuracy audits: 17 June 1998 14 December 1998		
1998 Qtr. 2	6	-05, +07			
1998 Qtr. 3	6	-06, +01			
1998 Qtr. 4	7	+00, +02			
Highland 8100 S. University Blvd. 08-005-0002					
1997	44	-05, +04	-02, +04	-01, +09	-02, +10
1997 Qtr. 1	11	-03, +05	APCD accuracy audits: 21 January 1997 03 July 1997		
1997 Qtr. 2	13	-02, +03			
1997 Qtr. 3	13	-05, -02			
1997 Qtr. 4	7	-02, +01			
1998	n/a	n/a	n/a	n/a	n/a
1998 Qtr. 1	n/a	n/a	(Analyzer removed from service)		
1998 Qtr. 2	n/a	n/a			
1998 Qtr. 3	n/a	n/a			
1998 Qtr. 4	n/a	n/a			
* Unable to calculate probability limits. Only one audit is available.					

Table 28. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Longmont, Boulder2 - YMCA.

			Accuracy Audit Level		
	# of Prec. Tests	Precision	Level 1	Level 2	Level 3
Longmont 440 Main St. 08-013-0009					
1997	46	-04, +02	+00, *	+00, *	+04, *
1997 Qtr. 1	13	-02, +02	APCD accuracy audits: 22 December 1997		
1997 Qtr. 2	12	-03, +02			
1997 Qtr. 3	13	-04, +00			
1997 Qtr. 4	8	-03, +00			
1998	26	-05, +04	-02, *	+02, *	+02, *
1998 Qtr. 1	7	-06, +03	APCD accuracy audits: 17 February 1998		
1998 Qtr. 2	6	-04, +02			
1998 Qtr. 3	6	-02, +05			
1998 Qtr. 4	7	-04, +03			
Boulder2 - YMCA 2150 28th St. 08-013-0010					
1997	45	-09, +06	-03, -00	-01, +05	+01, +04
1997 Qtr. 1	13	-08, +01	APCD accuracy audits: 12 February 1997 16 December 1997		
1997 Qtr. 2	13	-09, +03			
1997 Qtr. 3	12	+00, +05			
1997 Qtr. 4	7	-09, +06			
1998	26	-02, +04	-02, *	+01, *	+01, *
1998 Qtr. 1	6	-05, +05	APCD accuracy audits: 17 February 1998		
1998 Qtr. 2	7	+00, +03			
1998 Qtr. 3	6	-03, +06			
1998 Qtr. 4	7	-01, +02			
* Unable to calculate probability limits. Only one audit is available.					

Table 29. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Boulder Marine St., Denver CAMP.

			Accuracy Audit Level		
	# of Prec. Tests	Precision	Level 1	Level 2	Level 3
Boulder 2320 Marine St. 08-013-1001					
1997	42	-05, +04	+00, +00	+03, +05	+04, +05
1997 Qtr. 1	12	-07, +06	APCD accuracy audits: 13 February 1997 23 September 1997		
1997 Qtr. 2	12	-03, +01			
1997 Qtr. 3	12	-03, +00			
1997 Qtr. 4	6	-03, +05			
1998	26	-04, +03	+00, *	+02, *	+03,
1998 Qtr. 1	6	-05, +03	APCD accuracy audits: 25 September 1998		
1998 Qtr. 2	7	-02, +03			
1998 Qtr. 3	6	-03, +01			
1998 Qtr. 4	7	-06, +02			
CAMP 2105 Broadway 08-031-0002					
1997	48	-03, +02	-07, +10	+02, +05	+01, +07
1997 Qtr. 1	13	-02, +04	APCD accuracy audits: 27 January 1997 13 June 1997		
1997 Qtr. 2	13	-02, +01			
1997 Qtr. 3	13	-02, +01			
1997 Qtr. 4	9	-03, +00			
1998	26	-10, +04	-22, +17	-11, +12	-09, +10
1998 Qtr. 1	7	-02, +02	APCD accuracy audits: 17 March 1998 04 December 1998		
1998 Qtr. 2	6	-05, +05			
1998 Qtr. 3	6	-11, +00			
1998 Qtr. 4	7	-11, -02			
* Unable to calculate probability limits. Only one audit is available.					

Table 30. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Denver NJH, Denver Carriage.

			Accuracy Audit Level		
	# of Prec. Tests	Precision	Level 1	Level 2	Level 3
NJH 14th Ave. & Albion St. 08-031-0013					
1997	46	-02, +04	+00, +00	+03, +05	+04, +04
1997 Qtr. 1	13	-01, +04	APCD accuracy audits: 11 February 1997 21 April 1997		
1997 Qtr. 2	13	-02, +05			
1997 Qtr. 3	12	-04, +05			
1997 Qtr. 4	8	-03, +03			
1998	26	-04, +04	+05, +05	+01, +09	-01, +11
1998 Qtr. 1	6	-02, +05	APCD accuracy audits: 28 September 1998 10 December 1998		
1998 Qtr. 2	7	-05, +04			
1998 Qtr. 3	6	-05, +06			
1998 Qtr. 4	7	-03, +03			
Carriage 23rd Ave. & Julian St. 08-031-0014					
1997	45	-02, +02	-04, +02	-01, +04	-02, +06
1997 Qtr. 1	12	-02, +01	APCD accuracy audits: 22 January 1997 18 July 1997		
1997 Qtr. 2	13	-03, +04			
1997 Qtr. 3	13	-02, +03			
1997 Qtr. 4	7	-01, +01			
1998	25	-03, +05	-05, +12	+01, +08	+02, +06
1998 Qtr. 1	7	-02, +04	APCD accuracy audits: 31 March 1998 25 September 1998		
1998 Qtr. 2	6	-04, +08			
1998 Qtr. 3	5	-01, +01			
1998 Qtr. 4	7	-03, +03			
* Unable to calculate probability limits. Only one audit is available.					

Table 31. Denver metropolitan area carbon monoxide precision and accuracy probability limits (% difference): Denver Speer & Auraria, Arvada.

			Accuracy Audit Level		
	# of Prec. Tests	Precision	Level 1	Level 2	Level 3
Auraria Fire Speer & Auraria Pkwy. 08-031-0019					
1997	48	-07, +08	-02, +10	+01, +16	-03, +20
1997 Qtr. 1	12	-11, +10	APCD accuracy audits: 11 February 1997 03 April 1997		
1997 Qtr. 2	13	-04, +06			
1997 Qtr. 3	13	-04, +01			
1997 Qtr. 4	10	+00, +09			
1998	26	-04, +03	+03, *	+03, *	+03, *
1998 Qtr. 1	6	-04, +02	APCD accuracy audits: 19 June 1998		
1998 Qtr. 2	7	-06, +04			
1998 Qtr. 3	6	-01, +03			
1998 Qtr. 4	7	-03, +03			
Arvada 57th Ave. & Garrison St. 08-059-0002					
1997	48	-07, +06	+00, +00	+01, +04	-01, +06
1997 Qtr. 1	13	-05, +00	APCD accuracy audits: 03 June 1997 31 December 1997		
1997 Qtr. 2	13	-02, +00			
1997 Qtr. 3	13	-09, +11			
1997 Qtr. 4	9	-05, +07			
1998	26	-04, +06	+05, *	+05, *	+06, *
1998 Qtr. 1	7	-02, +05	APCD accuracy audits: 24 September 1998		
1998 Qtr. 2	6	-05, +09			
1998 Qtr. 3	6	+00, +02			
1998 Qtr. 4	7	-05, +02			
* Unable to calculate probability limits. Only one audit is available.					

6. Data Access

When requested, key modeling input and output files and this report will be made available on the Internet at:

<http://apcd.state.co.us>

Files that are prohibitively large will not be available for download. To obtain data or information not published on the Internet, contact the Division directly.

7. References

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Index

- accuracy, 15, 17, 50, 57, 59, 60, 61, 70, 72, 83,
85, 87, 99, 100, 101, 102, 103, 104, 105
- Actual emissions, 30
- Adams, 8, 9, 565
- AIRS, 30, 65, 99, 100
- APCD, 16, 34, 59, 70, 89, 98, 99, 100, 101, 102,
103, 104, 105, 112, 560
- Appendix W of 40 CFR Part 51, 33, 56
- Arapahoe, 8, 9, 48, 83, 87, 286, 348, 410, 565
- Audit, 100, 101, 102, 103, 104, 105
- Auraria Pkwy, 49, 105
- bias, 59, 61
- Boulder, vi, 8, 22, 23, 28, 29, 48, 61, 62, 64, 72,
89, 91, 92, 94, 95, 103, 286, 348, 410, 562,
564, 565
- CAA, 7, 8, 14, 79, 89, 554, 555, 559, 563
- CAA Amendments, 8
- CAL3QHC, 33, 34, 47, 48, 49, 50, 51, 52, 53,
55, 56, 62, 64, 70, 71, 72, 80, 82, 83, 85, 87,
286, 287, 348, 349, 410, 411, 461, 463, 467,
470, 475, 490, 494, 502, 505, 509, 511, 513,
515, 517, 519, 521, 523, 525, 527, 529, 531,
533, 535, 537, 539, 541, 543, 545, 559
- calibration, 98, 99
- calm, 13, 39, 52, 53, 484, 489
- carbon monoxide, 7, 8, 15, 17, 22, 23, 28, 33, 34,
38, 45, 53, 54, 58, 79, 80, 82, 98, 99, 100, 101,
102, 103, 104, 105, 551, 552, 556, 557, 562,
565
- carboxyhemoglobin, 7
- Catalyst, 24
- climatology, 14, 37
- cloud, 13, 39
- cold, 13, 39, 51, 559
- Colorado Avenue, 48
- completeness requirements, 91
- Conformity, 22
- Control Strategy, 22, 80
- Credit, 24, 81, 129
- Cutpoints, 23, 24
- Data Capture, 91, 92
- demographic, 16
- Denver, i, vi, 7, 8, 11, 13, 14, 15, 17, 22, 23, 28,
29, 30, 33, 34, 37, 38, 39, 40, 48, 51, 61, 62,
64, 65, 68, 80, 81, 89, 91, 92, 95, 96, 97, 98,
100, 101, 102, 103, 104, 105, 109, 111, 112,
278, 286, 287, 340, 348, 402, 410, 551, 552,
553, 555, 556, 557, 558, 559, 560, 561, 562,
564, 565
- Diagnostic Wind Model, 33, 40, 43
- diffusion break, 43
- Douglas, 8, 9, 565
- drainage flow, 39, 69
- DRCOG, 16, 22, 28, 48, 51, 68, 69, 79, 558, 560,
561
- DWM, 40, 43
- Elbert, 9, 565
- elevated points sources, 30, 31
- emission estimates, 17, 28, 29, 61, 71
- Emission Factors, 28, 143, 173, 205, 235, 257,
259, 260
- emission inventories, 16, 28, 79, 80
- EPA Region VIII, 34, 37, 55, 56, 62, 552
- episode, 30, 31, 33, 37, 38, 39, 40, 43, 44, 45,
46, 50, 53, 54, 58, 61, 62, 63, 64, 70, 72, 77,
78, 79, 80, 83, 85, 87, 278, 286, 340, 348, 402,
410
- error, 57, 58, 59, 60, 61, 72, 560
- exceedance, 7, 89, 552, 562
- federal requirements, 81, 91
- fireplaces, 17, 18
- Foothills Parkway, 48
- growth, 16, 22, 51, 80, 556, 559, 560
- Hampden, 48, 83, 87, 286, 348, 410
- hemoglobin, 7
- hot spot, 33, 40, 47, 53, 70, 72, 80, 83, 85, 87
- household, 17, 22
- I/M 240, 22, 23, 25, 81, 205, 219, 235, 278, 287,
332, 340, 349, 394, 402, 411, 456
- Illif Avenue, 48
- Initial Conditions, 45
- inspection and maintenance, 81, 551, 557
- Jefferson, 8, 9, 565
- Kiowa Creek, 8, 9, 565
- law, 7, 553, 557, 558, 563
- LDGT1, 23, 24, 27, 131, 143, 157, 173, 193,
205, 219, 235

LDGV, 23, 24, 27, 131, 143, 157, 173, 193, 205, 219, 235
links, 50
Longmont, vi, 8, 40, 94, 102, 551, 552, 553, 562, 564
maintenance plan, 7, 14, 15, 16, 30, 33, 34, 39, 46, 48, 50, 53, 79, 81
meteorology, 34, 37, 44, 47, 51, 52, 53, 559
Mobile5b, 23, 24, 28, 129
model year, 23, 24, 27, 557
Model Years, 24
monitoring, 7, 14, 45, 47, 49, 55, 56, 57, 58, 59, 61, 64, 65, 70, 82, 89, 91, 98, 100, 286, 348, 410, 552, 559, 561
monitors, 40, 45, 47, 49, 55, 61, 65, 89, 91, 561
NAMS, 89, 98
National Air Monitoring Station, 89
NLEV, 23, 24, 129, 255
nonattainment area, 7, 8, 30, 37, 40, 551, 552, 555, 558, 562, 565
oxygen, 7, 8, 553, 555, 561
oxygenated fuel, 22, 23, 28
Parker Road, 48
performance evaluation, 47, 53, 61, 62
persistence factor, 51, 52
photochemical reactions, 34
Platte, 8, 11, 13, 39, 43, 68, 560
Plume rise, 30
population, 16, 18, 19, 22, 25, 65
precision, 15, 17, 83, 85, 87, 99, 100, 101, 102, 103, 104, 105
PREPNT, 30
pressure, 13, 39, 40, 69
pressure gradient, 13, 39, 69
probability, 100, 101, 102, 103, 104, 105
projections, 16, 80, 559, 560
PSD permitting, 81
quality assurance, 91, 98, 100
radiational inversion, 39
Receptor, 50, 481, 483, 486, 488
redesignation request, 7, 14, 81
Regulation, 8, 81, 551, 552, 553, 555, 556, 557, 561, 562, 564
remote sensing, 81
RSD, 22, 23, 25, 26, 81, 83, 85, 87, 219, 235
Saturation Study, 49
Section 110, 14, 557, 562, 563
SLAMS, 89, 98
snow, 39
sodar, 43
speed, 28, 39, 51, 52, 53, 65, 131, 157, 193, 219, 255
Speer Blvd, 49
Standard Operating Procedures, 98, 99, 100, 109
State and Local Air Monitoring Stations, 89
Statistical measures, 44, 55
stove, 19, 20, 21
survey, 17, 19
tailpipe standards, 81
temperature, 13, 39, 51
Temporal Distribution, 14, 31, 567, 573
traffic, 47, 51, 52, 55, 69, 559, 560
transportation, 16, 28, 33, 34, 48, 53, 54, 68, 71, 82, 552, 556, 558, 560, 561
Transportation Improvement, 22, 28
UAM, 17, 29, 30, 31, 33, 34, 39, 40, 43, 44, 45, 46, 47, 48, 51, 52, 54, 55, 56, 61, 62, 64, 65, 67, 68, 69, 72, 77, 78, 80, 82, 83, 85, 87, 111, 112, 278, 279, 280, 281, 282, 284, 285, 286, 287, 332, 340, 341, 342, 343, 344, 346, 347, 348, 349, 394, 402, 403, 404, 405, 406, 408, 409, 410, 411, 456
University, 48, 51, 83, 87, 91, 101, 286, 348, 410
Urban Airhsed Model, 34
validating data, 99
Vehicle Population, 25
violation, 7, 14, 89
VMT, 16, 22, 23, 27, 28, 68, 69, 115, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 131, 157, 193, 219, 552, 557, 558, 560, 562
Weld, 9, 30, 565
wind, 13, 33, 39, 43, 49, 51, 52, 53, 56, 65, 67, 69, 71, 481, 484, 487, 489, 559, 560
wood burning, 17
Zero/span checks, 98

Appendix A – Mobile Source Emissions Modeling: VMT Summaries by Dispersion Modeling Domain and Nonattainment Area Domain

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Dispersion Modeling Domain

AM Peak VMT					
ROAD ⁹ CLASS	AREA ¹⁰ TYPE	AM PD1	AM PD2	AM PD3	AM TOTAL
	2	142,997.3	79,145.0	84,009.3	306,151.7
	3	386,380.9	214,527.3	228,403.9	829,312.1
	4	768,022.5	461,265.8	517,559.4	1,746,847.7
	5	280,792.2	172,080.6	195,697.9	648,570.7
	-----	-----	-----	-----	-----
1		1,578,192.9	927,018.8	1,025,670.5	3,530,882.2
	2	12,998.9	7,720.1	8,467.1	29,186.1
	3	45,015.6	25,794.0	28,313.4	99,122.9
	4	129,469.0	77,936.2	88,220.2	295,625.4
	5	37,136.3	22,951.0	26,359.0	86,446.3
	-----	-----	-----	-----	-----
2		224,619.8	134,401.3	151,359.7	510,380.7
	1	22,246.6	14,062.7	16,151.0	52,460.3
	2	83,933.9	49,246.8	54,672.3	187,853.1
	3	483,848.0	290,234.9	325,607.4	1,099,690.3
	4	595,460.9	360,072.1	409,445.6	1,364,978.6
	5	112,037.2	73,767.0	88,536.9	274,341.1
	-----	-----	-----	-----	-----
3		1,297,526.7	787,383.5	894,413.2	2,979,323.4
	1	11,702.0	7,234.9	8,341.9	27,278.9
	2	34,690.2	21,946.7	25,567.4	82,204.3
	3	167,842.8	106,098.5	123,273.7	397,214.9
	4	272,393.4	180,134.8	216,887.7	669,416.0
	5	80,773.7	58,049.2	76,090.9	214,913.9
	-----	-----	-----	-----	-----
4		567,402.3	373,464.1	450,161.7	1,391,028.0
	1	3,252.5	2,355.4	3,088.2	8,696.1
	2	15,692.3	12,901.7	17,416.2	46,010.1
	3	83,103.8	76,150.7	112,717.1	271,971.5
	4	116,641.3	91,504.0	126,354.3	334,499.6
	5	48,563.4	33,219.1	46,250.6	128,033.1
	-----	-----	-----	-----	-----
5		267,253.3	216,130.8	305,826.3	789,210.4
	2	6,416.3	3,777.7	4,310.4	14,504.4
	3	17,162.7	9,758.4	10,817.7	37,738.8
	4	25,384.7	15,066.1	17,200.9	57,651.7
	5	3,008.2	1,912.6	2,207.8	7,128.5
	-----	-----	-----	-----	-----
6		51,971.8	30,514.8	34,536.8	117,023.3
	1	2,623.5	1,595.6	1,818.2	6,037.3
	2	21,982.8	13,450.7	15,332.9	50,766.3
	3	109,852.6	66,973.8	76,112.0	252,938.4
	4	170,223.0	104,371.3	119,312.4	393,906.7
	5	68,404.1	41,965.9	47,857.2	158,227.1
	-----	-----	-----	-----	-----
8		373,085.9	228,357.2	260,432.6	861,875.8
	=====	=====	=====	=====	=====
		4,360,052.6	2,697,270.5	3,122,400.7	10,179,723.9

⁹ Road Types: 1=Freeway, 2=Major Regional, 3=Principal Arterial, 4=Minor Arterial, 5=Collector, 6=Ramp, 7=Frontage, 8=Local

¹⁰ Area Types: 1=Central Business District, 2=Fringe, 3=Urban, 4=Suburban, 5=Rural

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Dispersion Modeling Domain

PM Peak VMT					
ROAD ¹¹ CLASS	AREA ¹² TYPE	PM PD1	PM PD2	PM PD3	PM TOTAL
1	2	418,946.5	158,046.5	83,624.8	660,617.9
	3	1,183,328.0	450,783.7	239,701.1	1,873,812.9
	4	2,314,071.9	1,017,515.7	570,115.3	3,901,702.9
	5	817,987.5	375,493.3	214,655.6	1,408,136.3
		-----	-----	-----	-----
		4,734,333.9	2,001,839.3	1,108,096.9	7,844,270.1
2	2	40,058.6	16,722.2	9,204.2	65,985.0
	3	134,883.6	53,203.0	29,058.9	217,145.5
	4	390,740.7	167,205.4	94,810.3	652,756.3
	5	105,013.3	51,549.1	31,272.9	187,835.2
		-----	-----	-----	-----
		670,696.2	288,679.6	164,346.3	1,123,722.0
3	1	69,474.3	32,422.8	18,633.7	120,530.8
	2	256,053.1	109,408.5	60,715.5	426,177.1
	3	1,524,929.2	654,964.7	365,569.5	2,545,463.4
	4	1,843,885.9	805,504.9	455,693.1	3,105,083.9
	5	315,502.7	153,073.1	91,946.9	560,522.7
		-----	-----	-----	-----
		4,009,845.3	1,755,373.9	992,558.6	6,757,777.8
4	1	37,036.5	16,681.0	9,470.9	63,188.5
	2	111,166.9	51,249.3	29,758.4	192,174.7
	3	521,726.2	247,531.0	141,536.1	910,793.3
	4	859,413.3	429,505.4	255,889.7	1,544,808.4
	5	218,194.7	117,159.5	80,639.0	415,993.2
		-----	-----	-----	-----
		1,747,537.6	862,126.2	517,294.1	3,126,958.0
5	1	10,209.8	6,052.4	4,085.3	20,347.5
	2	44,601.5	30,639.5	20,856.1	96,097.2
	3	235,865.1	190,162.1	140,060.6	566,087.8
	4	315,513.8	209,872.5	148,870.5	674,256.8
	5	131,792.0	67,061.2	44,503.7	243,357.0
		-----	-----	-----	-----
		737,982.2	503,787.8	358,376.3	1,600,146.2
6	2	22,122.2	8,820.6	4,882.2	35,824.9
	3	53,693.7	21,244.8	11,741.0	86,679.5
	4	75,572.7	31,560.0	18,098.0	125,230.7
	5	8,074.0	3,904.4	2,291.4	14,269.8
		-----	-----	-----	-----
		159,462.5	65,529.8	37,012.7	262,005.0
8	1	8,905.8	3,941.3	2,249.5	15,096.6
	2	69,815.1	31,192.0	17,782.9	118,790.0
	3	376,678.9	167,313.1	95,390.6	639,382.6
	4	604,710.7	270,825.3	155,421.5	1,030,957.5
	5	208,258.7	93,022.0	53,371.9	354,652.7
		-----	-----	-----	-----
		1,268,369.2	566,293.7	324,216.5	2,158,879.4
		=====	=====	=====	=====
		13,328,226.9	6,043,630.3	3,501,901.4	22,873,758.6

¹¹ Road Types: 1=Freeway, 2=Major Regional, 3=Principal Arterial, 4=Minor Arterial, 5=Collector, 6=Ramp, 7=Frontage, 8=Local

¹² Area Types: 1=Central Business District, 2=Fringe, 3=Urban, 4=Suburban, 5=Rural

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Dispersion Modeling Domain

Off Peak VMT

FUN CLASS	AREA TYPE	OFF PD1	OFF PD2	OFF PD3	OFF PD4	TOTAL OFF VMT
	2	254,289.7	287,962.1	585,928.5	131,361.9	1,259,542.2
	3	682,827.6	769,572.9	1,602,496.9	365,550.5	3,420,447.9
	4	1,126,258.3	1,330,196.4	2,891,912.8	702,089.5	6,050,457.1
	5	453,769.9	531,207.4	1,167,963.4	285,733.4	2,438,674.2
		-----	-----	-----	-----	-----
1		2,517,145.5	2,918,938.9	6,248,301.7	1,484,735.3	13,169,121.4
	2	20,486.7	23,456.1	51,549.7	12,126.5	107,619.0
	3	70,132.6	82,640.8	169,414.2	37,832.3	360,019.9
	4	186,790.0	218,089.7	479,572.1	117,229.9	1,001,681.7
	5	49,940.0	59,149.2	132,779.0	33,256.8	275,125.0
		-----	-----	-----	-----	-----
2		327,349.3	383,335.8	833,315.0	200,445.6	1,744,445.7
	1	25,739.4	30,596.1	70,603.3	18,682.9	145,621.8
	2	114,300.1	137,906.6	309,901.6	75,954.3	638,062.6
	3	656,332.0	787,948.5	1,771,654.9	439,864.6	3,655,800.0
	4	919,765.8	1,062,821.9	2,283,719.3	546,734.4	4,813,041.3
	5	141,997.4	166,565.1	370,612.1	94,543.7	773,718.3
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3		1,858,134.7	2,185,838.2	4,806,491.2	1,175,780.0	10,026,244.0
	1	15,414.0	18,157.3	41,256.3	10,302.8	85,130.4
	2	45,280.6	53,146.1	120,171.8	30,199.9	248,798.4
	3	198,151.8	236,709.7	559,647.2	144,213.8	1,138,722.5
	4	334,005.5	393,942.5	901,570.4	236,298.3	1,865,816.7
	5	90,897.0	107,762.1	238,263.9	59,816.8	496,739.8
		-----	-----	-----	-----	-----
4		683,749.0	809,717.6	1,860,909.7	480,831.5	3,835,207.7
	1	3,779.3	4,408.7	9,806.4	2,461.9	20,456.3
	2	12,497.3	15,314.3	35,995.2	9,873.0	73,679.9
	3	57,103.5	66,437.9	159,317.6	45,844.0	328,703.0
	4	93,215.1	110,604.6	260,274.3	70,717.5	534,811.4
	5	58,019.2	67,700.7	147,753.6	36,182.6	309,656.2
		-----	-----	-----	-----	-----
5		224,614.4	264,466.2	613,147.1	165,078.9	1,267,306.7
	2	11,266.3	13,113.5	27,863.2	6,427.3	58,670.2
	3	29,382.0	32,554.3	68,935.9	15,839.8	146,712.0
	4	37,677.7	43,530.7	91,590.1	21,878.5	194,677.0
	5	3,573.1	4,186.7	9,127.4	2,284.0	19,171.3
		-----	-----	-----	-----	-----
6		81,899.1	93,385.2	197,516.6	46,429.6	419,230.5
	1	4,279.4	4,977.2	10,848.0	2,648.9	22,753.4
	2	32,822.0	38,278.3	83,713.1	20,340.3	175,153.7
	3	180,749.6	209,529.5	457,807.4	111,277.3	959,363.7
	4	290,109.0	337,914.6	741,337.7	180,523.2	1,549,884.6
	5	101,828.9	117,092.2	256,017.6	62,431.5	537,370.2
		-----	-----	-----	-----	-----
8		609,788.7	707,791.8	1,549,723.8	377,221.3	3,244,525.6
		=====	=====	=====	=====	=====
		6,302,680.8	7,363,473.8	16,109,405.2	3,930,522.0	33,706,081.8

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Nonattainment Area

AM Peak VMT

ROAD CLASS	AREA TYPE	AM PD1	AM PD2	AM PD3	AM TOTAL
	2	142,997.3	79,145.0	84,009.3	306,151.7
	3	386,380.9	214,527.3	228,403.9	829,312.1
	4	750,175.6	451,028.4	506,403.0	1,707,607.0
	5	196,828.3	122,009.2	140,374.6	459,212.2
		-----	-----	-----	-----
1		1,476,382.2	866,709.9	959,190.8	3,302,283.0
	2	12,998.9	7,720.1	8,467.1	29,186.1
	3	45,015.6	25,794.0	28,313.4	99,122.9
	4	109,891.9	64,310.0	70,984.2	245,186.2
	5	11,810.8	7,765.2	9,019.7	28,595.7
		-----	-----	-----	-----
2		179,717.2	105,589.3	116,784.4	402,090.9
	1	22,246.6	14,062.7	16,151.0	52,460.3
	2	83,933.9	49,246.8	54,672.3	187,853.1
	3	481,643.1	288,991.8	324,123.2	1,094,758.1
	4	569,684.5	344,648.4	391,785.2	1,306,118.2
	5	72,836.4	48,034.7	57,481.2	178,352.3
		-----	-----	-----	-----
3		1,230,344.6	744,984.4	844,213.0	2,819,542.0
	1	11,702.0	7,234.9	8,341.9	27,278.9
	2	34,690.2	21,946.7	25,567.4	82,204.3
	3	166,642.1	105,340.0	122,367.9	394,349.9
	4	261,665.0	173,246.6	208,741.1	643,652.7
	5	52,448.1	37,667.2	49,495.9	139,611.2
		-----	-----	-----	-----
4		527,147.5	345,435.3	414,514.1	1,287,097.0
	1	3,252.5	2,355.4	3,088.2	8,696.1
	2	15,692.3	12,901.7	17,416.2	46,010.1
	3	82,932.8	76,040.5	112,582.7	271,556.0
	4	113,194.8	89,422.5	124,048.3	326,665.6
	5	39,750.4	27,692.6	39,323.6	106,766.6
		-----	-----	-----	-----
5		254,822.8	208,412.7	296,459.0	759,694.5
	2	6,416.3	3,777.7	4,310.4	14,504.4
	3	17,162.7	9,758.4	10,817.7	37,738.8
	4	24,970.3	14,826.8	16,915.4	56,712.4
	5	2,409.2	1,539.0	1,816.0	5,764.2
		-----	-----	-----	-----
6		50,958.4	29,901.9	33,859.5	114,719.8
	1	2,623.5	1,595.6	1,818.2	6,037.3
	2	21,982.8	13,450.7	15,332.9	50,766.3
	3	109,126.5	66,532.3	75,607.9	251,266.7
	4	165,186.4	101,263.7	115,761.7	382,211.8
	5	28,332.6	17,497.3	19,897.4	65,727.3
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8		327,251.8	200,339.6	228,418.0	756,009.4
=====		=====	=====	=====	=====
		4,046,624.4	2,501,373.2	2,893,438.8	9,441,436.4

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Nonattainment Area

PM Peak VMT					
ROAD CLASS	AREA TYPE	PM PD1	PM PD2	PM PD3	PM TOTAL
	2	418,946.5	158,046.5	83,624.8	660,617.9
	3	1,183,328.0	450,783.7	239,701.1	1,873,812.9
	4	2,259,631.1	995,512.5	558,427.4	3,813,571.0
	5	559,947.7	265,936.3	155,379.1	981,263.0
		-----	-----	-----	-----
1		4,421,853.3	1,870,279.0	1,037,132.5	7,329,264.8
	2	40,058.6	16,722.2	9,204.2	65,985.0
	3	134,883.6	53,203.0	29,058.9	217,145.5
	4	334,898.2	138,333.0	75,971.0	549,202.2
	5	28,643.5	16,579.0	9,930.1	55,152.6
		-----	-----	-----	-----
2		538,484.0	224,837.1	124,164.2	887,485.2
	1	69,474.3	32,422.8	18,633.7	120,530.8
	2	256,053.1	109,408.5	60,715.5	426,177.1
	3	1,517,119.3	651,730.5	363,747.7	2,532,597.5
	4	1,764,365.8	769,111.0	435,158.0	2,968,634.9
	5	199,682.5	97,858.8	59,065.0	356,606.3
		-----	-----	-----	-----
3		3,806,695.1	1,660,531.5	937,319.9	6,404,546.6
	1	37,036.5	16,681.0	9,470.9	63,188.5
	2	111,166.9	51,249.3	29,758.4	192,174.7
	3	517,715.4	245,460.9	140,314.7	903,491.0
	4	822,029.0	412,653.2	245,972.2	1,480,654.4
	5	138,019.7	77,042.8	51,911.0	266,973.5
		-----	-----	-----	-----
4		1,625,967.5	803,087.3	477,427.2	2,906,482.0
	1	10,209.8	6,052.4	4,085.3	20,347.5
	2	44,601.5	30,639.5	20,856.1	96,097.2
	3	235,444.9	189,897.8	139,882.5	565,225.2
	4	303,817.4	204,676.9	145,869.9	654,364.1
	5	106,079.1	54,766.2	36,932.3	197,777.6
		-----	-----	-----	-----
5		700,152.7	486,032.8	347,626.2	1,533,811.7
	2	22,122.2	8,820.6	4,882.2	35,824.9
	3	53,693.7	21,244.8	11,741.0	86,679.5
	4	74,500.1	31,109.2	17,832.6	123,441.9
	5	6,129.0	3,068.0	1,845.5	11,042.5
		-----	-----	-----	-----
6		156,444.9	64,242.6	36,301.4	256,988.9
	1	8,905.8	3,941.3	2,249.5	15,096.6
	2	69,815.1	31,192.0	17,782.9	118,790.0
	3	374,296.1	166,253.7	94,783.6	635,333.4
	4	587,027.9	262,792.1	150,786.5	1,000,606.5
	5	85,868.0	38,280.3	21,975.6	146,123.9
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8		1,125,912.9	502,459.4	287,578.1	1,915,950.4
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		12,375,510.4	5,611,469.7	3,247,549.4	21,234,529.5

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Nonattainment Area

Off Peak VMT

FUN CLASS	AREA TYPE	OFF PD1	OFF PD2	OFF PD3	OFF PD4	TOTAL OFF VMT
	2	254,289.7	287,962.1	585,928.5	131,361.9	1,259,542.2
	3	682,827.6	769,572.9	1,602,496.9	365,550.5	3,420,447.9
	4	1,095,665.3	1,294,599.8	2,813,673.1	683,373.5	5,887,311.7
	5	297,927.3	351,762.9	775,289.0	190,655.2	1,615,634.3
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1		2,330,709.8	2,703,897.7	5,777,387.6	1,370,941.1	12,182,936.2
	2	20,486.7	23,456.1	51,549.7	12,126.5	107,619.0
	3	70,132.6	82,640.8	169,414.2	37,832.3	360,019.9
	4	158,361.7	185,379.8	407,410.1	99,059.1	850,210.8
	5	10,068.2	11,814.8	28,596.3	7,575.2	58,054.5
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2		259,049.2	303,291.6	656,970.3	156,593.2	1,375,904.3
	1	25,739.4	30,596.1	70,603.3	18,682.9	145,621.8
	2	114,300.1	137,906.6	309,901.6	75,954.3	638,062.6
	3	652,417.3	783,325.1	1,761,512.9	437,302.7	3,634,558.0
	4	882,758.6	1,017,875.3	2,184,188.0	522,422.7	4,607,244.5
	5	81,687.2	95,367.1	213,579.2	54,958.4	445,591.9
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3		1,756,902.6	2,065,070.1	4,539,785.0	1,109,321.0	9,471,078.8
	1	15,414.0	18,157.3	41,256.3	10,302.8	85,130.4
	2	45,280.6	53,146.1	120,171.8	30,199.9	248,798.4
	3	196,658.2	234,813.7	555,398.4	143,015.4	1,129,885.6
	4	315,622.5	372,741.5	856,556.8	225,107.3	1,770,028.0
	5	55,186.0	64,790.0	143,404.8	36,844.8	300,225.6
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4		628,161.3	743,648.6	1,716,788.1	445,470.1	3,534,068.1
	1	3,779.3	4,408.7	9,806.4	2,461.9	20,456.3
	2	12,497.3	15,314.3	35,995.2	9,873.0	73,679.9
	3	56,959.5	66,276.9	158,963.8	45,751.0	327,951.2
	4	87,748.1	103,993.2	245,550.2	67,150.7	504,442.3
	5	45,503.7	53,320.5	116,696.6	28,611.1	244,131.8
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5		206,487.9	243,313.6	567,012.3	153,847.7	1,170,661.5
	2	11,266.3	13,113.5	27,863.2	6,427.3	58,670.2
	3	29,382.0	32,554.3	68,935.9	15,839.8	146,712.0
	4	37,134.3	42,883.6	90,155.9	21,532.0	191,705.7
	5	2,700.0	3,169.6	6,894.3	1,753.0	14,516.9
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6		80,482.6	91,720.9	193,849.2	45,552.1	411,604.8
	1	4,279.4	4,977.2	10,848.0	2,648.9	22,753.4
	2	32,822.0	38,278.3	83,713.1	20,340.3	175,153.7
	3	179,652.3	208,228.5	454,980.3	110,588.6	953,449.7
	4	281,424.3	327,852.3	719,407.8	175,192.9	1,503,877.5
	5	40,168.9	45,885.8	100,269.2	24,486.4	210,810.4
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8		538,346.8	625,222.1	1,369,218.5	333,257.1	2,866,044.6
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		5,800,140.2	6,776,164.6	14,821,011.0	3,614,982.3	31,012,298.2

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Dispersion Modeling Domain

AM Peak VMT					
ROAD CLASS	AREA TYPE	AM PD1	AM PD2	AM PD3	AM TOTAL
	2	151,186.6	82,517.0	87,421.5	321,125.1
	3	424,271.3	234,151.9	249,269.2	907,692.5
	4	881,957.3	534,294.2	598,815.8	2,015,067.4
	5	313,694.3	194,631.4	223,991.9	732,317.5
		-----	-----	-----	-----
1		1,771,109.5	1,045,594.5	1,159,498.4	3,976,202.5
	2	18,184.8	10,488.2	11,586.4	40,259.5
	3	184,594.4	104,980.2	113,128.2	402,702.9
	4	436,659.3	261,090.8	292,035.9	989,786.0
	5	77,066.6	50,539.7	58,803.6	186,410.0
		-----	-----	-----	-----
2		716,505.2	427,099.0	475,554.1	1,619,158.3
	1	25,274.2	15,633.1	17,728.8	58,636.1
	2	100,119.2	59,330.3	66,000.7	225,450.2
	3	476,055.0	291,478.0	330,365.8	1,097,898.8
	4	576,185.5	351,878.2	401,702.4	1,329,766.1
	5	126,885.1	82,177.8	99,199.2	308,262.0
		-----	-----	-----	-----
3		1,304,518.9	800,497.4	914,997.0	3,020,013.3
	1	13,065.0	7,929.6	8,900.7	29,895.4
	2	29,549.8	18,695.9	21,527.3	69,773.0
	3	132,601.0	85,585.2	98,817.2	317,003.4
	4	199,738.8	136,865.8	167,712.6	504,317.3
	5	52,789.2	38,402.6	49,766.9	140,958.7
		-----	-----	-----	-----
4		427,743.8	287,479.2	346,724.8	1,061,947.7
	1	4,388.5	3,189.8	4,149.5	11,727.9
	2	16,831.3	14,024.1	18,813.9	49,669.4
	3	77,181.5	72,985.5	110,755.2	260,922.2
	4	120,460.5	95,549.1	132,248.9	348,258.4
	5	51,926.8	36,835.1	51,694.7	140,456.5
		-----	-----	-----	-----
5		270,788.6	222,583.7	317,662.1	811,034.4
	2	7,107.9	4,055.9	4,526.7	15,690.6
	3	18,504.4	10,592.7	11,789.6	40,886.6
	4	28,408.6	16,823.0	18,924.6	64,156.2
	5	3,172.4	2,018.0	2,390.8	7,581.2
		-----	-----	-----	-----
6		57,193.3	33,489.5	37,631.7	128,314.6
	1	3,472.5	2,112.1	2,392.1	7,976.7
	2	23,987.4	14,653.4	16,659.7	55,300.6
	3	119,431.9	72,961.8	82,795.0	275,188.6
	4	196,024.2	120,163.2	136,945.5	453,132.8
	5	75,265.8	46,048.9	52,497.2	173,811.8
		-----	-----	-----	-----
8		418,181.8	255,939.4	291,289.4	965,410.6
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		4,966,041.1	3,072,682.7	3,543,357.5	11,582,081.4

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Dispersion Modeling Domain

ROAD ¹³ CLASS	AREA ¹⁴ TYPE	PM Peak VMT			
		PM PD1	PM PD2	PM PD3	PM TOTAL
	2	445,447.2	167,696.5	88,683.7	701,827.4
	3	1,293,157.4	489,571.5	259,924.7	2,042,653.7
	4	2,684,485.0	1,195,804.8	669,647.8	4,549,937.5
	5	925,500.2	434,725.9	249,944.4	1,610,170.4
		-----	-----	-----	-----
1		5,348,589.8	2,287,798.6	1,268,200.6	8,904,589.0
	2	56,931.7	22,872.8	12,500.7	92,305.2
	3	575,279.4	229,260.0	122,901.0	927,440.4
	4	1,343,288.4	580,558.4	324,182.1	2,248,028.9
	5	217,012.7	107,450.8	63,538.7	388,002.3
		-----	-----	-----	-----
2		2,192,512.3	940,141.9	523,122.6	3,655,776.8
	1	77,149.9	35,935.4	20,370.0	133,455.4
	2	311,387.4	132,602.0	73,879.2	517,868.6
	3	1,480,501.3	658,822.3	372,543.3	2,511,866.9
	4	1,800,392.1	795,512.8	456,479.1	3,052,384.0
	5	358,751.5	170,348.1	101,608.1	630,707.7
		-----	-----	-----	-----
3		4,028,182.3	1,793,220.6	1,024,879.7	6,846,282.5
	1	41,477.3	17,787.5	9,992.6	69,257.3
	2	94,877.8	43,690.4	25,483.2	164,051.4
	3	404,924.2	199,121.3	115,710.1	719,755.7
	4	624,012.5	323,075.0	197,555.5	1,144,643.0
	5	140,358.2	73,680.5	51,281.4	265,320.1
		-----	-----	-----	-----
4		1,305,649.9	657,354.8	400,022.8	2,363,027.5
	1	13,165.0	8,219.7	5,462.4	26,847.0
	2	48,575.7	34,144.0	23,335.0	106,054.6
	3	220,075.9	184,689.9	139,952.7	544,718.5
	4	322,769.2	216,798.2	152,356.4	691,923.8
	5	141,743.5	70,925.3	46,590.4	259,259.2
		-----	-----	-----	-----
5		746,329.2	514,777.1	367,696.8	1,628,803.1
	2	24,532.4	9,771.8	5,360.3	39,664.6
	3	57,691.9	22,982.8	12,769.9	93,444.5
	4	85,037.2	35,741.1	19,943.6	140,721.9
	5	8,933.2	4,140.0	2,507.7	15,581.0
		-----	-----	-----	-----
6		176,194.7	72,635.8	40,581.5	289,412.0
	1	11,863.2	5,250.0	2,995.7	20,108.9
	2	75,741.8	33,645.4	19,199.0	128,586.1
	3	411,929.4	182,791.7	104,202.1	698,923.2
	4	691,753.9	309,697.2	177,552.7	1,179,003.8
	5	229,189.5	102,446.1	58,663.2	390,298.8
		-----	-----	-----	-----
8		1,420,477.7	633,830.4	362,612.6	2,416,920.7
=====		=====	=====	=====	=====
		15,217,935.9	6,899,759.1	3,987,116.6	26,104,811.6

¹³ Road Types: 1=Freeway, 2=Major Regional, 3=Principal Arterial, 4=Minor Arterial, 5=Collector, 6=Ramp, 7=Frontage, 8=Local

¹⁴ Area Types: 1=Central Business District, 2=Fringe, 3=Urban, 4=Suburban, 5=Rural

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Dispersion Modeling Domain

Off Peak VMT

FUN CLASS	AREA TYPE	OFF PD1	OFF PD2	OFF PD3	OFF PD4	TOTAL OFF VMT
	2	296,911.1	319,495.5	635,836.6	140,325.5	1,392,568.8
	3	788,741.4	872,007.4	1,793,547.1	404,910.1	3,859,205.9
	4	1,348,904.7	1,572,530.0	3,426,558.8	818,931.7	7,166,925.1
	5	520,534.2	612,539.5	1,354,505.7	330,938.6	2,818,518.0
		-----	-----	-----	-----	-----
1		2,955,091.4	3,376,572.4	7,210,448.2	1,695,105.9	15,237,217.9
	2	28,731.1	32,628.7	70,346.5	16,724.5	148,430.7
	3	291,033.5	342,360.5	743,505.7	174,398.0	1,551,297.7
	4	622,224.9	745,719.3	1,662,490.1	408,171.8	3,438,606.0
	5	95,923.1	117,409.9	268,806.9	70,447.0	552,586.8
		-----	-----	-----	-----	-----
2		1,037,912.5	1,238,118.3	2,745,149.1	669,741.2	5,690,921.1
	1	29,784.6	36,642.9	84,491.6	21,925.9	172,845.0
	2	139,366.1	173,235.4	385,503.7	92,158.5	790,263.6
	3	626,582.4	759,734.4	1,718,390.6	427,698.2	3,532,405.6
	4	881,907.3	1,025,222.2	2,211,008.1	534,466.4	4,652,604.1
	5	167,978.1	193,568.9	431,847.3	106,313.1	899,707.4
		-----	-----	-----	-----	-----
3		1,845,618.5	2,188,403.8	4,831,241.2	1,182,562.1	10,047,825.6
	1	17,822.6	21,120.4	48,091.6	11,838.1	98,872.8
	2	39,403.6	48,000.8	106,336.4	26,506.3	220,247.1
	3	146,957.4	179,697.8	429,379.7	111,547.9	867,582.8
	4	247,941.2	291,970.9	675,540.1	173,458.0	1,388,910.1
	5	60,409.3	72,494.0	161,985.2	39,584.3	334,472.8
		-----	-----	-----	-----	-----
4		512,534.2	613,283.8	1,421,333.0	362,934.6	2,910,085.6
	1	5,089.4	5,843.8	12,890.2	3,347.5	27,171.1
	2	13,848.1	16,948.1	41,277.2	11,291.4	83,364.8
	3	61,099.9	71,815.2	169,459.5	46,678.0	349,052.6
	4	107,181.0	128,611.1	299,040.7	77,899.8	612,732.7
	5	63,988.5	77,072.6	170,003.0	40,435.5	351,499.6
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5		251,207.1	300,290.8	692,670.6	179,652.3	1,423,820.7
	2	12,138.2	14,333.1	30,851.5	7,253.8	64,576.6
	3	33,147.6	35,780.8	74,911.3	17,240.7	161,080.4
	4	44,371.5	50,526.4	106,658.9	25,184.1	226,740.9
	5	4,076.5	4,736.6	10,555.3	2,579.7	21,948.1
		-----	-----	-----	-----	-----
6		93,733.7	105,376.9	222,977.1	52,258.3	474,346.1
	1	5,799.0	6,707.4	14,700.5	3,534.8	30,741.8
	2	36,344.2	42,315.6	92,568.5	22,300.3	193,528.6
	3	201,253.8	233,526.8	511,548.3	123,433.4	1,069,762.3
	4	339,635.4	394,952.8	864,838.2	209,066.6	1,808,493.0
	5	115,353.1	133,692.6	293,373.3	70,628.1	613,047.2
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8		698,385.5	811,195.2	1,777,028.9	428,963.3	3,715,572.9
		=====	=====	=====	=====	=====
		7,394,482.8	8,633,241.2	18,900,848.2	4,571,217.7	39,499,789.9

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Nonattainment Area

AM Peak VMT

ROAD CLASS	AREA TYPE	AM PD1	AM PD2	AM PD3	AM TOTAL
	2	151,186.6	82,517.0	87,421.5	321,125.1
	3	424,271.3	234,151.9	249,269.2	907,692.5
	4	860,881.7	521,573.6	584,637.9	1,967,093.3
	5	215,240.7	134,876.1	155,651.0	505,767.7
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1		1,651,580.3	973,118.7	1,076,979.6	3,701,678.6
	2	18,184.8	10,488.2	11,586.4	40,259.5
	3	184,594.4	104,980.2	113,128.2	402,702.9
	4	402,495.8	239,926.3	266,383.6	908,805.6
	5	51,329.3	34,325.0	40,408.5	126,062.7
	-----	-----	-----	-----	-----
2		656,604.3	389,719.7	431,506.7	1,477,830.7
	1	25,274.2	15,633.1	17,728.8	58,636.1
	2	100,119.2	59,330.3	66,000.7	225,450.2
	3	473,238.6	289,810.0	328,436.8	1,091,485.5
	4	540,592.7	330,753.4	377,934.2	1,249,280.3
	5	85,315.6	54,767.7	65,346.5	205,429.8
	-----	-----	-----	-----	-----
3		1,224,540.3	750,294.6	855,446.9	2,830,281.9
	1	13,065.0	7,929.6	8,900.7	29,895.4
	2	29,549.8	18,695.9	21,527.3	69,773.0
	3	131,520.2	84,868.4	98,013.3	314,402.0
	4	191,044.5	131,363.6	161,404.9	483,813.0
	5	29,644.4	21,793.5	28,723.9	80,161.7
	-----	-----	-----	-----	-----
4		394,824.0	264,651.0	318,570.1	978,045.1
	1	4,388.5	3,189.8	4,149.5	11,727.9
	2	16,831.3	14,024.1	18,813.9	49,669.4
	3	77,054.2	72,885.9	110,600.5	260,540.7
	4	116,202.0	92,910.3	129,119.2	338,231.6
	5	42,279.5	30,700.4	44,350.6	117,330.5
	-----	-----	-----	-----	-----
5		256,755.6	213,710.6	307,033.7	777,500.0
	2	7,107.9	4,055.9	4,526.7	15,690.6
	3	18,504.4	10,592.7	11,789.6	40,886.6
	4	27,921.8	16,528.1	18,585.5	63,035.4
	5	2,517.9	1,621.1	1,914.0	6,052.9
	-----	-----	-----	-----	-----
6		56,051.9	32,797.7	36,815.9	125,665.5
	1	3,472.5	2,112.1	2,392.1	7,976.7
	2	23,987.4	14,653.4	16,659.7	55,300.6
	3	118,663.4	72,490.2	82,261.1	273,414.8
	4	188,816.7	115,729.0	131,901.8	436,447.4
	5	32,957.9	20,222.4	22,980.6	76,160.8
	-----	-----	-----	-----	-----
8		367,897.9	225,207.2	256,195.3	849,300.3
	=====	=====	=====	=====	=====
		4,608,254.3	2,849,499.5	3,282,548.3	10,740,302.1

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Nonattainment Area

PM Peak VMT					
ROAD CLASS	AREA TYPE	PM PD1	PM PD2	PM PD3	PM TOTAL
	2	445,447.2	167,696.5	88,683.7	701,827.4
	3	1,293,157.4	489,571.5	259,924.7	2,042,653.7
	4	2,620,441.0	1,167,806.7	654,175.7	4,442,423.3
	5	623,315.8	299,865.0	173,060.8	1,096,241.7
		-----	-----	-----	-----
1		4,982,361.4	2,124,939.7	1,175,844.9	8,283,146.0
	2	56,931.7	22,872.8	12,500.7	92,305.2
	3	575,279.4	229,260.0	122,901.0	927,440.4
	4	1,240,999.7	533,571.1	295,195.5	2,069,766.3
	5	137,289.0	70,670.1	42,090.4	250,049.4
		-----	-----	-----	-----
2		2,010,499.9	856,374.0	472,687.6	3,339,561.5
	1	77,149.9	35,935.4	20,370.0	133,455.4
	2	311,387.4	132,602.0	73,879.2	517,868.6
	3	1,470,307.7	654,684.5	370,189.5	2,495,181.7
	4	1,688,721.1	745,865.5	428,294.6	2,862,881.3
	5	237,404.4	111,897.9	66,404.7	415,707.0
		-----	-----	-----	-----
3		3,784,970.5	1,680,985.4	959,138.0	6,425,093.9
	1	41,477.3	17,787.5	9,992.6	69,257.3
	2	94,877.8	43,690.4	25,483.2	164,051.4
	3	401,568.8	197,301.5	114,640.3	713,510.6
	4	593,462.4	309,283.5	189,461.3	1,092,207.2
	5	75,099.0	42,238.4	30,771.5	148,108.9
		-----	-----	-----	-----
4		1,206,485.2	610,301.3	370,348.8	2,187,135.3
	1	13,165.0	8,219.7	5,462.4	26,847.0
	2	48,575.7	34,144.0	23,335.0	106,054.6
	3	219,733.1	184,436.0	139,780.9	543,950.1
	4	308,016.1	210,095.0	148,433.4	666,544.6
	5	113,950.4	58,222.3	38,844.1	211,016.8
		-----	-----	-----	-----
5		703,440.4	495,117.0	355,855.7	1,554,413.0
	2	24,532.4	9,771.8	5,360.3	39,664.6
	3	57,691.9	22,982.8	12,769.9	93,444.5
	4	83,873.4	35,223.2	19,603.6	138,700.1
	5	6,740.9	3,138.8	1,926.6	11,806.2
		-----	-----	-----	-----
6		172,838.5	71,116.5	39,660.4	283,615.4
	1	11,863.2	5,250.0	2,995.7	20,108.9
	2	75,741.8	33,645.4	19,199.0	128,586.1
	3	409,396.3	181,656.9	103,554.8	694,608.0
	4	666,347.5	298,298.3	170,994.0	1,135,639.8
	5	99,990.1	44,677.5	25,543.4	170,211.0
		-----	-----	-----	-----
8		1,263,338.8	563,528.0	322,286.8	2,149,153.7
=====		=====	=====	=====	=====
		14,123,934.7	6,402,362.0	3,695,822.2	24,222,118.9

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Nonattainment Area

Off Peak VMT

FUN CLASS	AREA TYPE	OFF PD1	OFF PD2	OFF PD3	OFF PD4	TOTAL OFF VMT
	2	296,911.1	319,495.5	635,836.6	140,325.5	1,392,568.8
	3	788,741.4	872,007.4	1,793,547.1	404,910.1	3,859,205.9
	4	1,314,001.0	1,530,484.8	3,333,028.1	796,049.4	6,973,563.3
	5	340,291.9	397,801.7	877,839.4	214,663.0	1,830,596.0
		-----	-----	-----	-----	-----
1		2,739,945.4	3,119,789.4	6,640,251.2	1,555,948.1	14,055,934.1
	2	28,731.1	32,628.7	70,346.5	16,724.5	148,430.7
	3	291,033.5	342,360.5	743,505.7	174,398.0	1,551,297.7
	4	569,607.4	683,024.6	1,524,398.4	374,805.2	3,151,835.7
	5	48,471.8	61,053.9	144,415.5	40,326.8	294,268.0
		-----	-----	-----	-----	-----
2		937,843.8	1,119,067.7	2,482,666.1	606,254.5	5,145,832.1
	1	29,784.6	36,642.9	84,491.6	21,925.9	172,845.0
	2	139,366.1	173,235.4	385,503.7	92,158.5	790,263.6
	3	621,214.0	753,428.7	1,704,507.6	424,254.0	3,503,404.4
	4	824,110.7	958,295.1	2,068,512.2	499,755.6	4,350,673.6
	5	107,770.4	123,245.2	273,170.4	66,918.7	571,104.7
		-----	-----	-----	-----	-----
3		1,722,245.8	2,044,847.3	4,516,185.5	1,105,012.7	9,388,291.2
	1	17,822.6	21,120.4	48,091.6	11,838.1	98,872.8
	2	39,403.6	48,000.8	106,336.4	26,506.3	220,247.1
	3	145,545.8	178,014.8	425,629.2	110,555.9	859,745.7
	4	232,427.2	274,023.6	634,688.3	163,867.4	1,305,006.4
	5	29,312.0	36,409.1	81,702.3	20,416.5	167,840.0
		-----	-----	-----	-----	-----
4		464,511.2	557,568.8	1,296,447.8	333,184.2	2,651,712.0
	1	5,089.4	5,843.8	12,890.2	3,347.5	27,171.1
	2	13,848.1	16,948.1	41,277.2	11,291.4	83,364.8
	3	61,002.9	71,699.2	169,194.3	46,608.2	348,504.6
	4	99,957.2	120,266.4	280,264.8	73,373.8	573,862.3
	5	50,628.5	61,831.5	135,471.9	32,235.9	280,167.8
		-----	-----	-----	-----	-----
5		230,526.2	276,589.0	639,098.4	166,856.9	1,313,070.5
	2	12,138.2	14,333.1	30,851.5	7,253.8	64,576.6
	3	33,147.6	35,780.8	74,911.3	17,240.7	161,080.4
	4	43,750.6	49,796.7	105,047.6	24,801.6	223,396.5
	5	3,163.9	3,617.3	7,983.8	1,954.3	16,719.3
		-----	-----	-----	-----	-----
6		92,200.2	103,527.9	218,794.3	51,250.4	465,772.8
	1	5,799.0	6,707.4	14,700.5	3,534.8	30,741.8
	2	36,344.2	42,315.6	92,568.5	22,300.3	193,528.6
	3	200,045.4	232,101.7	508,429.0	122,687.3	1,063,263.4
	4	327,011.6	380,307.1	832,834.8	201,344.5	1,741,498.0
	5	48,427.0	55,564.4	121,725.2	29,152.5	254,869.2
		-----	-----	-----	-----	-----
8		617,627.1	716,996.2	1,570,258.0	379,019.6	3,283,900.9
	=====	=====	=====	=====	=====	=====
		6,804,899.7	7,938,386.3	17,363,701.3	4,197,526.3	36,304,513.5

Appendix B – Mobile Source Emissions Modeling: Mobile5b input/output and FORTRAN algorithm for NLEV Credit Estimate

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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1          PROMPT                      # No prompting, vertical format
2006 CO Redesignation; small stuff plus; SIP cp; mechanics training
1          TAMFLG                      # Use MOBILE 5 tampering rates
1          SPDFLG                      # Use one speed for all vehicle types
2          VMFLAG                      # Each scenario has its own VMT mix
3          MYMRFG                      # Use local registration distribution
1          NEWFLG                      # Use MOBILE 5 BER's
6          IMFLAG                      # Use one I/M programs
1          ALHFLG                      # No additional correction factors
2          ATPFLG                      # Anti-tampering, no press/purge check
1          RLFLAG                      # Uncontrolled refueling emission rates
2          LOCFLG                      # Only one LAP record
2          TEMFLG                      # MOBILE 5 uses max and min temp.
2          OUTFMT                      # 80 column descriptive format
2          PRTFLG                      # Calculate CO only
1          IDLFLG                      # No idle emissions
3          NMHFLG                      # VOC emission factors
1          HCFLAG                      # No component emission factor output
.049 .065 .067 .074 .080 .083 .082 .068 .065 .043 # Colorado LDGV
.058 .052 .045 .034 .028 .024 .021 .019 .017 .009 # registration distribution
.007 .005 .003 .001 .001
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDGT1
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDGT2
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.066 .062 .049 .050 .052 .084 .096 .069 .064 .042 # Colorado HDGV
.052 .054 .044 .030 .026 .025 .027 .027 .027 .018 # registration distribution
.014 .011 .007 .004 .000
.049 .065 .067 .074 .080 .083 .082 .068 .065 .043 # Colorado LDDV
.058 .052 .045 .034 .028 .024 .021 .019 .017 .009 # registration distribution
.007 .005 .003 .001 .001
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDDT
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.110 .095 .116 .113 .080 .102 .079 .062 .037 .050 # Colorado HDDV
.048 .055 .044 .001 .001 .001 .001 .001 .001 .001 # registration distribution
.001 .001 .000 .000 .000
.001 .001 .001 .001 .001 .001 .001 .001 .001 .001 # Colorado MC
.001 .989 .000 .000 .000 .000 .000 .000 .000 .000 # registration distribution
.000 .000 .000 .000 .000
2 1 2 1
82 20 82 02 00 00 098 1 2 2221 4222 .6 10.0 1.5
82 20 82 02 00 00 098 1 2 1112 2222 220. 1.2 999.
TECH12RSD80.D
IMDATRSD80.D
82 75 02 2222 12 098. 22111112
      C 26. 52. 12.4 12.4 92 2
.001 .999 .027 .015 2
2 6 21.5 27.0 16.0 8.0 16.0
.595.214.100.026.002.002.061.000 6 AM 1 CBD PRINCIPAL ARTERIAL
2 6 18.7 27.0 16.0 8.0 16.0
.595.214.100.026.002.002.061.000 6 AM 1 CBD MINOR ARTERIAL
2 6 17.1 27.0 7.0 11.0 7.0
.595.214.100.026.002.002.061.000 6 AM 1 CBD COLLECTOR
2 6 11.4 27.0 7.0 11.0 7.0
.595.214.100.026.002.002.061.000 6 AM 1 CBD LOCAL
2 6 36.3 27.0 8.0 1.0 8.0
.571.218.102.031.002.002.074.000 6 AM 1 FRINGE FREEWAY
2 6 30.4 27.0 8.0 1.0 8.0
.571.218.102.031.002.002.074.000 6 AM 1 FRINGE MAJOR REGIONAL
2 6 24.8 27.0 41.0 5.0 42.0
.667.154.072.030.002.002.073.000 6 AM 1 FRINGE PRINCIPAL ARTERIAL
2 6 22.1 27.0 41.0 5.0 42.0
.667.154.072.030.002.002.073.000 6 AM 1 FRINGE MINOR ARTERIAL
2 6 21.1 27.0 22.0 2.0 22.0
.667.154.072.030.002.002.073.000 6 AM 1 FRINGE COLLECTOR
2 6 30.3 27.0 41.0 5.0 42.0
.667.154.072.030.002.002.073.000 6 AM 1 FRINGE RAMP
2 6 13.1 27.0 22.0 1.0 23.0

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.667.154.072.030.002.002.073.000	6 AM	1	FRINGE	LOCAL
2 6 40.2 27.0 22.0 2.0 22.0				
.644.187.088.023.002.002.054.000	6 AM	1	URBAN	FREEWAY
2 6 32.8 27.0 24.0 2.0 24.0				
.584.226.106.024.002.002.056.000	6 AM	1	URBAN	MAJOR REGIONAL
2 6 28.8 27.0 39.0 4.0 40.0				
.641.190.089.022.002.002.054.000	6 AM	1	URBAN	PRINCIPAL ARTERIAL
2 6 27.2 27.0 81.0 7.0 83.0				
.683.171.080.018.002.002.044.000	6 AM	1	URBAN	MINOR ARTERIAL
2 6 23.2 27.0 69.0 7.0 71.0				
.652.181.085.023.002.002.055.000	6 AM	1	URBAN	COLLECTOR
2 6 31.7 27.0 39.0 4.0 40.0				
.641.190.089.022.002.002.054.000	6 AM	1	URBAN	RAMP
2 6 16.3 27.0 44.0 4.0 46.0				
.652.181.085.023.002.002.055.000	6 AM	1	URBAN	LOCAL
2 6 45.6 27.0 28.0 2.0 28.0				
.570.234.109.024.002.003.058.000	6 AM	1	SUBURBAN	FREEWAY
2 6 36.5 27.0 19.0 2.0 19.0				
.514.241.113.037.002.003.090.000	6 AM	1	SUBURBAN	MAJOR REGIONAL
2 6 34.0 27.0 39.0 3.0 39.0				
.583.227.106.024.002.002.056.000	6 AM	1	SUBURBAN	PRINCIPAL ARTERIAL
2 6 32.7 27.0 77.0 8.0 77.0				
.637.194.091.022.002.002.052.000	6 AM	1	SUBURBAN	MINOR ARTERIAL
2 6 27.6 27.0 73.0 7.0 73.0				
.626.229.107.010.002.002.024.000	6 AM	1	SUBURBAN	COLLECTOR
2 6 30.5 27.0 39.0 3.0 39.0				
.583.227.106.024.002.002.056.000	6 AM	1	SUBURBAN	RAMP
2 6 19.8 27.0 52.0 5.0 52.0				
.626.229.107.010.002.002.024.000	6 AM	1	SUBURBAN	LOCAL
2 6 59.0 27.0 36.0 1.0 35.0				
.389.222.104.083.001.002.199.000	6 AM	1	RURAL	FREEWAY
2 6 45.0 27.0 8.0 0.0 8.0				
.493.225.105.051.002.002.122.000	6 AM	1	RURAL	MAJOR REGIONAL
2 6 42.3 27.0 13.0 1.0 13.0				
.564.238.111.024.002.003.058.000	6 AM	1	RURAL	PRINCIPAL ARTERIAL
2 6 41.5 27.0 13.0 1.0 13.0				
.564.238.111.024.002.003.058.000	6 AM	1	RURAL	MINOR ARTERIAL
2 6 31.7 27.0 57.0 2.0 57.0				
.564.238.111.024.002.003.058.000	6 AM	1	RURAL	COLLECTOR
2 6 34.9 27.0 13.0 1.0 13.0				
.564.238.111.024.002.003.058.000	6 AM	1	RURAL	RAMP
2 6 21.9 27.0 57.0 2.0 57.0				
.564.238.111.024.002.003.058.000	6 AM	1	RURAL	LOCAL
2 6 16.3 27.0 16.0 8.0 16.0				
.595.214.100.026.002.002.061.000	6 AM	2	CBD	PRINCIPAL ARTERIAL
2 6 14.5 27.0 16.0 8.0 16.0				
.595.214.100.026.002.002.061.000	6 AM	2	CBD	MINOR ARTERIAL
2 6 15.2 27.0 7.0 11.0 7.0				
.595.214.100.026.002.002.061.000	6 AM	2	CBD	COLLECTOR
2 6 11.4 27.0 7.0 11.0 7.0				
.595.214.100.026.002.002.061.000	6 AM	2	CBD	LOCAL
2 6 27.8 27.0 8.0 1.0 8.0				
.571.218.102.031.002.002.074.000	6 AM	2	FRINGE	FREEWAY
2 6 23.1 27.0 8.0 1.0 8.0				
.571.218.102.031.002.002.074.000	6 AM	2	FRINGE	MAJOR REGIONAL
2 6 19.1 27.0 41.0 5.0 42.0				
.667.154.072.030.002.002.073.000	6 AM	2	FRINGE	PRINCIPAL ARTERIAL
2 6 17.3 27.0 41.0 5.0 42.0				
.667.154.072.030.002.002.073.000	6 AM	2	FRINGE	MINOR ARTERIAL
2 6 17.9 27.0 22.0 2.0 22.0				
.667.154.072.030.002.002.073.000	6 AM	2	FRINGE	COLLECTOR
2 6 26.3 27.0 41.0 5.0 42.0				
.667.154.072.030.002.002.073.000	6 AM	2	FRINGE	RAMP
2 6 13.1 27.0 22.0 1.0 23.0				
.667.154.072.030.002.002.073.000	6 AM	2	FRINGE	LOCAL
2 6 32.2 27.0 22.0 2.0 22.0				
.644.187.088.023.002.002.054.000	6 AM	2	URBAN	FREEWAY
2 6 27.9 27.0 24.0 2.0 24.0				
.584.226.106.024.002.002.056.000	6 AM	2	URBAN	MAJOR REGIONAL
2 6 23.2 27.0 39.0 4.0 40.0				
.641.190.089.022.002.002.054.000	6 AM	2	URBAN	PRINCIPAL ARTERIAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 6 22.1 27.0 81.0 7.0 83.0	
.683.171.080.018.002.002.044.000	6 AM 2 URBAN MINOR ARTERIAL
2 6 20.6 27.0 69.0 7.0 71.0	
.652.181.085.023.002.002.055.000	6 AM 2 URBAN COLLECTOR
2 6 28.5 27.0 39.0 4.0 40.0	
.641.190.089.022.002.002.054.000	6 AM 2 URBAN RAMP
2 6 16.3 27.0 44.0 4.0 46.0	
.652.181.085.023.002.002.055.000	6 AM 2 URBAN LOCAL
2 6 38.7 27.0 28.0 2.0 28.0	
.570.234.109.024.002.003.058.000	6 AM 2 SUBURBAN FREEWAY
2 6 30.8 27.0 19.0 2.0 19.0	
.514.241.113.037.002.003.090.000	6 AM 2 SUBURBAN MAJOR REGIONAL
2 6 27.6 27.0 39.0 3.0 39.0	
.583.227.106.024.002.002.056.000	6 AM 2 SUBURBAN PRINCIPAL ARTERIAL
2 6 27.3 27.0 77.0 8.0 77.0	
.637.194.091.022.002.002.052.000	6 AM 2 SUBURBAN MINOR ARTERIAL
2 6 24.3 27.0 73.0 7.0 73.0	
.626.229.107.010.002.002.024.000	6 AM 2 SUBURBAN COLLECTOR
2 6 27.9 27.0 39.0 3.0 39.0	
.583.227.106.024.002.002.056.000	6 AM 2 SUBURBAN RAMP
2 6 19.8 27.0 52.0 5.0 52.0	
.626.229.107.010.002.002.024.000	6 AM 2 SUBURBAN LOCAL
2 6 53.5 27.0 36.0 1.0 35.0	
.389.222.104.083.001.002.199.000	6 AM 2 RURAL FREEWAY
2 6 39.9 27.0 8.0 0.0 8.0	
.493.225.105.051.002.002.122.000	6 AM 2 RURAL MAJOR REGIONAL
2 6 38.5 27.0 13.0 1.0 13.0	
.564.238.111.024.002.003.058.000	6 AM 2 RURAL PRINCIPAL ARTERIAL
2 6 38.5 27.0 13.0 1.0 13.0	
.564.238.111.024.002.003.058.000	6 AM 2 RURAL MINOR ARTERIAL
2 6 29.7 27.0 57.0 2.0 57.0	
.564.238.111.024.002.003.058.000	6 AM 2 RURAL COLLECTOR
2 6 31.1 27.0 13.0 1.0 13.0	
.564.238.111.024.002.003.058.000	6 AM 2 RURAL RAMP
2 6 21.9 27.0 57.0 2.0 57.0	
.564.238.111.024.002.003.058.000	6 AM 2 RURAL LOCAL
2 6 11.8 27.0 16.0 8.0 16.0	
.595.214.100.026.002.002.061.000	6 AM 3 CBD PRINCIPAL ARTERIAL
2 6 11.3 27.0 16.0 8.0 16.0	
.595.214.100.026.002.002.061.000	6 AM 3 CBD MINOR ARTERIAL
2 6 12.9 27.0 7.0 11.0 7.0	
.595.214.100.026.002.002.061.000	6 AM 3 CBD COLLECTOR
2 6 11.4 27.0 7.0 11.0 7.0	
.595.214.100.026.002.002.061.000	6 AM 3 CBD LOCAL
2 6 21.1 27.0 8.0 1.0 8.0	
.571.218.102.031.002.002.074.000	6 AM 3 FRINGE FREEWAY
2 6 17.8 27.0 8.0 1.0 8.0	
.571.218.102.031.002.002.074.000	6 AM 3 FRINGE MAJOR REGIONAL
2 6 14.1 27.0 41.0 5.0 42.0	
.667.154.072.030.002.002.073.000	6 AM 3 FRINGE PRINCIPAL ARTERIAL
2 6 12.9 27.0 41.0 5.0 42.0	
.667.154.072.030.002.002.073.000	6 AM 3 FRINGE MINOR ARTERIAL
2 6 14.5 27.0 22.0 2.0 22.0	
.667.154.072.030.002.002.073.000	6 AM 3 FRINGE COLLECTOR
2 6 22.0 27.0 41.0 5.0 42.0	
.667.154.072.030.002.002.073.000	6 AM 3 FRINGE RAMP
2 6 13.1 27.0 22.0 1.0 23.0	
.667.154.072.030.002.002.073.000	6 AM 3 FRINGE LOCAL
2 6 25.6 27.0 22.0 2.0 22.0	
.644.187.088.023.002.002.054.000	6 AM 3 URBAN FREEWAY
2 6 22.3 27.0 24.0 2.0 24.0	
.584.226.106.024.002.002.056.000	6 AM 3 URBAN MAJOR REGIONAL
2 6 18.2 27.0 39.0 4.0 40.0	
.641.190.089.022.002.002.054.000	6 AM 3 URBAN PRINCIPAL ARTERIAL
2 6 17.3 27.0 81.0 7.0 83.0	
.683.171.080.018.002.002.044.000	6 AM 3 URBAN MINOR ARTERIAL
2 6 17.4 27.0 69.0 7.0 71.0	
.652.181.085.023.002.002.055.000	6 AM 3 URBAN COLLECTOR
2 6 25.1 27.0 39.0 4.0 40.0	
.641.190.089.022.002.002.054.000	6 AM 3 URBAN RAMP
2 6 16.3 27.0 44.0 4.0 46.0	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.652.181.085.023.002.002.055.000	6 AM	3	URBAN	LOCAL
2 6 31.7 27.0 28.0 2.0 28.0				
.570.234.109.024.002.003.058.000	6 AM	3	SUBURBAN	FREEWAY
2 6 26.5 27.0 19.0 2.0 19.0				
.514.241.113.037.002.003.090.000	6 AM	3	SUBURBAN	MAJOR REGIONAL
2 6 21.8 27.0 39.0 3.0 39.0				
.583.227.106.024.002.002.056.000	6 AM	3	SUBURBAN	PRINCIPAL ARTERIAL
2 6 21.3 27.0 77.0 8.0 77.0				
.637.194.091.022.002.002.052.000	6 AM	3	SUBURBAN	MINOR ARTERIAL
2 6 20.9 27.0 73.0 7.0 73.0				
.626.229.107.010.002.002.024.000	6 AM	3	SUBURBAN	COLLECTOR
2 6 25.2 27.0 39.0 3.0 39.0				
.583.227.106.024.002.002.056.000	6 AM	3	SUBURBAN	RAMP
2 6 19.8 27.0 52.0 5.0 52.0				
.626.229.107.010.002.002.024.000	6 AM	3	SUBURBAN	LOCAL
2 6 47.5 27.0 36.0 1.0 35.0				
.389.222.104.083.001.002.199.000	6 AM	3	RURAL	FREEWAY
2 6 34.3 27.0 8.0 0.0 8.0				
.493.225.105.051.002.002.122.000	6 AM	3	RURAL	MAJOR REGIONAL
2 6 34.5 27.0 13.0 1.0 13.0				
.564.238.111.024.002.003.058.000	6 AM	3	RURAL	PRINCIPAL ARTERIAL
2 6 34.5 27.0 13.0 1.0 13.0				
.564.238.111.024.002.003.058.000	6 AM	3	RURAL	MINOR ARTERIAL
2 6 27.7 27.0 57.0 2.0 57.0				
.564.238.111.024.002.003.058.000	6 AM	3	RURAL	COLLECTOR
2 6 26.1 27.0 13.0 1.0 13.0				
.564.238.111.024.002.003.058.000	6 AM	3	RURAL	RAMP
2 6 21.9 27.0 57.0 2.0 57.0				
.564.238.111.024.002.003.058.000	6 AM	3	RURAL	LOCAL
2 6 23.2 52.0 46.0 12.0 59.0				
.648.173.081.028.002.002.066.000	6 PM	4	CBD	PRINCIPAL ARTERIAL
2 6 19.9 52.0 46.0 12.0 59.0				
.648.173.081.028.002.002.066.000	6 PM	4	CBD	MINOR ARTERIAL
2 6 17.5 52.0 45.0 8.0 56.0				
.648.173.081.028.002.002.066.000	6 PM	4	CBD	COLLECTOR
2 6 11.4 52.0 45.0 8.0 56.0				
.648.173.081.028.002.002.066.000	6 PM	4	CBD	LOCAL
2 6 37.1 52.0 8.0 7.0 12.0				
.547.241.113.028.002.003.066.000	6 PM	4	FRINGE	FREEWAY
2 6 33.9 52.0 8.0 7.0 12.0				
.547.241.113.028.002.003.066.000	6 PM	4	FRINGE	MAJOR REGIONAL
2 6 27.0 52.0 30.0 19.0 43.0				
.629.193.090.025.002.002.059.000	6 PM	4	FRINGE	PRINCIPAL ARTERIAL
2 6 23.2 52.0 30.0 19.0 43.0				
.629.193.090.025.002.002.059.000	6 PM	4	FRINGE	MINOR ARTERIAL
2 6 22.5 52.0 34.0 14.0 46.0				
.629.193.090.025.002.002.059.000	6 PM	4	FRINGE	COLLECTOR
2 6 29.3 52.0 30.0 19.0 43.0				
.629.193.090.025.002.002.059.000	6 PM	4	FRINGE	RAMP
2 6 13.1 52.0 34.0 14.0 46.0				
.629.193.090.025.002.002.059.000	6 PM	4	FRINGE	LOCAL
2 6 41.2 52.0 8.0 7.0 12.0				
.618.207.097.022.002.002.052.000	6 PM	4	URBAN	FREEWAY
2 6 31.5 52.0 15.0 14.0 23.0				
.587.241.113.016.002.003.038.000	6 PM	4	URBAN	MAJOR REGIONAL
2 6 29.8 52.0 19.0 17.0 30.0				
.624.207.097.020.002.002.048.000	6 PM	4	URBAN	PRINCIPAL ARTERIAL
2 6 28.6 52.0 39.0 37.0 60.0				
.648.207.097.013.002.002.031.000	6 PM	4	URBAN	MINOR ARTERIAL
2 6 23.9 52.0 24.0 24.0 38.0				
.698.180.084.010.002.002.024.000	6 PM	4	URBAN	COLLECTOR
2 6 31.4 52.0 19.0 17.0 30.0				
.624.207.097.020.002.002.048.000	6 PM	4	URBAN	RAMP
2 6 16.3 52.0 19.0 19.0 31.0				
.698.180.084.010.002.002.024.000	6 PM	4	URBAN	LOCAL
2 6 49.1 52.0 13.0 10.0 19.0				
.577.232.109.023.002.002.055.000	6 PM	4	SUBURBAN	FREEWAY
2 6 38.0 52.0 14.0 23.0 22.0				
.478.281.132.031.002.003.073.000	6 PM	4	SUBURBAN	MAJOR REGIONAL
2 6 36.0 52.0 12.0 11.0 18.0				
.558.254.119.019.002.003.045.000	6 PM	4	SUBURBAN	PRINCIPAL ARTERIAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 6 35.6 52.0 25.0 24.0 37.0	
.599.229.107.018.002.002.043.000	6 PM 4 SUBURBAN MINOR ARTERIAL
2 6 28.9 52.0 28.0 26.0 43.0	
.648.207.097.013.002.002.031.000	6 PM 4 SUBURBAN COLLECTOR
2 6 32.8 52.0 12.0 11.0 18.0	
.558.254.119.019.002.003.045.000	6 PM 4 SUBURBAN RAMP
2 6 19.8 52.0 19.0 18.0 29.0	
.648.207.097.013.002.002.031.000	6 PM 4 SUBURBAN LOCAL
2 6 60.7 52.0 16.0 9.0 23.0	
.418.241.113.066.001.003.158.000	6 PM 4 RURAL FREEWAY
2 6 48.4 52.0 3.0 2.0 5.0	
.498.261.122.034.002.003.080.000	6 PM 4 RURAL MAJOR REGIONAL
2 6 45.2 52.0 16.0 13.0 24.0	
.619.220.103.016.002.002.038.000	6 PM 4 RURAL PRINCIPAL ARTERIAL
2 6 42.6 52.0 16.0 13.0 24.0	
.619.220.103.016.002.002.038.000	6 PM 4 RURAL MINOR ARTERIAL
2 6 33.8 52.0 23.0 13.0 34.0	
.619.220.103.016.002.002.038.000	6 PM 4 RURAL COLLECTOR
2 6 38.3 52.0 16.0 13.0 24.0	
.619.220.103.016.002.002.038.000	6 PM 4 RURAL RAMP
2 6 21.7 52.0 23.0 13.0 34.0	
.619.220.103.016.002.002.038.000	6 PM 4 RURAL LOCAL
2 6 16.9 52.0 46.0 12.0 59.0	
.648.173.081.028.002.002.066.000	6 PM 5 CBD PRINCIPAL ARTERIAL
2 6 14.4 52.0 46.0 12.0 59.0	
.648.173.081.028.002.002.066.000	6 PM 5 CBD MINOR ARTERIAL
2 6 15.3 52.0 45.0 8.0 56.0	
.648.173.081.028.002.002.066.000	6 PM 5 CBD COLLECTOR
2 6 11.4 52.0 45.0 8.0 56.0	
.648.173.081.028.002.002.066.000	6 PM 5 CBD LOCAL
2 6 27.7 52.0 8.0 7.0 12.0	
.547.241.113.028.002.003.066.000	6 PM 5 FRINGE FREEWAY
2 6 25.0 52.0 8.0 7.0 12.0	
.547.241.113.028.002.003.066.000	6 PM 5 FRINGE MAJOR REGIONAL
2 6 18.7 52.0 30.0 19.0 43.0	
.629.193.090.025.002.002.059.000	6 PM 5 FRINGE PRINCIPAL ARTERIAL
2 6 16.6 52.0 30.0 19.0 43.0	
.629.193.090.025.002.002.059.000	6 PM 5 FRINGE MINOR ARTERIAL
2 6 18.4 52.0 34.0 14.0 46.0	
.629.193.090.025.002.002.059.000	6 PM 5 FRINGE COLLECTOR
2 6 24.0 52.0 30.0 19.0 43.0	
.629.193.090.025.002.002.059.000	6 PM 5 FRINGE RAMP
2 6 13.1 52.0 34.0 14.0 46.0	
.629.193.090.025.002.002.059.000	6 PM 5 FRINGE LOCAL
2 6 29.5 52.0 8.0 7.0 12.0	
.618.207.097.022.002.002.052.000	6 PM 5 URBAN FREEWAY
2 6 26.3 52.0 15.0 14.0 23.0	
.587.241.113.016.002.003.038.000	6 PM 5 URBAN MAJOR REGIONAL
2 6 22.4 52.0 19.0 17.0 30.0	
.624.207.097.020.002.002.048.000	6 PM 5 URBAN PRINCIPAL ARTERIAL
2 6 21.0 52.0 39.0 37.0 60.0	
.648.207.097.013.002.002.031.000	6 PM 5 URBAN MINOR ARTERIAL
2 6 21.0 52.0 24.0 24.0 38.0	
.698.180.084.010.002.002.024.000	6 PM 5 URBAN COLLECTOR
2 6 27.4 52.0 19.0 17.0 30.0	
.624.207.097.020.002.002.048.000	6 PM 5 URBAN RAMP
2 6 16.3 52.0 19.0 19.0 31.0	
.698.180.084.010.002.002.024.000	6 PM 5 URBAN LOCAL
2 6 39.3 52.0 13.0 10.0 19.0	
.577.232.109.023.002.002.055.000	6 PM 5 SUBURBAN FREEWAY
2 6 32.5 52.0 14.0 23.0 22.0	
.478.281.132.031.002.003.073.000	6 PM 5 SUBURBAN MAJOR REGIONAL
2 6 28.2 52.0 12.0 11.0 18.0	
.558.254.119.019.002.003.045.000	6 PM 5 SUBURBAN PRINCIPAL ARTERIAL
2 6 28.5 52.0 25.0 24.0 37.0	
.599.229.107.018.002.002.043.000	6 PM 5 SUBURBAN MINOR ARTERIAL
2 6 25.3 52.0 28.0 26.0 43.0	
.648.207.097.013.002.002.031.000	6 PM 5 SUBURBAN COLLECTOR
2 6 29.8 52.0 12.0 11.0 18.0	
.558.254.119.019.002.003.045.000	6 PM 5 SUBURBAN RAMP
2 6 19.8 52.0 19.0 18.0 29.0	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.648.207.097.013.002.002.031.000	6 PM	5	SUBURBAN	LOCAL
2 6 55.1 52.0 16.0 9.0 23.0				
.418.241.113.066.001.003.158.000	6 PM	5	RURAL	FREEWAY
2 6 44.1 52.0 3.0 2.0 5.0				
.498.261.122.034.002.003.080.000	6 PM	5	RURAL	MAJOR REGIONAL
2 6 41.0 52.0 16.0 13.0 24.0				
.619.220.103.016.002.002.038.000	6 PM	5	RURAL	PRINCIPAL ARTERIAL
2 6 40.2 52.0 16.0 13.0 24.0				
.619.220.103.016.002.002.038.000	6 PM	5	RURAL	MINOR ARTERIAL
2 6 31.7 52.0 23.0 13.0 34.0				
.619.220.103.016.002.002.038.000	6 PM	5	RURAL	COLLECTOR
2 6 36.5 52.0 16.0 13.0 24.0				
.619.220.103.016.002.002.038.000	6 PM	5	RURAL	RAMP
2 6 21.7 52.0 23.0 13.0 34.0				
.619.220.103.016.002.002.038.000	6 PM	5	RURAL	LOCAL
2 6 12.4 52.0 46.0 12.0 59.0				
.648.173.081.028.002.002.066.000	6 PM	6	CBD	PRINCIPAL ARTERIAL
2 6 10.8 52.0 46.0 12.0 59.0				
.648.173.081.028.002.002.066.000	6 PM	6	CBD	MINOR ARTERIAL
2 6 12.9 52.0 45.0 8.0 56.0				
.648.173.081.028.002.002.066.000	6 PM	6	CBD	COLLECTOR
2 6 11.4 52.0 45.0 8.0 56.0				
.648.173.081.028.002.002.066.000	6 PM	6	CBD	LOCAL
2 6 21.8 52.0 8.0 7.0 12.0				
.547.241.113.028.002.003.066.000	6 PM	6	FRINGE	FREEWAY
2 6 20.1 52.0 8.0 7.0 12.0				
.547.241.113.028.002.003.066.000	6 PM	6	FRINGE	MAJOR REGIONAL
2 6 14.3 52.0 30.0 19.0 43.0				
.629.193.090.025.002.002.059.000	6 PM	6	FRINGE	PRINCIPAL ARTERIAL
2 6 12.1 52.0 30.0 19.0 43.0				
.629.193.090.025.002.002.059.000	6 PM	6	FRINGE	MINOR ARTERIAL
2 6 15.1 52.0 34.0 14.0 46.0				
.629.193.090.025.002.002.059.000	6 PM	6	FRINGE	COLLECTOR
2 6 20.4 52.0 30.0 19.0 43.0				
.629.193.090.025.002.002.059.000	6 PM	6	FRINGE	RAMP
2 6 13.1 52.0 34.0 14.0 46.0				
.629.193.090.025.002.002.059.000	6 PM	6	FRINGE	LOCAL
2 6 22.6 52.0 8.0 7.0 12.0				
.618.207.097.022.002.002.052.000	6 PM	6	URBAN	FREEWAY
2 6 20.6 52.0 15.0 14.0 23.0				
.587.241.113.016.002.003.038.000	6 PM	6	URBAN	MAJOR REGIONAL
2 6 17.3 52.0 19.0 17.0 30.0				
.624.207.097.020.002.002.048.000	6 PM	6	URBAN	PRINCIPAL ARTERIAL
2 6 16.6 52.0 39.0 37.0 60.0				
.648.207.097.013.002.002.031.000	6 PM	6	URBAN	MINOR ARTERIAL
2 6 17.8 52.0 24.0 24.0 38.0				
.698.180.084.010.002.002.024.000	6 PM	6	URBAN	COLLECTOR
2 6 24.4 52.0 19.0 17.0 30.0				
.624.207.097.020.002.002.048.000	6 PM	6	URBAN	RAMP
2 6 16.3 52.0 19.0 19.0 31.0				
.698.180.084.010.002.002.024.000	6 PM	6	URBAN	LOCAL
2 6 32.6 52.0 13.0 10.0 19.0				
.577.232.109.023.002.002.055.000	6 PM	6	SUBURBAN	FREEWAY
2 6 28.3 52.0 14.0 23.0 22.0				
.478.281.132.031.002.003.073.000	6 PM	6	SUBURBAN	MAJOR REGIONAL
2 6 22.7 52.0 12.0 11.0 18.0				
.558.254.119.019.002.003.045.000	6 PM	6	SUBURBAN	PRINCIPAL ARTERIAL
2 6 23.2 52.0 25.0 24.0 37.0				
.599.229.107.018.002.002.043.000	6 PM	6	SUBURBAN	MINOR ARTERIAL
2 6 22.5 52.0 28.0 26.0 43.0				
.648.207.097.013.002.002.031.000	6 PM	6	SUBURBAN	COLLECTOR
2 6 27.6 52.0 12.0 11.0 18.0				
.558.254.119.019.002.003.045.000	6 PM	6	SUBURBAN	RAMP
2 6 19.8 52.0 19.0 18.0 29.0				
.648.207.097.013.002.002.031.000	6 PM	6	SUBURBAN	LOCAL
2 6 50.1 52.0 16.0 9.0 23.0				
.418.241.113.066.001.003.158.000	6 PM	6	RURAL	FREEWAY
2 6 40.1 52.0 3.0 2.0 5.0				
.498.261.122.034.002.003.080.000	6 PM	6	RURAL	MAJOR REGIONAL
2 6 37.2 52.0 16.0 13.0 24.0				
.619.220.103.016.002.002.038.000	6 PM	6	RURAL	PRINCIPAL ARTERIAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 6 37.0 52.0 16.0 13.0 24.0			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	MINOR ARTERIAL
2 6 30.0 52.0 23.0 13.0 34.0			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	COLLECTOR
2 6 35.2 52.0 16.0 13.0 24.0			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	RAMP
2 6 21.7 52.0 23.0 13.0 34.0			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	LOCAL
2 6 27.0 36.0 21.0 17.0 43.0			
.589.213.100.028.002.002.066.000	6 OFF	7 CBD	PRINCIPAL ARTERIAL
2 6 25.1 36.0 21.0 17.0 43.0			
.589.213.100.028.002.002.066.000	6 OFF	7 CBD	MINOR ARTERIAL
2 6 20.0 36.0 16.0 12.0 35.0			
.589.213.100.028.002.002.066.000	6 OFF	7 CBD	COLLECTOR
2 6 11.3 36.0 16.0 12.0 35.0			
.589.213.100.028.002.002.066.000	6 OFF	7 CBD	LOCAL
2 6 55.0 36.0 9.0 10.0 16.0			
.517.241.113.037.002.003.087.000	6 OFF	7 FRINGE	FREEWAY
2 6 39.8 36.0 9.0 10.0 16.0			
.517.241.113.037.002.003.087.000	6 OFF	7 FRINGE	MAJOR REGIONAL
2 6 35.0 36.0 22.0 25.0 39.0			
.648.187.087.022.002.002.052.000	6 OFF	7 FRINGE	PRINCIPAL ARTERIAL
2 6 30.0 36.0 22.0 25.0 39.0			
.648.187.087.022.002.002.052.000	6 OFF	7 FRINGE	MINOR ARTERIAL
2 6 25.0 36.0 15.0 19.0 29.0			
.648.187.087.022.002.002.052.000	6 OFF	7 FRINGE	COLLECTOR
2 6 38.9 36.0 22.0 25.0 39.0			
.648.187.087.022.002.002.052.000	6 OFF	7 FRINGE	RAMP
2 6 13.1 36.0 15.0 19.0 29.0			
.648.187.087.022.002.002.052.000	6 OFF	7 FRINGE	LOCAL
2 6 58.0 36.0 14.0 14.0 23.0			
.618.200.094.025.002.002.059.000	6 OFF	7 URBAN	FREEWAY
2 6 45.0 36.0 14.0 14.0 24.0			
.547.248.116.025.002.003.059.000	6 OFF	7 URBAN	MAJOR REGIONAL
2 6 37.0 36.0 20.0 21.0 34.0			
.630.210.098.017.002.002.041.000	6 OFF	7 URBAN	PRINCIPAL ARTERIAL
2 6 35.0 36.0 33.0 33.0 54.0			
.658.180.084.022.002.002.052.000	6 OFF	7 URBAN	MINOR ARTERIAL
2 6 25.0 36.0 26.0 28.0 43.0			
.658.207.097.010.002.002.024.000	6 OFF	7 URBAN	COLLECTOR
2 6 39.1 36.0 20.0 21.0 34.0			
.630.210.098.017.002.002.041.000	6 OFF	7 URBAN	RAMP
2 6 16.3 36.0 18.0 20.0 20.0			
.658.207.097.010.002.002.024.000	6 OFF	7 URBAN	LOCAL
2 6 58.0 36.0 13.0 11.0 21.0			
.549.233.109.031.002.003.073.000	6 OFF	7 SUBURBAN	FREEWAY
2 6 45.0 36.0 15.0 15.0 25.0			
.477.275.129.034.002.003.080.000	6 OFF	7 SUBURBAN	MAJOR REGIONAL
2 6 45.0 36.0 22.0 21.0 36.0			
.608.207.097.025.002.002.059.000	6 OFF	7 SUBURBAN	PRINCIPAL ARTERIAL
2 6 39.8 36.0 32.0 30.0 52.0			
.609.212.099.022.002.002.054.000	6 OFF	7 SUBURBAN	MINOR ARTERIAL
2 6 30.0 36.0 23.0 22.0 37.0			
.568.268.125.010.002.003.024.000	6 OFF	7 SUBURBAN	COLLECTOR
2 6 39.0 36.0 22.0 21.0 36.0			
.608.207.097.025.002.002.059.000	6 OFF	7 SUBURBAN	RAMP
2 6 19.7 36.0 19.0 19.0 32.0			
.568.268.125.010.002.003.024.000	6 OFF	7 SUBURBAN	LOCAL
2 6 63.0 36.0 15.0 9.0 25.0			
.440.220.103.069.001.002.165.000	6 OFF	7 RURAL	FREEWAY
2 6 49.0 36.0 4.0 2.0 6.0			
.487.241.113.045.002.003.109.000	6 OFF	7 RURAL	MAJOR REGIONAL
2 6 47.9 36.0 18.0 12.0 29.0			
.458.288.135.034.002.003.080.000	6 OFF	7 RURAL	PRINCIPAL ARTERIAL
2 6 44.0 36.0 18.0 12.0 29.0			
.458.288.135.034.002.003.080.000	6 OFF	7 RURAL	MINOR ARTERIAL
2 6 35.0 36.0 23.0 13.0 48.0			
.458.288.135.034.002.003.080.000	6 OFF	7 RURAL	COLLECTOR
2 6 39.6 36.0 18.0 12.0 29.0			
.458.288.135.034.002.003.080.000	6 OFF	7 RURAL	RAMP
2 6 21.1 36.0 23.0 13.0 48.0			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.458.288.135.034.002.003.080.000	6 OFF 7 RURAL	LOCAL
2 6 26.7 36.0 21.0 17.0 43.0		
.589.213.100.028.002.002.066.000	6 OFF 8 CBD	PRINCIPAL ARTERIAL
2 6 24.5 36.0 21.0 17.0 43.0		
.589.213.100.028.002.002.066.000	6 OFF 8 CBD	MINOR ARTERIAL
2 6 19.6 36.0 16.0 12.0 35.0		
.589.213.100.028.002.002.066.000	6 OFF 8 CBD	COLLECTOR
2 6 11.3 36.0 16.0 12.0 35.0		
.589.213.100.028.002.002.066.000	6 OFF 8 CBD	LOCAL
2 6 52.2 36.0 9.0 10.0 16.0		
.517.241.113.037.002.003.087.000	6 OFF 8 FRINGE	FREEWAY
2 6 38.4 36.0 9.0 10.0 16.0		
.517.241.113.037.002.003.087.000	6 OFF 8 FRINGE	MAJOR REGIONAL
2 6 33.9 36.0 22.0 25.0 39.0		
.648.187.087.022.002.002.052.000	6 OFF 8 FRINGE	PRINCIPAL ARTERIAL
2 6 29.1 36.0 22.0 25.0 39.0		
.648.187.087.022.002.002.052.000	6 OFF 8 FRINGE	MINOR ARTERIAL
2 6 24.8 36.0 15.0 19.0 29.0		
.648.187.087.022.002.002.052.000	6 OFF 8 FRINGE	COLLECTOR
2 6 35.8 36.0 22.0 25.0 39.0		
.648.187.087.022.002.002.052.000	6 OFF 8 FRINGE	RAMP
2 6 13.1 36.0 15.0 19.0 29.0		
.648.187.087.022.002.002.052.000	6 OFF 8 FRINGE	LOCAL
2 6 55.2 36.0 14.0 14.0 23.0		
.618.200.094.025.002.002.059.000	6 OFF 8 URBAN	FREEWAY
2 6 39.9 36.0 14.0 14.0 24.0		
.547.248.116.025.002.003.059.000	6 OFF 8 URBAN	MAJOR REGIONAL
2 6 36.2 36.0 20.0 21.0 34.0		
.630.210.098.017.002.002.041.000	6 OFF 8 URBAN	PRINCIPAL ARTERIAL
2 6 34.4 36.0 33.0 33.0 54.0		
.658.180.084.022.002.002.052.000	6 OFF 8 URBAN	MINOR ARTERIAL
2 6 24.8 36.0 26.0 28.0 43.0		
.658.207.097.010.002.002.024.000	6 OFF 8 URBAN	COLLECTOR
2 6 36.7 36.0 20.0 21.0 34.0		
.630.210.098.017.002.002.041.000	6 OFF 8 URBAN	RAMP
2 6 16.3 36.0 18.0 20.0 20.0		
.658.207.097.010.002.002.024.000	6 OFF 8 URBAN	LOCAL
2 6 57.2 36.0 13.0 11.0 21.0		
.549.233.109.031.002.003.073.000	6 OFF 8 SUBURBAN	FREEWAY
2 6 44.3 36.0 15.0 15.0 25.0		
.477.275.129.034.002.003.080.000	6 OFF 8 SUBURBAN	MAJOR REGIONAL
2 6 43.5 36.0 22.0 21.0 36.0		
.608.207.097.025.002.002.059.000	6 OFF 8 SUBURBAN	PRINCIPAL ARTERIAL
2 6 39.2 36.0 32.0 30.0 52.0		
.609.212.099.022.002.002.054.000	6 OFF 8 SUBURBAN	MINOR ARTERIAL
2 6 29.9 36.0 23.0 22.0 37.0		
.568.268.125.010.002.003.024.000	6 OFF 8 SUBURBAN	COLLECTOR
2 6 37.1 36.0 22.0 21.0 36.0		
.608.207.097.025.002.002.059.000	6 OFF 8 SUBURBAN	RAMP
2 6 19.7 36.0 19.0 19.0 32.0		
.568.268.125.010.002.003.024.000	6 OFF 8 SUBURBAN	LOCAL
2 6 62.9 36.0 15.0 9.0 25.0		
.440.220.103.069.001.002.165.000	6 OFF 8 RURAL	FREEWAY
2 6 49.0 36.0 4.0 2.0 6.0		
.487.241.113.045.002.003.109.000	6 OFF 8 RURAL	MAJOR REGIONAL
2 6 47.5 36.0 18.0 12.0 29.0		
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL	PRINCIPAL ARTERIAL
2 6 43.9 36.0 18.0 12.0 29.0		
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL	MINOR ARTERIAL
2 6 34.9 36.0 23.0 13.0 48.0		
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL	COLLECTOR
2 6 39.4 36.0 18.0 12.0 29.0		
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL	RAMP
2 6 21.0 36.0 23.0 13.0 48.0		
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL	LOCAL
2 6 26.0 36.0 21.0 17.0 43.0		
.589.213.100.028.002.002.066.000	6 OFF 9 CBD	PRINCIPAL ARTERIAL
2 6 23.5 36.0 21.0 17.0 43.0		
.589.213.100.028.002.002.066.000	6 OFF 9 CBD	MINOR ARTERIAL
2 6 19.0 36.0 16.0 12.0 35.0		
.589.213.100.028.002.002.066.000	6 OFF 9 CBD	COLLECTOR

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 6 11.3 36.0 16.0 12.0 35.0			
.589.213.100.028.002.002.066.000	6 OFF 9	CBD	LOCAL
2 6 47.5 36.0 9.0 10.0 16.0			
.517.241.113.037.002.003.087.000	6 OFF 9	FRINGE	FREEWAY
2 6 37.2 36.0 9.0 10.0 16.0			
.517.241.113.037.002.003.087.000	6 OFF 9	FRINGE	MAJOR REGIONAL
2 6 32.2 36.0 22.0 25.0 39.0			
.648.187.087.022.002.002.052.000	6 OFF 9	FRINGE	PRINCIPAL ARTERIAL
2 6 27.9 36.0 22.0 25.0 39.0			
.648.187.087.022.002.002.052.000	6 OFF 9	FRINGE	MINOR ARTERIAL
2 6 24.3 36.0 15.0 19.0 29.0			
.648.187.087.022.002.002.052.000	6 OFF 9	FRINGE	COLLECTOR
2 6 34.1 36.0 22.0 25.0 39.0			
.648.187.087.022.002.002.052.000	6 OFF 9	FRINGE	RAMP
2 6 13.1 36.0 15.0 19.0 29.0			
.648.187.087.022.002.002.052.000	6 OFF 9	FRINGE	LOCAL
2 6 50.5 36.0 14.0 14.0 23.0			
.618.200.094.025.002.002.059.000	6 OFF 9	URBAN	FREEWAY
2 6 38.2 36.0 14.0 14.0 24.0			
.547.248.116.025.002.003.059.000	6 OFF 9	URBAN	MAJOR REGIONAL
2 6 34.7 36.0 20.0 21.0 34.0			
.630.210.098.017.002.002.041.000	6 OFF 9	URBAN	PRINCIPAL ARTERIAL
2 6 33.1 36.0 33.0 33.0 54.0			
.658.180.084.022.002.002.052.000	6 OFF 9	URBAN	MINOR ARTERIAL
2 6 24.7 36.0 26.0 28.0 43.0			
.658.207.097.010.002.002.024.000	6 OFF 9	URBAN	COLLECTOR
2 6 35.1 36.0 20.0 21.0 34.0			
.630.210.098.017.002.002.041.000	6 OFF 9	URBAN	RAMP
2 6 16.3 36.0 18.0 20.0 20.0			
.658.207.097.010.002.002.024.000	6 OFF 9	URBAN	LOCAL
2 6 55.1 36.0 13.0 11.0 21.0			
.549.233.109.031.002.003.073.000	6 OFF 9	SUBURBAN	FREEWAY
2 6 43.2 36.0 15.0 15.0 25.0			
.477.275.129.034.002.003.080.000	6 OFF 9	SUBURBAN	MAJOR REGIONAL
2 6 41.3 36.0 22.0 21.0 36.0			
.608.207.097.025.002.002.059.000	6 OFF 9	SUBURBAN	PRINCIPAL ARTERIAL
2 6 38.7 36.0 32.0 30.0 52.0			
.609.212.099.022.002.002.054.000	6 OFF 9	SUBURBAN	MINOR ARTERIAL
2 6 29.8 36.0 23.0 22.0 37.0			
.568.268.125.010.002.003.024.000	6 OFF 9	SUBURBAN	COLLECTOR
2 6 35.6 36.0 22.0 21.0 36.0			
.608.207.097.025.002.002.059.000	6 OFF 9	SUBURBAN	RAMP
2 6 19.8 36.0 19.0 19.0 32.0			
.568.268.125.010.002.003.024.000	6 OFF 9	SUBURBAN	LOCAL
2 6 62.5 36.0 15.0 9.0 25.0			
.440.220.103.069.001.002.165.000	6 OFF 9	RURAL	FREEWAY
2 6 49.0 36.0 4.0 2.0 6.0			
.487.241.113.045.002.003.109.000	6 OFF 9	RURAL	MAJOR REGIONAL
2 6 47.1 36.0 18.0 12.0 29.0			
.458.288.135.034.002.003.080.000	6 OFF 9	RURAL	PRINCIPAL ARTERIAL
2 6 43.7 36.0 18.0 12.0 29.0			
.458.288.135.034.002.003.080.000	6 OFF 9	RURAL	MINOR ARTERIAL
2 6 34.7 36.0 23.0 13.0 48.0			
.458.288.135.034.002.003.080.000	6 OFF 9	RURAL	COLLECTOR
2 6 39.2 36.0 18.0 12.0 29.0			
.458.288.135.034.002.003.080.000	6 OFF 9	RURAL	RAMP
2 6 21.0 36.0 23.0 13.0 48.0			
.458.288.135.034.002.003.080.000	6 OFF 9	RURAL	LOCAL
2 6 25.2 36.0 21.0 17.0 43.0			
.589.213.100.028.002.002.066.000	6 OFF10	CBD	PRINCIPAL ARTERIAL
2 6 22.3 36.0 21.0 17.0 43.0			
.589.213.100.028.002.002.066.000	6 OFF10	CBD	MINOR ARTERIAL
2 6 18.4 36.0 16.0 12.0 35.0			
.589.213.100.028.002.002.066.000	6 OFF10	CBD	COLLECTOR
2 6 11.3 36.0 16.0 12.0 35.0			
.589.213.100.028.002.002.066.000	6 OFF10	CBD	LOCAL
2 6 42.9 36.0 9.0 10.0 16.0			
.517.241.113.037.002.003.087.000	6 OFF10	FRINGE	FREEWAY
2 6 34.3 36.0 9.0 10.0 16.0			
.517.241.113.037.002.003.087.000	6 OFF10	FRINGE	MAJOR REGIONAL
2 6 29.5 36.0 22.0 25.0 39.0			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.648.187.087.022.002.002.052.000	6 OFF10 FRINGE	PRINCIPAL ARTERIAL
2 6 25.7 36.0 22.0 25.0 39.0		
.648.187.087.022.002.002.052.000	6 OFF10 FRINGE	MINOR ARTERIAL
2 6 23.6 36.0 15.0 19.0 29.0		
.648.187.087.022.002.002.052.000	6 OFF10 FRINGE	COLLECTOR
2 6 32.6 36.0 22.0 25.0 39.0		
.648.187.087.022.002.002.052.000	6 OFF10 FRINGE	RAMP
2 6 13.1 36.0 15.0 19.0 29.0		
.648.187.087.022.002.002.052.000	6 OFF10 FRINGE	LOCAL
2 6 45.6 36.0 14.0 14.0 23.0		
.618.200.094.025.002.002.059.000	6 OFF10 URBAN	FREEWAY
2 6 36.4 36.0 14.0 14.0 24.0		
.547.248.116.025.002.003.059.000	6 OFF10 URBAN	MAJOR REGIONAL
2 6 32.6 36.0 20.0 21.0 34.0		
.630.210.098.017.002.002.041.000	6 OFF10 URBAN	PRINCIPAL ARTERIAL
2 6 31.3 36.0 33.0 33.0 54.0		
.658.180.084.022.002.002.052.000	6 OFF10 URBAN	MINOR ARTERIAL
2 6 24.5 36.0 26.0 28.0 43.0		
.658.207.097.010.002.002.024.000	6 OFF10 URBAN	COLLECTOR
2 6 33.7 36.0 20.0 21.0 34.0		
.630.210.098.017.002.002.041.000	6 OFF10 URBAN	RAMP
2 6 16.3 36.0 18.0 20.0 20.0		
.658.207.097.010.002.002.024.000	6 OFF10 URBAN	LOCAL
2 6 52.2 36.0 13.0 11.0 21.0		
.549.233.109.031.002.003.073.000	6 OFF10 SUBURBAN	FREEWAY
2 6 41.4 36.0 15.0 15.0 25.0		
.477.275.129.034.002.003.080.000	6 OFF10 SUBURBAN	MAJOR REGIONAL
2 6 38.9 36.0 22.0 21.0 36.0		
.608.207.097.025.002.002.059.000	6 OFF10 SUBURBAN	PRINCIPAL ARTERIAL
2 6 37.3 36.0 32.0 30.0 52.0		
.609.212.099.022.002.002.054.000	6 OFF10 SUBURBAN	MINOR ARTERIAL
2 6 29.6 36.0 23.0 22.0 37.0		
.568.268.125.010.002.003.024.000	6 OFF10 SUBURBAN	COLLECTOR
2 6 34.2 36.0 22.0 21.0 36.0		
.608.207.097.025.002.002.059.000	6 OFF10 SUBURBAN	RAMP
2 6 19.8 36.0 19.0 19.0 32.0		
.568.268.125.010.002.003.024.000	6 OFF10 SUBURBAN	LOCAL
2 6 61.2 36.0 15.0 9.0 25.0		
.440.220.103.069.001.002.165.000	6 OFF10 RURAL	FREEWAY
2 6 48.9 36.0 4.0 2.0 6.0		
.487.241.113.045.002.003.109.000	6 OFF10 RURAL	MAJOR REGIONAL
2 6 46.5 36.0 18.0 12.0 29.0		
.458.288.135.034.002.003.080.000	6 OFF10 RURAL	PRINCIPAL ARTERIAL
2 6 43.4 36.0 18.0 12.0 29.0		
.458.288.135.034.002.003.080.000	6 OFF10 RURAL	MINOR ARTERIAL
2 6 34.5 36.0 23.0 13.0 48.0		
.458.288.135.034.002.003.080.000	6 OFF10 RURAL	COLLECTOR
2 6 39.0 36.0 18.0 12.0 29.0		
.458.288.135.034.002.003.080.000	6 OFF10 RURAL	RAMP
2 6 21.0 36.0 23.0 13.0 48.0		
.458.288.135.034.002.003.080.000	6 OFF10 RURAL	LOCAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

12006 CO Redesignation; small stuff plus; SIP cp; mechanics training
MOBILE5b (14-Sep-96)

0
-M 22 Warning:
+ 0.346E-01 mileage with zero registration
-M 22 Warning:
+ 0.626E-01 mileage with zero registration
-M 22 Warning:
+ 0.373E-01 mileage with zero registration
-M 22 Warning:
+ 0.222E-01 mileage with zero registration

OR	Amb.					P														
e						o														
g	CY	Tmp	Cold/Hot	Start		l	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	AllVeh	LDGV	LDGT1L		
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	16.0	8.0	16.0	2	15.64	21.13	23.48	21.88	38.21	1.15	2.08	16.40	0.00	18.17	.595	.214	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	16.0	8.0	16.0	2	17.93	23.93	26.57	24.77	44.42	1.32	2.40	18.94	0.00	20.76	.595	.214	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	7.0	11.0	7.0	2	17.31	22.58	25.36	23.47	48.79	1.37	2.50	20.70	0.00	20.21	.595	.214	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	7.0	11.0	7.0	2	21.82	28.11	31.64	29.23	71.34	1.96	3.56	29.48	0.00	25.83	.595	.214	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	8.0	1.0	8.0	2	7.45	10.74	12.14	11.19	22.96	0.63	1.13	9.71	0.00	9.27	.571	.218	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	8.0	1.0	8.0	2	9.46	13.21	14.89	13.75	26.55	0.74	1.33	11.41	0.00	11.47	.571	.218	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	41.0	5.0	42.0	2	16.35	23.36	25.39	24.01	32.71	1.18	2.13	14.10	0.00	18.35	.667	.154	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	41.0	5.0	42.0	2	18.81	26.53	28.79	27.25	37.08	1.33	2.40	15.93	0.00	20.99	.667	.154	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	22.0	2.0	22.0	2	16.83	23.02	25.43	23.79	39.00	1.19	2.15	16.73	0.00	19.00	.667	.154	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	41.0	5.0	42.0	2	12.70	18.66	20.34	19.19	26.63	0.96	1.73	11.45	0.00	14.45	.667	.154	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	22.0	1.0	23.0	2	23.09	30.98	34.24	32.02	63.22	1.88	3.39	26.37	0.00	26.47	.667	.154	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	22.0	2.0	22.0	2	7.29	11.04	12.31	11.45	21.75	0.64	1.16	9.04	0.00	8.84	.644	.187	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	24.0	2.0	24.0	2	9.85	14.34	15.89	14.83	24.80	0.77	1.39	10.61	0.00	11.87	.584	.226	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	39.0	4.0	40.0	2	13.35	19.43	21.20	19.99	27.98	0.99	1.79	12.05	0.00	15.41	.641	.190	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	81.0	7.0	83.0	2	23.57	34.66	36.66	35.30	29.66	1.52	2.73	12.79	0.00	26.06	.683	.171	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	69.0	7.0	71.0	2	24.95	35.87	38.12	36.59	35.17	1.62	2.91	15.13	0.00	27.65	.652	.181	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	39.0	4.0	40.0	2	11.79	17.42	19.04	17.94	25.55	0.90	1.62	10.95	0.00	13.72	.641	.190	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	44.0	4.0	46.0	2	24.96	34.61	37.43	35.51	51.24	1.86	3.35	21.67	0.00	28.10	.652	.181	.	.
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.								
2	6	27	28.0	2.0	28.0	2	6.37	10.08	11.21	10.44	21.33	0.64	1.15	8.57	0.00	8.23	.570	.234	.	.

Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	19.0	2.0	19.0	2	8.15	12.01	13.40	12.45	22.88	0.68	1.22	9.67	0.00	10.32	.514	.241	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	39.0	3.0	39.0	2	10.64	15.91	17.42	16.39	24.08	0.84	1.50	10.26	0.00	12.82	.583	.227	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	77.0	8.0	77.0	2	17.41	26.31	28.00	26.85	24.86	1.21	2.18	10.64	0.00	19.85	.637	.194	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	73.0	7.0	73.0	2	20.54	30.21	32.15	30.83	29.22	1.37	2.47	12.59	0.00	23.82	.626	.229	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	39.0	3.0	39.0	2	12.29	18.03	19.70	18.56	26.47	0.93	1.67	11.37	0.00	14.62	.583	.227	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	52.0	5.0	52.0	2	24.03	33.72	36.27	34.53	41.78	1.62	2.92	17.87	0.00	27.50	.626	.229	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	36.0	1.0	35.0	2	8.59	13.75	15.34	14.26	26.81	0.74	1.33	9.44	0.00	12.09	.389	.222	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	8.0	0.0	8.0	2	5.44	8.29	9.40	8.64	21.31	0.55	0.99	8.60	0.00	7.67	.493	.225	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	13.0	1.0	13.0	2	6.25	9.44	10.64	9.82	21.42	0.59	1.06	8.80	0.00	7.98	.564	.238	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	13.0	1.0	13.0	2	6.43	9.67	10.88	10.05	21.52	0.59	1.07	8.88	0.00	8.17	.564	.238	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	57.0	2.0	57.0	2	14.01	20.99	22.64	21.52	25.55	1.02	1.83	10.95	0.00	16.67	.564	.238	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	13.0	1.0	13.0	2	8.22	11.88	13.33	12.34	23.60	0.67	1.21	10.03	0.00	10.10	.564	.238	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	57.0	2.0	57.0	2	22.25	31.72	34.04	32.46	37.45	1.50	2.69	16.09	0.00	25.72	.564	.238	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	16.0	8.0	16.0	2	19.25	25.58	28.42	26.48	51.24	1.51	2.75	21.67	0.00	22.43	.595	.214	.	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	16.0	8.0	16.0	2	20.52													

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	6	27	39.0	4.0	40.0	2	17.48	24.73	26.90	25.42	35.17	1.25	2.24	15.13	0.00	19.89	.641	.190	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	81.0	7.0	83.0	2	30.41	43.62	46.00	44.38	37.08	1.89	3.40	15.93	0.00	33.29	.683	.171	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	69.0	7.0	71.0	2	28.77	40.85	43.36	41.65	40.03	1.83	3.30	17.15	0.00	31.71	.652	.181	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	39.0	4.0	40.0	2	13.53	19.66	21.45	20.23	28.28	1.00	1.81	12.18	0.00	15.61	.641	.190	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	44.0	4.0	46.0	2	24.96	34.61	37.43	35.51	51.24	1.86	3.35	21.67	0.00	28.10	.652	.181	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	28.0	2.0	28.0	2	8.12	12.29	13.62	12.71	22.12	0.69	1.25	9.26	0.00	10.06	.570	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	19.0	2.0	19.0	2	10.25	14.63	16.28	15.16	26.23	0.79	1.42	11.26	0.00	12.62	.514	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	39.0	3.0	39.0	2	13.97	20.18	22.02	20.77	29.22	1.03	1.84	12.59	0.00	16.47	.583	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	77.0	8.0	77.0	2	21.98	32.28	34.25	32.91	29.55	1.45	2.61	12.74	0.00	24.70	.637	.194	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	73.0	7.0	73.0	2	24.06	34.81	36.98	35.50	33.44	1.57	2.82	14.41	0.00	27.68	.626	.229	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	39.0	3.0	39.0	2	13.78	19.94	21.76	20.52	28.90	1.01	1.82	12.45	0.00	16.26	.583	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	52.0	5.0	52.0	2	24.03	33.72	36.27	34.53	41.78	1.62	2.92	17.87	0.00	27.50	.626	.229	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	36.0	1.0	35.0	2	6.24	10.15	11.23	10.49	23.27	0.69	1.23	8.72	0.00	9.52	.389	.222	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	8.0	0.0	8.0	2	6.51	9.60	10.86	10.00	21.82	0.58	1.05	9.08	0.00	8.73	.493	.225	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	13.0	1.0	13.0	2	7.17	10.58	11.89	11.00	22.18	0.62	1.12	9.30	0.00	8.96	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	13.0	1.0	13.0	2	7.17	10.58	11.89	11.00	22.18	0.62	1.12	9.30	0.00	8.96	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	57.0	2.0	57.0	2	15.25	22.60	24.36	23.16	27.15	1.09	1.95	11.68	0.00	18.02	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	13.0	1.0	13.0	2	9.59	13.58	15.22	14.10	25.99	0.74	1.34	11.16	0.00	11.61	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	57.0	2.0	57.0	2	22.25	31.72	34.04	32.46	37.45	1.50	2.69	16.09	0.00	25.72	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	16.0	8.0	16.0	2	23.16	30.48	33.93	31.58	69.30	2.01	3.64	28.70	0.00	27.26	.595	.214	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	16.0	8.0	16.0	2	23.79	31.26	34.81	32.39	71.86	2.07	3.76	29.68	0.00	28.02	.595	.214	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	7.0	11.0	7.0	2	20.25	26.18	29.45	27.22	64.11	1.77	3.23	26.71	0.00	23.90	.595	.214	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	7.0	11.0	7.0	2	21.82	28.11	31.64	29.23	71.34	1.96	3.56	29.48	0.00	25.83	.595	.214	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	8.0	1.0	8.0	2	14.90	19.90	22.34	20.67	39.00	1.08	1.95	16.73	0.00	17.58	.571	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	8.0	1.0	8.0	2	17.12	22.59	25.36	23.47	46.80	1.28	2.31	19.90	0.00	20.22	.571	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	41.0	5.0	42.0	2	25.92	35.71	38.79	36.69	59.06	2.07	3.73	24.75	0.00	29.17	.667	.154	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	27	41.0	5.0	42.0	2	27.30	37.51	40.77	38.55	64.11	2.23	4.03	26.71	0.00	30.81	.667	.154	..

Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

[illegible]

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	6	52	45.0	8.0	56.0	2	20.55	26.84	29.18	27.59	45.27	1.86	3.39	20.24	0.00	22.94	.648	.173	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	45.0	8.0	56.0	2	26.23	33.86	36.91	34.83	67.80	2.71	4.94	29.48	0.00	29.71	.648	.173	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	8.0	7.0	12.0	2	6.18	8.56	9.68	8.92	21.52	0.64	1.16	9.55	0.00	7.77	.547	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	8.0	7.0	12.0	2	6.99	9.52	10.74	9.91	22.94	0.69	1.26	10.29	0.00	8.66	.547	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	30.0	19.0	43.0	2	12.22	16.37	17.97	16.88	28.41	1.12	2.07	12.89	0.00	13.94	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	30.0	19.0	43.0	2	14.74	19.38	21.24	19.97	33.42	1.31	2.43	15.13	0.00	16.66	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	34.0	14.0	46.0	2	15.38	20.27	22.17	20.87	34.56	1.36	2.50	15.63	0.00	17.37	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	30.0	19.0	43.0	2	11.01	14.93	16.41	15.40	26.15	1.03	1.90	11.84	0.00	12.64	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	34.0	14.0	46.0	2	22.59	28.98	31.74	29.86	60.09	2.30	4.22	26.37	0.00	25.73	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	8.0	7.0	12.0	2	5.32	7.55	8.55	7.87	20.50	0.60	1.09	8.92	0.00	6.60	.618	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	15.0	14.0	23.0	2	8.34	11.32	12.65	11.74	24.42	0.81	1.49	11.02	0.00	9.87	.587	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	19.0	17.0	30.0	2	9.39	12.71	14.12	13.16	25.72	0.91	1.67	11.64	0.00	10.94	.624	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	39.0	37.0	60.0	2	15.04	20.11	21.76	20.64	26.78	1.32	2.50	12.14	0.00	16.75	.648	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	24.0	24.0	38.0	2	13.87	18.17	19.97	18.74	32.36	1.25	2.33	14.66	0.00	15.31	.698	.180	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	19.0	17.0	30.0	2	8.77	11.97	13.31	12.40	24.49	0.86	1.59	11.05	0.00	10.27	.624	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	19.0	19.0	31.0	2	17.70	22.52	24.88	23.27	48.70	1.71	3.17	21.67	0.00	19.51	.698	.180	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	13.0	10.0	19.0	2	4.42	6.61	7.48	6.89	20.72	0.60	1.10	8.51	0.00	5.84	.577	.232	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	14.0	23.0	22.0	2	6.47	9.05	10.15	9.40	21.23	0.71	1.32	9.38	0.00	8.32	.478	.281	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	12.0	11.0	18.0	2	6.71	9.30	10.45	9.67	21.94	0.69	1.26	9.78	0.00	8.21	.558	.254	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	25.0	24.0	37.0	2	8.21	11.44	12.66	11.83	22.11	0.84	1.56	9.87	0.00	9.72	.599	.229	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	28.0	26.0	43.0	2	11.63	15.64	17.17	16.13	26.51	1.07	2.01	12.01	0.00	13.16	.648	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	12.0	11.0	18.0	2	7.62	10.36	11.63	10.77	23.57	0.75	1.37	10.61	0.00	9.20	.558	.254	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	19.0	18.0	29.0	2	15.47	19.88	21.98	20.55	39.71	1.39	2.57	17.87	0.00	17.35	.648	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	16.0	9.0	23.0	2	6.94	10.24	11.66	10.69	26.98	0.70	1.29	9.78	0.00	10.02	.418	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	3.0	2.0	5.0	2	3.99	5.89	6.73	6.16	20.58	0.53	0.97	8.51	0.00	5.73	.498	.261	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	16.0	13.0	24.0	2	5.03	7.43	8.36	7.72	20.26	0.64	1.17	8.59	0.00	6.26	.619	.220	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	16.0	13.0	24.0	2	5.50	7.98	8.97	8.30	20.33	0.65	1.19	8.77	0.00	6.75	.619	.220	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	23.0	13.0	34.0	2	8.12	11.30	12.54	11.69	22.99	0.81	1.50	10.32	0.00	9.57	.619	.220	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	16.0	13.0	24.0	2	6.42	9.07	10.17	9.42	21.14	0.69	1.27	9.33	0.00	7.71	.619	.220	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	23.0	13.0	34.0	2	14.23	18.59	20.51	19.20	35.95	1.28	2.36	16.24	0.00	16.21	.619	.220	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	46.0	12.0	59.0	2	22.03	28.68	31.09	29.45	46.94	2.00	3.67	20.94	0.00	24.46	.648	.173	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	46.0	12.0	59.0	2	24.04	31.15	33.82	32.00	55.02	2.33	4.26	24.29	0.00	26.86	.648	.173	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	45.0	8.0	56.0	2	22.08	28.73	31.25	29.53	51.88	2.11	3.86	23.00	0.00	24.79	.648	.173	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	45.0	8.0	56.0	2	26.23	33.86	36.91	34.83	67.80	2.71	4.94	29.48	0.00	29.71	.648	.173	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	8.0	7.0	12.0	2	9.12	12.00	13.51	12.48	27.67	0.84	1.53	12.55	0.00	11.01	.547	.241	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	8.0	7.0	12.0	2	10.37	13.47	15.15	14.00	30.82	0.94	1.70	13.98	0.00	12.42	.547	.241	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	30.0	19.0	43.0	2	18.52	23.86	26.09	24.57	42.22	1.64	3.04	18.94	0.00	20.79	.629	.193	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	30.0	19.0	43.0	2	19.69	25.28	27.67	26.04	47.80	1.85	3.42	21.30	0.00	22.22	.629	.193	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	34.0	14.0	46.0	2	18.77	24.30	26.55	25.02	42.95	1.68	3.08	19.25	0.00	21.10	.629	.193	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	30.0	19.0	43.0	2	14.14	18.67	20.46	19.24	32.21	1.27	2.35	14.60	0.00	16.01	.629	.193	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	34.0	14.0	46.0	2	22.59	28.98	31.74	29.86	60.09	2.30	4.22	26.37	0.00	25.73	.629	.193	.
0	Emission factors are as of Jan. 1st of the indicated calendar year.																		
2	6	52	8.0	7.0	12.0	2	8.41	11.17	12.59	11.62	25.97	0.79	1.43	11.					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	6	52	12.0	11.0	18.0	2	8.65	11.57	12.97	12.02	25.72	0.82	1.50	11.64	0.00	10.33	.558	.254	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	19.0	18.0	29.0	2	15.47	19.88	21.98	20.55	39.71	1.39	2.57	17.87	0.00	17.35	.648	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	16.0	9.0	23.0	2	4.56	6.87	7.75	7.15	22.89	0.64	1.17	8.87	0.00	7.35	.418	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	3.0	2.0	5.0	2	4.55	6.54	7.47	6.84	20.25	0.54	0.98	8.65	0.00	6.27	.498	.261	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	16.0	13.0	24.0	2	5.82	8.36	9.38	8.69	20.53	0.66	1.22	8.94	0.00	7.08	.619	.220	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	16.0	13.0	24.0	2	5.99	8.56	9.60	8.89	20.67	0.67	1.23	9.04	0.00	7.26	.619	.220	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	23.0	13.0	34.0	2	8.84	12.16	13.49	12.59	24.28	0.86	1.59	10.95	0.00	10.35	.619	.220	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	16.0	13.0	24.0	2	6.87	9.60	10.75	9.97	21.74	0.72	1.31	9.67	0.00	8.19	.619	.220	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	23.0	13.0	34.0	2	14.23	18.59	20.51	19.20	35.95	1.28	2.36	16.24	0.00	16.21	.619	.220	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	46.0	12.0	59.0	2	26.23	33.85	36.79	34.79	63.10	2.64	4.84	27.59	0.00	29.44	.648	.173	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	46.0	12.0	59.0	2	28.57	36.73	39.95	37.76	70.86	2.94	5.39	30.71	0.00	32.13	.648	.173	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	45.0	8.0	56.0	2	24.34	31.52	34.33	32.42	60.93	2.46	4.48	26.71	0.00	27.49	.648	.173	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	45.0	8.0	56.0	2	26.23	33.86	36.91	34.83	67.80	2.71	4.94	29.48	0.00	29.71	.648	.173	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	8.0	7.0	12.0	2	12.25	15.68	17.61	16.29	35.77	1.08	1.97	16.16	0.00	14.55	.547	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	8.0	7.0	12.0	2	13.50	17.14	19.23	17.81	39.07	1.18	2.15	17.59	0.00	15.95	.547	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	30.0	19.0	43.0	2	21.37	27.31	29.93	28.15	55.39	2.12	3.93	24.45	0.00	24.25	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	30.0	19.0	43.0	2	23.57	29.99	32.90	30.91	64.46	2.44	4.52	28.14	0.00	26.86	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	34.0	14.0	46.0	2	20.83	26.83	29.35	27.63	52.55	2.03	3.73	23.28	0.00	23.62	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	30.0	19.0	43.0	2	17.20	22.31	24.42	22.98	38.45	1.50	2.78	17.33	0.00	19.32	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	34.0	14.0	46.0	2	22.59	28.98	31.74	29.86	60.09	2.30	4.22	26.37	0.00	25.73	.629	.193	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	8.0	7.0	12.0	2	11.73	15.07	16.93	15.66	34.39	1.04	1.90	15.56	0.00	13.58	.618	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	15.0	14.0	23.0	2	14.17	18.19	20.23	18.84	38.05	1.26	2.33	17.15	0.00	16.26	.587	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	19.0	17.0	30.0	2	16.81	21.50	23.77	22.22	45.82	1.59	2.94	20.46	0.00	19.16	.624	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	39.0	37.0	60.0	2	26.09	33.13	35.72	33.96	47.80	2.32	4.38	21.30	0.00	28.53	.648	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	24.0	24.0	38.0	2	18.53	23.66	25.96	24.39	44.48	1.69	3.16	19.90	0.00	20.31	.698	.180	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	19.0	17.0	30.0	2	12.09	15.91	17.62	16.46	31.64	1.12	2.06	14.34	0.00	13.87	.624	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	52	19.0	19.0	31.0	2	17.70	22.52	24.88	23.27	48.70	1.71	3.17	21.67	0.00	19.51	.698	.180	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	13.0	10.0	19.0	2	7.73	10.51	11.79	10.92	23.69	0.75	1.38	10.67	0.00	9.32	.577	.232	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	14.0	23.0	22.0	2	9.60	12.73	14.20	13.20	27.07	0.93	1.72	12.27	0.00	11.78	.478	.281	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	12.0	11.0	18.0	2	12.16	15.70	17.55	16.29	34.23	1.09	2.00	15.49	0.00	14.22	.558	.254	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	25.0	24.0	37.0	2	14.25	18.58	20.43	19.17	33.42	1.29	2.39	15.13	0.00	16.23	.599	.229	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	28.0	26.0	43.0	2	15.88	20.68	22.62	21.30	34.56	1.40	2.61	15.63	0.00	17.71	.648	.207	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	12.0	11.0	18.0	2	9.54	12.62	14.14	13.11	27.77	0.89	1.62	12.59	0.00	11.32	.558	.254	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	19.0	18.0	29.0	2	15.47	19.88	21.98	20.55	39.71	1.39	2.57	17.87	0.00	17.35	.648	.207	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	16.0	9.0	23.0	2	4.52	6.81	7.68	7.09	20.95	0.62	1.12	8.53	0.00	7.13	.418	.241	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	3.0	2.0	5.0	2	5.24	7.35	8.37	7.67	20.69	0.57	1.03	9.05	0.00	6.98	.498	.261	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	16.0	13.0	24.0	2	6.69	9.39	10.52	9.75	21.49	0.70	1.30	9.53	0.00	8.00	.619	.220	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	16.0	13.0	24.0	2	6.74	9.45	10.58	9.81	21.56	0.71	1.30	9.57	0.00	8.05	.619	.220	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	23.0	13.0	34.0	2	9.50	12.95	14.35	13.40	25.55	0.91	1.68	11.56	0.00	11.06	.619	.220	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	16.0	13.0	24.0	2	7.22	10.02	11.21	10.40	22.29	0.74	1.35	9.96	0.00	8.57	.619	.220	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	52	23.0	13.0	34.0	2	14.23	18.59	20.51	19.20	35.95	1.28	2.36	16.24	0.00	16.21	.619	.220	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2	6	36	21.0	17.0	43.0	2	13.87	19.50	21.19	20.04	28.32	1.07	2.01	12.89	0.00				

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	6	36	14.0	14.0	24.0	2	5.56	8.52	9.51	8.84	20.19	0.63	1.16	8.60	0.00	7.27	.547	.248	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	20.0	21.0	34.0	2	8.36	12.27	13.50	12.66	21.49	0.78	1.45	9.57	0.00	9.93	.630	.210	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	33.0	33.0	54.0	2	12.24	17.85	19.25	18.29	22.31	1.00	1.90	10.01	0.00	13.90	.658	.180	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	26.0	28.0	43.0	2	16.07	22.15	23.99	22.74	30.72	1.25	2.35	13.98	0.00	18.14	.658	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	20.0	21.0	34.0	2	7.74	11.50	12.66	11.87	20.85	0.75	1.39	9.20	0.00	9.27	.630	.210	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	20.0	20.0	2	17.68	23.13	25.60	23.92	48.54	1.63	3.00	21.67	0.00	19.92	.658	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	13.0	11.0	21.0	2	6.26	9.64	10.87	10.03	24.63	0.66	1.21	9.26	0.00	8.31	.549	.233	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	15.0	15.0	25.0	2	5.62	8.62	9.61	8.94	20.19	0.64	1.18	8.60	0.00	7.67	.477	.275	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	21.0	36.0	2	6.45	9.97	11.00	10.30	20.19	0.71	1.32	8.60	0.00	8.07	.608	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	32.0	30.0	52.0	2	9.85	14.79	16.03	15.19	20.69	0.89	1.67	9.10	0.00	11.67	.609	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	23.0	22.0	37.0	2	11.54	16.32	17.83	16.80	25.47	0.97	1.80	11.56	0.00	13.69	.568	.268	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	21.0	36.0	2	7.95	11.84	13.02	12.22	20.88	0.76	1.41	9.22	0.00	9.62	.608	.207	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	19.0	19.0	32.0	2	17.98	24.10	26.34	24.81	39.80	1.42	2.65	17.96	0.00	20.81	.568	.268	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	15.0	9.0	25.0	2	8.86	13.59	15.37	14.16	29.35	0.75	1.38	10.35	0.00	12.21	.440	.220	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	4.0	2.0	6.0	2	4.22	6.43	7.33	6.72	20.63	0.54	0.97	8.51	0.00	6.29	.487	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	12.0	29.0	2	5.28	8.32	9.27	8.63	20.43	0.64	1.18	8.51	0.00	7.45	.458	.288	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	12.0	29.0	2	6.01	9.24	10.26	9.57	20.19	0.65	1.20	8.66	0.00	8.18	.458	.288	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	23.0	13.0	48.0	2	10.29	15.22	16.56	15.64	22.31	0.84	1.58	10.01	0.00	12.89	.458	.288	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	12.0	29.0	2	7.02	10.49	11.62	10.85	20.73	0.69	1.27	9.12	0.00	9.24	.458	.288	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	23.0	13.0	48.0	2	19.52	26.85	29.01	27.54	36.95	1.41	2.63	16.73	0.00	23.19	.458	.288	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	21.0	17.0	43.0	2	14.06	19.74	21.45	20.29	28.65	1.09	2.03	13.04	0.00	16.30	.589	.213	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	21.0	17.0	43.0	2	15.65	21.72	23.58	22.32	31.40	1.19	2.23	14.28	0.00	18.03	.589	.213	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	16.0	12.0	35.0	2	18.25	24.67	26.92	25.39	40.02	1.39	2.58	18.06	0.00	21.01	.589	.213	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	16.0	12.0	35.0	2	24.80	33.00	36.14	34.00	68.07	2.28	4.24	29.68	0.00	29.13	.589	.213	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	9.0	10.0	16.0	2	4.67	7.21	8.13	7.51	21.53	0.59	1.09	8.63	0.00	6.62	.517	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	9.0	10.0	16.0	2	6.51	9.47	10.61	9.83	21.04	0.64	1.18	9.31	0.00	8.44	.517	.241	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	25.0	39.0	2	10.18	14.70	16.06	15.13	22.86	0.88	1.64	10.29	0.00	11.79	.648	.187	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	6	36	22.0	25.0	39.0	2	12.45	17.50	19.08	18.00	26.24	1.02	1.90	11.92	0.00	14.20	.648	.187	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	15.0	19.0	29.0	2	13.09	17.95	19.73	18.52	30.99	1.09	2.02	14.10	0.00	14.97	.648	.187	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	22.0	25.0	39.0	2	9.45	13.80	15.09	14.21	21.95	0.84	1.57	9.82	0.00	11.02	.648	.187	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	15.0	19.0	29.0	2	21.66	28.58	31.40	29.48	59.89	2.03	3.78	26.37	0.00	24.81	.648	.187	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	14.0	14.0	23.0	2	5.09	7.94	8.89	8.24	22.87	0.65	1.20	8.88	0.00	6.67	.618	.200	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	14.0	14.0	24.0	2	6.64	9.86	10.97	10.21	20.67	0.67	1.23	9.08	0.00	8.41	.547	.248	.1
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	20.0	21.0	34.0	2	8.62	12.59	13.84	12.99	21.79	0.79	1.47	9.73	0.00	10.20	.630	.210	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	33.0	33.0	54.0	2	12.53	18.21	19.63	18.66	22.60	1.02	1.92	10.16	0.00	14.21	.658	.180	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	26.0	28.0	43.0	2	16.23	22.35	24.21	22.94	30.99	1.26	2.37	14.10	0.00	18.31	.658	.207	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	20.0	21.0	34.0	2	8.46	12.39	13.63	12.78	21.60	0.78	1.45	9.63	0.00	10.03	.630	.210	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	18.0	20.0	20.0	2	17.68	23.13	25.60	23.92	48.54	1.63	3.00	21.67	0.00	19.92	.658	.207	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	13.0	11.0	21.0	2	5.89	9.10	10.25	9.46	24.07	0.65	1.20	9.14	0.00	7.89	.549	.233	.1
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	15.0	15.0	25.0	2	5.75	8.79	9.80	9.11	20.18	0.64	1.19	8.64	0.00	7.81	.477	.275	.1
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	22.0	21.0	36.0	2	6.78	10.39	11.45	10.73	20.21	0.72	1.33	8.69	0.00	8.41	.608	.207	.0
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	6	36	32.0	30.0	52.0	2	10.06	15.06											

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	6	36	21.0	17.0	43.0	2	16.47	22.75	24.68	23.37	32.85	1.24	2.33	14.93	0.00	18.92	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	16.0	12.0	35.0	2	18.53	25.03	27.31	25.76	41.37	1.43	2.66	18.64	0.00	21.37	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	16.0	12.0	35.0	2	24.80	33.00	36.14	34.00	68.07	2.28	4.24	29.68	0.00	29.13	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	9.0	10.0	16.0	2	4.74	7.31	8.23	7.61	20.38	0.59	1.08	8.52	0.00	6.64	.517	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	9.0	10.0	16.0	2	6.81	9.83	11.01	10.21	21.42	0.66	1.20	9.53	0.00	8.76	.517	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	25.0	39.0	2	10.91	15.60	17.03	16.05	23.87	0.92	1.72	10.79	0.00	12.56	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	25.0	39.0	2	13.13	18.36	19.99	18.88	27.37	1.06	1.99	12.45	0.00	14.94	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	15.0	19.0	29.0	2	13.42	18.36	20.17	18.94	31.68	1.11	2.07	14.41	0.00	15.34	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	25.0	39.0	2	10.10	14.60	15.95	15.03	22.76	0.87	1.64	10.24	0.00	11.70	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	15.0	19.0	29.0	2	21.66	28.58	31.40	29.48	59.89	2.03	3.78	26.37	0.00	24.81	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	14.0	14.0	23.0	2	4.99	7.80	8.73	8.10	20.99	0.63	1.16	8.55	0.00	6.50	.618	.200	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	14.0	14.0	24.0	2	7.07	10.38	11.54	10.75	21.10	0.69	1.27	9.35	0.00	8.86	.547	.248	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	20.0	21.0	34.0	2	9.13	13.23	14.53	13.64	22.45	0.82	1.52	10.08	0.00	10.76	.630	.210	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	33.0	33.0	54.0	2	13.20	19.04	20.51	19.51	23.31	1.05	1.99	10.52	0.00	14.90	.658	.180	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	26.0	28.0	43.0	2	16.31	22.45	24.31	23.04	31.13	1.27	2.38	14.16	0.00	18.40	.658	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	20.0	21.0	34.0	2	8.99	13.05	14.34	13.46	22.26	0.81	1.51	9.98	0.00	10.60	.630	.210	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	20.0	20.0	2	17.68	23.13	25.60	23.92	48.54	1.63	3.00	21.67	0.00	19.92	.658	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	13.0	11.0	21.0	2	4.93	7.68	8.61	7.98	22.81	0.63	1.16	8.87	0.00	6.79	.549	.233	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	15.0	15.0	25.0	2	5.97	9.06	10.09	9.39	20.22	0.65	1.20	8.72	0.00	8.03	.477	.275	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	21.0	36.0	2	7.32	11.06	12.18	11.42	20.42	0.73	1.37	8.90	0.00	8.96	.608	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	32.0	30.0	52.0	2	10.25	15.29	16.56	15.70	20.96	0.90	1.70	9.26	0.00	12.09	.609	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	23.0	22.0	37.0	2	11.64	16.44	17.97	16.93	25.64	0.97	1.81	11.64	0.00	13.81	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	21.0	36.0	2	9.04	13.18	14.46	13.59	22.04	0.81	1.51	9.87	0.00	10.76	.608	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	19.0	19.0	32.0	2	17.88	23.97	26.20	24.68	39.58	1.42	2.63	17.87	0.00	20.69	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	15.0	9.0	25.0	2	8.62	13.24	14.97	13.79	28.77	0.74	1.36	10.21	0.00	11.92	.440	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	4.0	2.0	6.0	2	4.22	6.43	7.33	6.72	20.63	0.54	0.97	8.51	0.00	6.29	.487	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	12.0	29.0	2	5.42	8.50	9.46	8.81	20.33	0.64	1.19	8.52	0.00	7.58	.458	.288	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	6	36	23.0	22.0	37.0	2	11.74	16.57	18.10	17.05	25.80	0.98	1.82	11.72	0.00	13.92	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	22.0	21.0	36.0	2	9.54	13.81	15.14	14.24	22.70	0.84	1.57	10.21	0.00	11.31	.608	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	19.0	19.0	32.0	2	17.88	23.97	26.20	24.68	39.58	1.42	2.63	17.87	0.00	20.69	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	15.0	9.0	25.0	2	8.00	12.32	13.91	12.83	27.38	0.72	1.32	9.89	0.00	11.19	.440	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	4.0	2.0	6.0	2	4.22	6.43	7.33	6.72	20.61	0.54	0.97	8.51	0.00	6.29	.487	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	12.0	29.0	2	5.53	8.63	9.61	8.95	20.27	0.65	1.19	8.54	0.00	7.69	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	12.0	29.0	2	6.14	9.39	10.43	9.73	20.21	0.66	1.21	8.70	0.00	8.31	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	23.0	13.0	48.0	2	10.49	15.47	16.83	15.91	22.55	0.85	1.59	10.13	0.00	13.12	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	18.0	12.0	29.0	2	7.17	10.68	11.83	11.05	20.88	0.70	1.28	9.22	0.00	9.41	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	6	36	23.0	13.0	48.0	2	19.63	26.99	29.16	27.68	37.14	1.42	2.65	16.81	0.00	23.32	.458	.288	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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5          PROMPT                      # No prompting, vertical format
2006
1          TAMFLG                      # Use MOBILE 5 tampering rates
1          SPDFLG                      # Use one speed for all vehicle types
2          VMFLAG                      # Each scenario has its own VMT mix
3          MYMRFG                      # Use local registration distribution
1          NEWFLG                      # Use MOBILE 5 BER's
6          IMFLAG                      # Use one I/M programs
1          ALHFLG                      # No additional correction factors
2          ATPFLG                      # Anti-tampering, no press/purge check
1          RLFLAG                      # Uncontrolled refueling emission rates
2          LOCLAG                      # Only one LAP record
2          TEMFLG                      # MOBILE 5 uses max and min temp.
2          OUTFMT                      # 80 column descriptive format
2          PRTFLG                      # Calculate CO only
1          IDLFLG                      # No idle emissions
3          NMHFLG                      # VOC emission factors
1          HCFLAG                      # No component emission factor output
.049 .065 .067 .074 .080 .083 .082 .068 .065 .043 # Colorado LDGV
.058 .052 .045 .034 .028 .024 .021 .019 .017 .009 # registration distribution
.007 .005 .003 .001 .001
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDGT1
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDGT2
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.066 .062 .049 .050 .052 .084 .096 .069 .064 .042 # Colorado HDGV
.052 .054 .044 .030 .026 .025 .027 .027 .027 .018 # registration distribution
.014 .011 .007 .004 .000
.049 .065 .067 .074 .080 .083 .082 .068 .065 .043 # Colorado LDDV
.058 .052 .045 .034 .028 .024 .021 .019 .017 .009 # registration distribution
.007 .005 .003 .001 .001
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDDT
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.110 .095 .116 .113 .080 .102 .079 .062 .037 .050 # Colorado HDDV
.048 .055 .044 .001 .001 .001 .001 .001 .001 .001 # registration distribution
.001 .001 .000 .000 .000
.001 .001 .001 .001 .001 .001 .001 .001 .001 .001 # Colorado MC
.001 .989 .000 .000 .000 .000 .000 .000 .000 .000 # registration distribution
.000 .000 .000 .000 .000
2 1 2 1
82 20 82 02 00 00 098 1 2 2221 4222 .6 10.0 1.5
82 20 82 02 00 00 098 1 2 1112 2222 220. 1.2 999.
TECH12RSD80.D
IMDATRSD80.D
82 75 02 2222 12 098. 22111112
      C 26. 52. 12.4 12.4 92 2
.001 .999 .027 .015 2
4 6 21.5 27.0 16.0 8.0 16.0
01 1 1
.595.214.100.026.002.002.061.000 6 AM 1 CBD PRINCIPAL ARTERIAL
4 6 18.7 27.0 16.0 8.0 16.0
01 1 1
.595.214.100.026.002.002.061.000 6 AM 1 CBD MINOR ARTERIAL
4 6 17.1 27.0 7.0 11.0 7.0
01 1 1
.595.214.100.026.002.002.061.000 6 AM 1 CBD COLLECTOR
4 6 11.4 27.0 7.0 11.0 7.0
01 1 1
.595.214.100.026.002.002.061.000 6 AM 1 CBD LOCAL
4 6 36.3 27.0 8.0 1.0 8.0
01 1 1
.571.218.102.031.002.002.074.000 6 AM 1 FRINGE FREEWAY
4 6 30.4 27.0 8.0 1.0 8.0
01 1 1
.571.218.102.031.002.002.074.000 6 AM 1 FRINGE MAJOR REGIONAL
4 6 24.8 27.0 41.0 5.0 42.0
01 1 1
.667.154.072.030.002.002.073.000 6 AM 1 FRINGE PRINCIPAL ARTERIAL

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4	6	22.1	27.0	41.0	5.0	42.0				
01	1	1								
		.667	.154	.072	.030	.002	.002	.073	.000	6 AM 1 FRINGE MINOR ARTERIAL
4	6	21.1	27.0	22.0	2.0	22.0				
01	1	1								
		.667	.154	.072	.030	.002	.002	.073	.000	6 AM 1 FRINGE COLLECTOR
4	6	30.3	27.0	41.0	5.0	42.0				
01	1	1								
		.667	.154	.072	.030	.002	.002	.073	.000	6 AM 1 FRINGE RAMP
4	6	13.1	27.0	22.0	1.0	23.0				
01	1	1								
		.667	.154	.072	.030	.002	.002	.073	.000	6 AM 1 FRINGE LOCAL
4	6	40.2	27.0	22.0	2.0	22.0				
01	1	1								
		.644	.187	.088	.023	.002	.002	.054	.000	6 AM 1 URBAN FREEWAY
4	6	32.8	27.0	24.0	2.0	24.0				
01	1	1								
		.584	.226	.106	.024	.002	.002	.056	.000	6 AM 1 URBAN MAJOR REGIONAL
4	6	28.8	27.0	39.0	4.0	40.0				
01	1	1								
		.641	.190	.089	.022	.002	.002	.054	.000	6 AM 1 URBAN PRINCIPAL ARTERIAL
4	6	27.2	27.0	81.0	7.0	83.0				
01	1	1								
		.683	.171	.080	.018	.002	.002	.044	.000	6 AM 1 URBAN MINOR ARTERIAL
4	6	23.2	27.0	69.0	7.0	71.0				
01	1	1								
		.652	.181	.085	.023	.002	.002	.055	.000	6 AM 1 URBAN COLLECTOR
4	6	31.7	27.0	39.0	4.0	40.0				
01	1	1								
		.641	.190	.089	.022	.002	.002	.054	.000	6 AM 1 URBAN RAMP
4	6	16.3	27.0	44.0	4.0	46.0				
01	1	1								
		.652	.181	.085	.023	.002	.002	.055	.000	6 AM 1 URBAN LOCAL
4	6	45.6	27.0	28.0	2.0	28.0				
01	1	1								
		.570	.234	.109	.024	.002	.003	.058	.000	6 AM 1 SUBURBAN FREEWAY
4	6	36.5	27.0	19.0	2.0	19.0				
01	1	1								
		.514	.241	.113	.037	.002	.003	.090	.000	6 AM 1 SUBURBAN MAJOR REGIONAL
4	6	34.0	27.0	39.0	3.0	39.0				
01	1	1								
		.583	.227	.106	.024	.002	.002	.056	.000	6 AM 1 SUBURBAN PRINCIPAL ARTERIAL
4	6	32.7	27.0	77.0	8.0	77.0				
01	1	1								
		.637	.194	.091	.022	.002	.002	.052	.000	6 AM 1 SUBURBAN MINOR ARTERIAL
4	6	27.6	27.0	73.0	7.0	73.0				
01	1	1								
		.626	.229	.107	.010	.002	.002	.024	.000	6 AM 1 SUBURBAN COLLECTOR
4	6	30.5	27.0	39.0	3.0	39.0				
01	1	1								
		.583	.227	.106	.024	.002	.002	.056	.000	6 AM 1 SUBURBAN RAMP
4	6	19.8	27.0	52.0	5.0	52.0				
01	1	1								
		.626	.229	.107	.010	.002	.002	.024	.000	6 AM 1 SUBURBAN LOCAL
4	6	59.0	27.0	36.0	1.0	35.0				
01	1	1								
		.389	.222	.104	.083	.001	.002	.199	.000	6 AM 1 RURAL FREEWAY
4	6	45.0	27.0	8.0	0.0	8.0				
01	1	1								
		.493	.225	.105	.051	.002	.002	.122	.000	6 AM 1 RURAL MAJOR REGIONAL
4	6	42.3	27.0	13.0	1.0	13.0				
01	1	1								
		.564	.238	.111	.024	.002	.003	.058	.000	6 AM 1 RURAL PRINCIPAL ARTERIAL
4	6	41.5	27.0	13.0	1.0	13.0				
01	1	1								
		.564	.238	.111	.024	.002	.003	.058	.000	6 AM 1 RURAL MINOR ARTERIAL
4	6	31.7	27.0	57.0	2.0	57.0				
01	1	1								
		.564	.238	.111	.024	.002	.003	.058	.000	6 AM 1 RURAL COLLECTOR
4	6	34.9	27.0	13.0	1.0	13.0				
01	1	1								

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.564.238.111.024.002.003.058.000	6	AM	1	RURAL	RAMP
4 6 21.9 27.0 57.0 2.0 57.0					
01 1 1					
.564.238.111.024.002.003.058.000	6	AM	1	RURAL	LOCAL
4 6 16.3 27.0 16.0 8.0 16.0					
01 1 1					
.595.214.100.026.002.002.061.000	6	AM	2	CBD	PRINCIPAL ARTERIAL
4 6 14.5 27.0 16.0 8.0 16.0					
01 1 1					
.595.214.100.026.002.002.061.000	6	AM	2	CBD	MINOR ARTERIAL
4 6 15.2 27.0 7.0 11.0 7.0					
01 1 1					
.595.214.100.026.002.002.061.000	6	AM	2	CBD	COLLECTOR
4 6 11.4 27.0 7.0 11.0 7.0					
01 1 1					
.595.214.100.026.002.002.061.000	6	AM	2	CBD	LOCAL
4 6 27.8 27.0 8.0 1.0 8.0					
01 1 1					
.571.218.102.031.002.002.074.000	6	AM	2	FRINGE	FREEWAY
4 6 23.1 27.0 8.0 1.0 8.0					
01 1 1					
.571.218.102.031.002.002.074.000	6	AM	2	FRINGE	MAJOR REGIONAL
4 6 19.1 27.0 41.0 5.0 42.0					
01 1 1					
.667.154.072.030.002.002.073.000	6	AM	2	FRINGE	PRINCIPAL ARTERIAL
4 6 17.3 27.0 41.0 5.0 42.0					
01 1 1					
.667.154.072.030.002.002.073.000	6	AM	2	FRINGE	MINOR ARTERIAL
4 6 17.9 27.0 22.0 2.0 22.0					
01 1 1					
.667.154.072.030.002.002.073.000	6	AM	2	FRINGE	COLLECTOR
4 6 26.3 27.0 41.0 5.0 42.0					
01 1 1					
.667.154.072.030.002.002.073.000	6	AM	2	FRINGE	RAMP
4 6 13.1 27.0 22.0 1.0 23.0					
01 1 1					
.667.154.072.030.002.002.073.000	6	AM	2	FRINGE	LOCAL
4 6 32.2 27.0 22.0 2.0 22.0					
01 1 1					
.644.187.088.023.002.002.054.000	6	AM	2	URBAN	FREEWAY
4 6 27.9 27.0 24.0 2.0 24.0					
01 1 1					
.584.226.106.024.002.002.056.000	6	AM	2	URBAN	MAJOR REGIONAL
4 6 23.2 27.0 39.0 4.0 40.0					
01 1 1					
.641.190.089.022.002.002.054.000	6	AM	2	URBAN	PRINCIPAL ARTERIAL
4 6 22.1 27.0 81.0 7.0 83.0					
01 1 1					
.683.171.080.018.002.002.044.000	6	AM	2	URBAN	MINOR ARTERIAL
4 6 20.6 27.0 69.0 7.0 71.0					
01 1 1					
.652.181.085.023.002.002.055.000	6	AM	2	URBAN	COLLECTOR
4 6 28.5 27.0 39.0 4.0 40.0					
01 1 1					
.641.190.089.022.002.002.054.000	6	AM	2	URBAN	RAMP
4 6 16.3 27.0 44.0 4.0 46.0					
01 1 1					
.652.181.085.023.002.002.055.000	6	AM	2	URBAN	LOCAL
4 6 38.7 27.0 28.0 2.0 28.0					
01 1 1					
.570.234.109.024.002.003.058.000	6	AM	2	SUBURBAN	FREEWAY
4 6 30.8 27.0 19.0 2.0 19.0					
01 1 1					
.514.241.113.037.002.003.090.000	6	AM	2	SUBURBAN	MAJOR REGIONAL
4 6 27.6 27.0 39.0 3.0 39.0					
01 1 1					
.583.227.106.024.002.002.056.000	6	AM	2	SUBURBAN	PRINCIPAL ARTERIAL
4 6 27.3 27.0 77.0 8.0 77.0					
01 1 1					
.637.194.091.022.002.002.052.000	6	AM	2	SUBURBAN	MINOR ARTERIAL
4 6 24.3 27.0 73.0 7.0 73.0					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

01 1 1						
.626.229.107.010.002.002.024.000	6	AM	2	SUBURBAN	COLLECTOR	
4 6 27.9 27.0 39.0 3.0 39.0						
01 1 1						
.583.227.106.024.002.002.056.000	6	AM	2	SUBURBAN	RAMP	
4 6 19.8 27.0 52.0 5.0 52.0						
01 1 1						
.626.229.107.010.002.002.024.000	6	AM	2	SUBURBAN	LOCAL	
4 6 53.5 27.0 36.0 1.0 35.0						
01 1 1						
.389.222.104.083.001.002.199.000	6	AM	2	RURAL	FREEWAY	
4 6 39.9 27.0 8.0 0.0 8.0						
01 1 1						
.493.225.105.051.002.002.122.000	6	AM	2	RURAL	MAJOR REGIONAL	
4 6 38.5 27.0 13.0 1.0 13.0						
01 1 1						
.564.238.111.024.002.003.058.000	6	AM	2	RURAL	PRINCIPAL ARTERIAL	
4 6 38.5 27.0 13.0 1.0 13.0						
01 1 1						
.564.238.111.024.002.003.058.000	6	AM	2	RURAL	MINOR ARTERIAL	
4 6 29.7 27.0 57.0 2.0 57.0						
01 1 1						
.564.238.111.024.002.003.058.000	6	AM	2	RURAL	COLLECTOR	
4 6 31.1 27.0 13.0 1.0 13.0						
01 1 1						
.564.238.111.024.002.003.058.000	6	AM	2	RURAL	RAMP	
4 6 21.9 27.0 57.0 2.0 57.0						
01 1 1						
.564.238.111.024.002.003.058.000	6	AM	2	RURAL	LOCAL	
4 6 11.8 27.0 16.0 8.0 16.0						
01 1 1						
.595.214.100.026.002.002.061.000	6	AM	3	CBD	PRINCIPAL ARTERIAL	
4 6 11.3 27.0 16.0 8.0 16.0						
01 1 1						
.595.214.100.026.002.002.061.000	6	AM	3	CBD	MINOR ARTERIAL	
4 6 12.9 27.0 7.0 11.0 7.0						
01 1 1						
.595.214.100.026.002.002.061.000	6	AM	3	CBD	COLLECTOR	
4 6 11.4 27.0 7.0 11.0 7.0						
01 1 1						
.595.214.100.026.002.002.061.000	6	AM	3	CBD	LOCAL	
4 6 21.1 27.0 8.0 1.0 8.0						
01 1 1						
.571.218.102.031.002.002.074.000	6	AM	3	FRINGE	FREEWAY	
4 6 17.8 27.0 8.0 1.0 8.0						
01 1 1						
.571.218.102.031.002.002.074.000	6	AM	3	FRINGE	MAJOR REGIONAL	
4 6 14.1 27.0 41.0 5.0 42.0						
01 1 1						
.667.154.072.030.002.002.073.000	6	AM	3	FRINGE	PRINCIPAL ARTERIAL	
4 6 12.9 27.0 41.0 5.0 42.0						
01 1 1						
.667.154.072.030.002.002.073.000	6	AM	3	FRINGE	MINOR ARTERIAL	
4 6 14.5 27.0 22.0 2.0 22.0						
01 1 1						
.667.154.072.030.002.002.073.000	6	AM	3	FRINGE	COLLECTOR	
4 6 22.0 27.0 41.0 5.0 42.0						
01 1 1						
.667.154.072.030.002.002.073.000	6	AM	3	FRINGE	RAMP	
4 6 13.1 27.0 22.0 1.0 23.0						
01 1 1						
.667.154.072.030.002.002.073.000	6	AM	3	FRINGE	LOCAL	
4 6 25.6 27.0 22.0 2.0 22.0						
01 1 1						
.644.187.088.023.002.002.054.000	6	AM	3	URBAN	FREEWAY	
4 6 22.3 27.0 24.0 2.0 24.0						
01 1 1						
.584.226.106.024.002.002.056.000	6	AM	3	URBAN	MAJOR REGIONAL	
4 6 18.2 27.0 39.0 4.0 40.0						
01 1 1						
.641.190.089.022.002.002.054.000	6	AM	3	URBAN	PRINCIPAL ARTERIAL	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4	6	17.3	27.0	81.0	7.0	83.0			
01	1	1							
		.683.171.080.018.002.002.044.000		6	AM	3	URBAN	MINOR	ARTERIAL
4	6	17.4	27.0	69.0	7.0	71.0			
01	1	1							
		.652.181.085.023.002.002.055.000		6	AM	3	URBAN	COLLECTOR	
4	6	25.1	27.0	39.0	4.0	40.0			
01	1	1							
		.641.190.089.022.002.002.054.000		6	AM	3	URBAN	RAMP	
4	6	16.3	27.0	44.0	4.0	46.0			
01	1	1							
		.652.181.085.023.002.002.055.000		6	AM	3	URBAN	LOCAL	
4	6	31.7	27.0	28.0	2.0	28.0			
01	1	1							
		.570.234.109.024.002.003.058.000		6	AM	3	SUBURBAN	FREEWAY	
4	6	26.5	27.0	19.0	2.0	19.0			
01	1	1							
		.514.241.113.037.002.003.090.000		6	AM	3	SUBURBAN	MAJOR REGIONAL	
4	6	21.8	27.0	39.0	3.0	39.0			
01	1	1							
		.583.227.106.024.002.002.056.000		6	AM	3	SUBURBAN	PRINCIPAL ARTERIAL	
4	6	21.3	27.0	77.0	8.0	77.0			
01	1	1							
		.637.194.091.022.002.002.052.000		6	AM	3	SUBURBAN	MINOR ARTERIAL	
4	6	20.9	27.0	73.0	7.0	73.0			
01	1	1							
		.626.229.107.010.002.002.024.000		6	AM	3	SUBURBAN	COLLECTOR	
4	6	25.2	27.0	39.0	3.0	39.0			
01	1	1							
		.583.227.106.024.002.002.056.000		6	AM	3	SUBURBAN	RAMP	
4	6	19.8	27.0	52.0	5.0	52.0			
01	1	1							
		.626.229.107.010.002.002.024.000		6	AM	3	SUBURBAN	LOCAL	
4	6	47.5	27.0	36.0	1.0	35.0			
01	1	1							
		.389.222.104.083.001.002.199.000		6	AM	3	RURAL	FREEWAY	
4	6	34.3	27.0	8.0	0.0	8.0			
01	1	1							
		.493.225.105.051.002.002.122.000		6	AM	3	RURAL	MAJOR REGIONAL	
4	6	34.5	27.0	13.0	1.0	13.0			
01	1	1							
		.564.238.111.024.002.003.058.000		6	AM	3	RURAL	PRINCIPAL ARTERIAL	
4	6	34.5	27.0	13.0	1.0	13.0			
01	1	1							
		.564.238.111.024.002.003.058.000		6	AM	3	RURAL	MINOR ARTERIAL	
4	6	27.7	27.0	57.0	2.0	57.0			
01	1	1							
		.564.238.111.024.002.003.058.000		6	AM	3	RURAL	COLLECTOR	
4	6	26.1	27.0	13.0	1.0	13.0			
01	1	1							
		.564.238.111.024.002.003.058.000		6	AM	3	RURAL	RAMP	
4	6	21.9	27.0	57.0	2.0	57.0			
01	1	1							
		.564.238.111.024.002.003.058.000		6	AM	3	RURAL	LOCAL	
4	6	23.2	52.0	46.0	12.0	59.0			
01	1	1							
		.648.173.081.028.002.002.066.000		6	PM	4	CBD	PRINCIPAL ARTERIAL	
4	6	19.9	52.0	46.0	12.0	59.0			
01	1	1							
		.648.173.081.028.002.002.066.000		6	PM	4	CBD	MINOR ARTERIAL	
4	6	17.5	52.0	45.0	8.0	56.0			
01	1	1							
		.648.173.081.028.002.002.066.000		6	PM	4	CBD	COLLECTOR	
4	6	11.4	52.0	45.0	8.0	56.0			
01	1	1							
		.648.173.081.028.002.002.066.000		6	PM	4	CBD	LOCAL	
4	6	37.1	52.0	8.0	7.0	12.0			
01	1	1							
		.547.241.113.028.002.003.066.000		6	PM	4	FRINGE	FREEWAY	
4	6	33.9	52.0	8.0	7.0	12.0			
01	1	1							

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.547.241.113.028.002.003.066.000	6	PM	4	FRINGE	MAJOR REGIONAL
4 6 27.0 52.0 30.0 19.0 43.0					
01 1 1					
.629.193.090.025.002.002.059.000	6	PM	4	FRINGE	PRINCIPAL ARTERIAL
4 6 23.2 52.0 30.0 19.0 43.0					
01 1 1					
.629.193.090.025.002.002.059.000	6	PM	4	FRINGE	MINOR ARTERIAL
4 6 22.5 52.0 34.0 14.0 46.0					
01 1 1					
.629.193.090.025.002.002.059.000	6	PM	4	FRINGE	COLLECTOR
4 6 29.3 52.0 30.0 19.0 43.0					
01 1 1					
.629.193.090.025.002.002.059.000	6	PM	4	FRINGE	RAMP
4 6 13.1 52.0 34.0 14.0 46.0					
01 1 1					
.629.193.090.025.002.002.059.000	6	PM	4	FRINGE	LOCAL
4 6 41.2 52.0 8.0 7.0 12.0					
01 1 1					
.618.207.097.022.002.002.052.000	6	PM	4	URBAN	FREEWAY
4 6 31.5 52.0 15.0 14.0 23.0					
01 1 1					
.587.241.113.016.002.003.038.000	6	PM	4	URBAN	MAJOR REGIONAL
4 6 29.8 52.0 19.0 17.0 30.0					
01 1 1					
.624.207.097.020.002.002.048.000	6	PM	4	URBAN	PRINCIPAL ARTERIAL
4 6 28.6 52.0 39.0 37.0 60.0					
01 1 1					
.648.207.097.013.002.002.031.000	6	PM	4	URBAN	MINOR ARTERIAL
4 6 23.9 52.0 24.0 24.0 38.0					
01 1 1					
.698.180.084.010.002.002.024.000	6	PM	4	URBAN	COLLECTOR
4 6 31.4 52.0 19.0 17.0 30.0					
01 1 1					
.624.207.097.020.002.002.048.000	6	PM	4	URBAN	RAMP
4 6 16.3 52.0 19.0 19.0 31.0					
01 1 1					
.698.180.084.010.002.002.024.000	6	PM	4	URBAN	LOCAL
4 6 49.1 52.0 13.0 10.0 19.0					
01 1 1					
.577.232.109.023.002.002.055.000	6	PM	4	SUBURBAN	FREEWAY
4 6 38.0 52.0 14.0 23.0 22.0					
01 1 1					
.478.281.132.031.002.003.073.000	6	PM	4	SUBURBAN	MAJOR REGIONAL
4 6 36.0 52.0 12.0 11.0 18.0					
01 1 1					
.558.254.119.019.002.003.045.000	6	PM	4	SUBURBAN	PRINCIPAL ARTERIAL
4 6 35.6 52.0 25.0 24.0 37.0					
01 1 1					
.599.229.107.018.002.002.043.000	6	PM	4	SUBURBAN	MINOR ARTERIAL
4 6 28.9 52.0 28.0 26.0 43.0					
01 1 1					
.648.207.097.013.002.002.031.000	6	PM	4	SUBURBAN	COLLECTOR
4 6 32.8 52.0 12.0 11.0 18.0					
01 1 1					
.558.254.119.019.002.003.045.000	6	PM	4	SUBURBAN	RAMP
4 6 19.8 52.0 19.0 18.0 29.0					
01 1 1					
.648.207.097.013.002.002.031.000	6	PM	4	SUBURBAN	LOCAL
4 6 60.7 52.0 16.0 9.0 23.0					
01 1 1					
.418.241.113.066.001.003.158.000	6	PM	4	RURAL	FREEWAY
4 6 48.4 52.0 3.0 2.0 5.0					
01 1 1					
.498.261.122.034.002.003.080.000	6	PM	4	RURAL	MAJOR REGIONAL
4 6 45.2 52.0 16.0 13.0 24.0					
01 1 1					
.619.220.103.016.002.002.038.000	6	PM	4	RURAL	PRINCIPAL ARTERIAL
4 6 42.6 52.0 16.0 13.0 24.0					
01 1 1					
.619.220.103.016.002.002.038.000	6	PM	4	RURAL	MINOR ARTERIAL
4 6 33.8 52.0 23.0 13.0 34.0					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

01 1 1	.619.220.103.016.002.002.038.000	6 PM	4 RURAL	COLLECTOR
4 6	38.3 52.0 16.0 13.0 24.0			
01 1 1	.619.220.103.016.002.002.038.000	6 PM	4 RURAL	RAMP
4 6	21.7 52.0 23.0 13.0 34.0			
01 1 1	.619.220.103.016.002.002.038.000	6 PM	4 RURAL	LOCAL
4 6	16.9 52.0 46.0 12.0 59.0			
01 1 1	.648.173.081.028.002.002.066.000	6 PM	5 CBD	PRINCIPAL ARTERIAL
4 6	14.4 52.0 46.0 12.0 59.0			
01 1 1	.648.173.081.028.002.002.066.000	6 PM	5 CBD	MINOR ARTERIAL
4 6	15.3 52.0 45.0 8.0 56.0			
01 1 1	.648.173.081.028.002.002.066.000	6 PM	5 CBD	COLLECTOR
4 6	11.4 52.0 45.0 8.0 56.0			
01 1 1	.648.173.081.028.002.002.066.000	6 PM	5 CBD	LOCAL
4 6	27.7 52.0 8.0 7.0 12.0			
01 1 1	.547.241.113.028.002.003.066.000	6 PM	5 FRINGE	FREEWAY
4 6	25.0 52.0 8.0 7.0 12.0			
01 1 1	.547.241.113.028.002.003.066.000	6 PM	5 FRINGE	MAJOR REGIONAL
4 6	18.7 52.0 30.0 19.0 43.0			
01 1 1	.629.193.090.025.002.002.059.000	6 PM	5 FRINGE	PRINCIPAL ARTERIAL
4 6	16.6 52.0 30.0 19.0 43.0			
01 1 1	.629.193.090.025.002.002.059.000	6 PM	5 FRINGE	MINOR ARTERIAL
4 6	18.4 52.0 34.0 14.0 46.0			
01 1 1	.629.193.090.025.002.002.059.000	6 PM	5 FRINGE	COLLECTOR
4 6	24.0 52.0 30.0 19.0 43.0			
01 1 1	.629.193.090.025.002.002.059.000	6 PM	5 FRINGE	RAMP
4 6	13.1 52.0 34.0 14.0 46.0			
01 1 1	.629.193.090.025.002.002.059.000	6 PM	5 FRINGE	LOCAL
4 6	29.5 52.0 8.0 7.0 12.0			
01 1 1	.618.207.097.022.002.002.052.000	6 PM	5 URBAN	FREEWAY
4 6	26.3 52.0 15.0 14.0 23.0			
01 1 1	.587.241.113.016.002.003.038.000	6 PM	5 URBAN	MAJOR REGIONAL
4 6	22.4 52.0 19.0 17.0 30.0			
01 1 1	.624.207.097.020.002.002.048.000	6 PM	5 URBAN	PRINCIPAL ARTERIAL
4 6	21.0 52.0 39.0 37.0 60.0			
01 1 1	.648.207.097.013.002.002.031.000	6 PM	5 URBAN	MINOR ARTERIAL
4 6	21.0 52.0 24.0 24.0 38.0			
01 1 1	.698.180.084.010.002.002.024.000	6 PM	5 URBAN	COLLECTOR
4 6	27.4 52.0 19.0 17.0 30.0			
01 1 1	.624.207.097.020.002.002.048.000	6 PM	5 URBAN	RAMP
4 6	16.3 52.0 19.0 19.0 31.0			
01 1 1	.698.180.084.010.002.002.024.000	6 PM	5 URBAN	LOCAL
4 6	39.3 52.0 13.0 10.0 19.0			
01 1 1	.577.232.109.023.002.002.055.000	6 PM	5 SUBURBAN	FREEWAY
4 6	32.5 52.0 14.0 23.0 22.0			
01 1 1	.478.281.132.031.002.003.073.000	6 PM	5 SUBURBAN	MAJOR REGIONAL
4 6	28.2 52.0 12.0 11.0 18.0			
01 1 1	.558.254.119.019.002.003.045.000	6 PM	5 SUBURBAN	PRINCIPAL ARTERIAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4	6	28.5	52.0	25.0	24.0	37.0			
01	1	1							
		.599.229.107.018.002.002.043.000		6	PM	5	SUBURBAN	MINOR	ARTERIAL
4	6	25.3	52.0	28.0	26.0	43.0			
01	1	1							
		.648.207.097.013.002.002.031.000		6	PM	5	SUBURBAN	COLLECTOR	
4	6	29.8	52.0	12.0	11.0	18.0			
01	1	1							
		.558.254.119.019.002.003.045.000		6	PM	5	SUBURBAN	RAMP	
4	6	19.8	52.0	19.0	18.0	29.0			
01	1	1							
		.648.207.097.013.002.002.031.000		6	PM	5	SUBURBAN	LOCAL	
4	6	55.1	52.0	16.0	9.0	23.0			
01	1	1							
		.418.241.113.066.001.003.158.000		6	PM	5	RURAL	FREEWAY	
4	6	44.1	52.0	3.0	2.0	5.0			
01	1	1							
		.498.261.122.034.002.003.080.000		6	PM	5	RURAL	MAJOR REGIONAL	
4	6	41.0	52.0	16.0	13.0	24.0			
01	1	1							
		.619.220.103.016.002.002.038.000		6	PM	5	RURAL	PRINCIPAL ARTERIAL	
4	6	40.2	52.0	16.0	13.0	24.0			
01	1	1							
		.619.220.103.016.002.002.038.000		6	PM	5	RURAL	MINOR ARTERIAL	
4	6	31.7	52.0	23.0	13.0	34.0			
01	1	1							
		.619.220.103.016.002.002.038.000		6	PM	5	RURAL	COLLECTOR	
4	6	36.5	52.0	16.0	13.0	24.0			
01	1	1							
		.619.220.103.016.002.002.038.000		6	PM	5	RURAL	RAMP	
4	6	21.7	52.0	23.0	13.0	34.0			
01	1	1							
		.619.220.103.016.002.002.038.000		6	PM	5	RURAL	LOCAL	
4	6	12.4	52.0	46.0	12.0	59.0			
01	1	1							
		.648.173.081.028.002.002.066.000		6	PM	6	CBD	PRINCIPAL ARTERIAL	
4	6	10.8	52.0	46.0	12.0	59.0			
01	1	1							
		.648.173.081.028.002.002.066.000		6	PM	6	CBD	MINOR ARTERIAL	
4	6	12.9	52.0	45.0	8.0	56.0			
01	1	1							
		.648.173.081.028.002.002.066.000		6	PM	6	CBD	COLLECTOR	
4	6	11.4	52.0	45.0	8.0	56.0			
01	1	1							
		.648.173.081.028.002.002.066.000		6	PM	6	CBD	LOCAL	
4	6	21.8	52.0	8.0	7.0	12.0			
01	1	1							
		.547.241.113.028.002.003.066.000		6	PM	6	FRINGE	FREEWAY	
4	6	20.1	52.0	8.0	7.0	12.0			
01	1	1							
		.547.241.113.028.002.003.066.000		6	PM	6	FRINGE	MAJOR REGIONAL	
4	6	14.3	52.0	30.0	19.0	43.0			
01	1	1							
		.629.193.090.025.002.002.059.000		6	PM	6	FRINGE	PRINCIPAL ARTERIAL	
4	6	12.1	52.0	30.0	19.0	43.0			
01	1	1							
		.629.193.090.025.002.002.059.000		6	PM	6	FRINGE	MINOR ARTERIAL	
4	6	15.1	52.0	34.0	14.0	46.0			
01	1	1							
		.629.193.090.025.002.002.059.000		6	PM	6	FRINGE	COLLECTOR	
4	6	20.4	52.0	30.0	19.0	43.0			
01	1	1							
		.629.193.090.025.002.002.059.000		6	PM	6	FRINGE	RAMP	
4	6	13.1	52.0	34.0	14.0	46.0			
01	1	1							
		.629.193.090.025.002.002.059.000		6	PM	6	FRINGE	LOCAL	
4	6	22.6	52.0	8.0	7.0	12.0			
01	1	1							
		.618.207.097.022.002.002.052.000		6	PM	6	URBAN	FREEWAY	
4	6	20.6	52.0	15.0	14.0	23.0			
01	1	1							

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.587.241.113.016.002.003.038.000	6 PM	6 URBAN	MAJOR REGIONAL
4 6 17.3 52.0 19.0 17.0 30.0			
01 1 1			
.624.207.097.020.002.002.048.000	6 PM	6 URBAN	PRINCIPAL ARTERIAL
4 6 16.6 52.0 39.0 37.0 60.0			
01 1 1			
.648.207.097.013.002.002.031.000	6 PM	6 URBAN	MINOR ARTERIAL
4 6 17.8 52.0 24.0 24.0 38.0			
01 1 1			
.698.180.084.010.002.002.024.000	6 PM	6 URBAN	COLLECTOR
4 6 24.4 52.0 19.0 17.0 30.0			
01 1 1			
.624.207.097.020.002.002.048.000	6 PM	6 URBAN	RAMP
4 6 16.3 52.0 19.0 19.0 31.0			
01 1 1			
.698.180.084.010.002.002.024.000	6 PM	6 URBAN	LOCAL
4 6 32.6 52.0 13.0 10.0 19.0			
01 1 1			
.577.232.109.023.002.002.055.000	6 PM	6 SUBURBAN	FREEWAY
4 6 28.3 52.0 14.0 23.0 22.0			
01 1 1			
.478.281.132.031.002.003.073.000	6 PM	6 SUBURBAN	MAJOR REGIONAL
4 6 22.7 52.0 12.0 11.0 18.0			
01 1 1			
.558.254.119.019.002.003.045.000	6 PM	6 SUBURBAN	PRINCIPAL ARTERIAL
4 6 23.2 52.0 25.0 24.0 37.0			
01 1 1			
.599.229.107.018.002.002.043.000	6 PM	6 SUBURBAN	MINOR ARTERIAL
4 6 22.5 52.0 28.0 26.0 43.0			
01 1 1			
.648.207.097.013.002.002.031.000	6 PM	6 SUBURBAN	COLLECTOR
4 6 27.6 52.0 12.0 11.0 18.0			
01 1 1			
.558.254.119.019.002.003.045.000	6 PM	6 SUBURBAN	RAMP
4 6 19.8 52.0 19.0 18.0 29.0			
01 1 1			
.648.207.097.013.002.002.031.000	6 PM	6 SUBURBAN	LOCAL
4 6 50.1 52.0 16.0 9.0 23.0			
01 1 1			
.418.241.113.066.001.003.158.000	6 PM	6 RURAL	FREEWAY
4 6 40.1 52.0 3.0 2.0 5.0			
01 1 1			
.498.261.122.034.002.003.080.000	6 PM	6 RURAL	MAJOR REGIONAL
4 6 37.2 52.0 16.0 13.0 24.0			
01 1 1			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	PRINCIPAL ARTERIAL
4 6 37.0 52.0 16.0 13.0 24.0			
01 1 1			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	MINOR ARTERIAL
4 6 30.0 52.0 23.0 13.0 34.0			
01 1 1			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	COLLECTOR
4 6 35.2 52.0 16.0 13.0 24.0			
01 1 1			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	RAMP
4 6 21.7 52.0 23.0 13.0 34.0			
01 1 1			
.619.220.103.016.002.002.038.000	6 PM	6 RURAL	LOCAL
4 6 27.0 36.0 21.0 17.0 43.0			
01 1 1			
.589.213.100.028.002.002.066.000	6 OFF	7 CBD	PRINCIPAL ARTERIAL
4 6 25.1 36.0 21.0 17.0 43.0			
01 1 1			
.589.213.100.028.002.002.066.000	6 OFF	7 CBD	MINOR ARTERIAL
4 6 20.0 36.0 16.0 12.0 35.0			
01 1 1			
.589.213.100.028.002.002.066.000	6 OFF	7 CBD	COLLECTOR
4 6 11.3 36.0 16.0 12.0 35.0			
01 1 1			
.589.213.100.028.002.002.066.000	6 OFF	7 CBD	LOCAL
4 6 55.0 36.0 9.0 10.0 16.0			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

01 1 1			
.517.241.113.037.002.003.087.000	6 OFF 7 FRINGE	FREEWAY	
4 6 39.8 36.0 9.0 10.0 16.0			
01 1 1			
.517.241.113.037.002.003.087.000	6 OFF 7 FRINGE	MAJOR REGIONAL	
4 6 35.0 36.0 22.0 25.0 39.0			
01 1 1			
.648.187.087.022.002.002.052.000	6 OFF 7 FRINGE	PRINCIPAL ARTERIAL	
4 6 30.0 36.0 22.0 25.0 39.0			
01 1 1			
.648.187.087.022.002.002.052.000	6 OFF 7 FRINGE	MINOR ARTERIAL	
4 6 25.0 36.0 15.0 19.0 29.0			
01 1 1			
.648.187.087.022.002.002.052.000	6 OFF 7 FRINGE	COLLECTOR	
4 6 38.9 36.0 22.0 25.0 39.0			
01 1 1			
.648.187.087.022.002.002.052.000	6 OFF 7 FRINGE	RAMP	
4 6 13.1 36.0 15.0 19.0 29.0			
01 1 1			
.648.187.087.022.002.002.052.000	6 OFF 7 FRINGE	LOCAL	
4 6 58.0 36.0 14.0 14.0 23.0			
01 1 1			
.618.200.094.025.002.002.059.000	6 OFF 7 URBAN	FREEWAY	
4 6 45.0 36.0 14.0 14.0 24.0			
01 1 1			
.547.248.116.025.002.003.059.000	6 OFF 7 URBAN	MAJOR REGIONAL	
4 6 37.0 36.0 20.0 21.0 34.0			
01 1 1			
.630.210.098.017.002.002.041.000	6 OFF 7 URBAN	PRINCIPAL ARTERIAL	
4 6 35.0 36.0 33.0 33.0 54.0			
01 1 1			
.658.180.084.022.002.002.052.000	6 OFF 7 URBAN	MINOR ARTERIAL	
4 6 25.0 36.0 26.0 28.0 43.0			
01 1 1			
.658.207.097.010.002.002.024.000	6 OFF 7 URBAN	COLLECTOR	
4 6 39.1 36.0 20.0 21.0 34.0			
01 1 1			
.630.210.098.017.002.002.041.000	6 OFF 7 URBAN	RAMP	
4 6 16.3 36.0 18.0 20.0 20.0			
01 1 1			
.658.207.097.010.002.002.024.000	6 OFF 7 URBAN	LOCAL	
4 6 58.0 36.0 13.0 11.0 21.0			
01 1 1			
.549.233.109.031.002.003.073.000	6 OFF 7 SUBURBAN	FREEWAY	
4 6 45.0 36.0 15.0 15.0 25.0			
01 1 1			
.477.275.129.034.002.003.080.000	6 OFF 7 SUBURBAN	MAJOR REGIONAL	
4 6 45.0 36.0 22.0 21.0 36.0			
01 1 1			
.608.207.097.025.002.002.059.000	6 OFF 7 SUBURBAN	PRINCIPAL ARTERIAL	
4 6 39.8 36.0 32.0 30.0 52.0			
01 1 1			
.609.212.099.022.002.002.054.000	6 OFF 7 SUBURBAN	MINOR ARTERIAL	
4 6 30.0 36.0 23.0 22.0 37.0			
01 1 1			
.568.268.125.010.002.003.024.000	6 OFF 7 SUBURBAN	COLLECTOR	
4 6 39.0 36.0 22.0 21.0 36.0			
01 1 1			
.608.207.097.025.002.002.059.000	6 OFF 7 SUBURBAN	RAMP	
4 6 19.7 36.0 19.0 19.0 32.0			
01 1 1			
.568.268.125.010.002.003.024.000	6 OFF 7 SUBURBAN	LOCAL	
4 6 63.0 36.0 15.0 9.0 25.0			
01 1 1			
.440.220.103.069.001.002.165.000	6 OFF 7 RURAL	FREEWAY	
4 6 49.0 36.0 4.0 2.0 6.0			
01 1 1			
.487.241.113.045.002.003.109.000	6 OFF 7 RURAL	MAJOR REGIONAL	
4 6 47.9 36.0 18.0 12.0 29.0			
01 1 1			
.458.288.135.034.002.003.080.000	6 OFF 7 RURAL	PRINCIPAL ARTERIAL	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4	6	44.0	36.0	18.0	12.0	29.0		
01	1	1						
.458.	288.	135.	034.	002.	003.	080.000	6 OFF 7 RURAL	MINOR ARTERIAL
4	6	35.0	36.0	23.0	13.0	48.0		
01	1	1						
.458.	288.	135.	034.	002.	003.	080.000	6 OFF 7 RURAL	COLLECTOR
4	6	39.6	36.0	18.0	12.0	29.0		
01	1	1						
.458.	288.	135.	034.	002.	003.	080.000	6 OFF 7 RURAL	RAMP
4	6	21.1	36.0	23.0	13.0	48.0		
01	1	1						
.458.	288.	135.	034.	002.	003.	080.000	6 OFF 7 RURAL	LOCAL
4	6	26.7	36.0	21.0	17.0	43.0		
01	1	1						
.589.	213.	100.	028.	002.	002.	066.000	6 OFF 8 CBD	PRINCIPAL ARTERIAL
4	6	24.5	36.0	21.0	17.0	43.0		
01	1	1						
.589.	213.	100.	028.	002.	002.	066.000	6 OFF 8 CBD	MINOR ARTERIAL
4	6	19.6	36.0	16.0	12.0	35.0		
01	1	1						
.589.	213.	100.	028.	002.	002.	066.000	6 OFF 8 CBD	COLLECTOR
4	6	11.3	36.0	16.0	12.0	35.0		
01	1	1						
.589.	213.	100.	028.	002.	002.	066.000	6 OFF 8 CBD	LOCAL
4	6	52.2	36.0	9.0	10.0	16.0		
01	1	1						
.517.	241.	113.	037.	002.	003.	087.000	6 OFF 8 FRINGE	FREEWAY
4	6	38.4	36.0	9.0	10.0	16.0		
01	1	1						
.517.	241.	113.	037.	002.	003.	087.000	6 OFF 8 FRINGE	MAJOR REGIONAL
4	6	33.9	36.0	22.0	25.0	39.0		
01	1	1						
.648.	187.	087.	022.	002.	002.	052.000	6 OFF 8 FRINGE	PRINCIPAL ARTERIAL
4	6	29.1	36.0	22.0	25.0	39.0		
01	1	1						
.648.	187.	087.	022.	002.	002.	052.000	6 OFF 8 FRINGE	MINOR ARTERIAL
4	6	24.8	36.0	15.0	19.0	29.0		
01	1	1						
.648.	187.	087.	022.	002.	002.	052.000	6 OFF 8 FRINGE	COLLECTOR
4	6	35.8	36.0	22.0	25.0	39.0		
01	1	1						
.648.	187.	087.	022.	002.	002.	052.000	6 OFF 8 FRINGE	RAMP
4	6	13.1	36.0	15.0	19.0	29.0		
01	1	1						
.648.	187.	087.	022.	002.	002.	052.000	6 OFF 8 FRINGE	LOCAL
4	6	55.2	36.0	14.0	14.0	23.0		
01	1	1						
.618.	200.	094.	025.	002.	002.	059.000	6 OFF 8 URBAN	FREEWAY
4	6	39.9	36.0	14.0	14.0	24.0		
01	1	1						
.547.	248.	116.	025.	002.	003.	059.000	6 OFF 8 URBAN	MAJOR REGIONAL
4	6	36.2	36.0	20.0	21.0	34.0		
01	1	1						
.630.	210.	098.	017.	002.	002.	041.000	6 OFF 8 URBAN	PRINCIPAL ARTERIAL
4	6	34.4	36.0	33.0	33.0	54.0		
01	1	1						
.658.	180.	084.	022.	002.	002.	052.000	6 OFF 8 URBAN	MINOR ARTERIAL
4	6	24.8	36.0	26.0	28.0	43.0		
01	1	1						
.658.	207.	097.	010.	002.	002.	024.000	6 OFF 8 URBAN	COLLECTOR
4	6	36.7	36.0	20.0	21.0	34.0		
01	1	1						
.630.	210.	098.	017.	002.	002.	041.000	6 OFF 8 URBAN	RAMP
4	6	16.3	36.0	18.0	20.0	20.0		
01	1	1						
.658.	207.	097.	010.	002.	002.	024.000	6 OFF 8 URBAN	LOCAL
4	6	57.2	36.0	13.0	11.0	21.0		
01	1	1						
.549.	233.	109.	031.	002.	003.	073.000	6 OFF 8 SUBURBAN	FREEWAY
4	6	44.3	36.0	15.0	15.0	25.0		
01	1	1						

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.477.275.129.034.002.003.080.000	6 OFF 8 SUBURBAN MAJOR REGIONAL
4 6 43.5 36.0 22.0 21.0 36.0	
01 1 1	
.608.207.097.025.002.002.059.000	6 OFF 8 SUBURBAN PRINCIPAL ARTERIAL
4 6 39.2 36.0 32.0 30.0 52.0	
01 1 1	
.609.212.099.022.002.002.054.000	6 OFF 8 SUBURBAN MINOR ARTERIAL
4 6 29.9 36.0 23.0 22.0 37.0	
01 1 1	
.568.268.125.010.002.003.024.000	6 OFF 8 SUBURBAN COLLECTOR
4 6 37.1 36.0 22.0 21.0 36.0	
01 1 1	
.608.207.097.025.002.002.059.000	6 OFF 8 SUBURBAN RAMP
4 6 19.7 36.0 19.0 19.0 32.0	
01 1 1	
.568.268.125.010.002.003.024.000	6 OFF 8 SUBURBAN LOCAL
4 6 62.9 36.0 15.0 9.0 25.0	
01 1 1	
.440.220.103.069.001.002.165.000	6 OFF 8 RURAL FREEWAY
4 6 49.0 36.0 4.0 2.0 6.0	
01 1 1	
.487.241.113.045.002.003.109.000	6 OFF 8 RURAL MAJOR REGIONAL
4 6 47.5 36.0 18.0 12.0 29.0	
01 1 1	
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL PRINCIPAL ARTERIAL
4 6 43.9 36.0 18.0 12.0 29.0	
01 1 1	
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL MINOR ARTERIAL
4 6 34.9 36.0 23.0 13.0 48.0	
01 1 1	
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL COLLECTOR
4 6 39.4 36.0 18.0 12.0 29.0	
01 1 1	
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL RAMP
4 6 21.0 36.0 23.0 13.0 48.0	
01 1 1	
.458.288.135.034.002.003.080.000	6 OFF 8 RURAL LOCAL
4 6 26.0 36.0 21.0 17.0 43.0	
01 1 1	
.589.213.100.028.002.002.066.000	6 OFF 9 CBD PRINCIPAL ARTERIAL
4 6 23.5 36.0 21.0 17.0 43.0	
01 1 1	
.589.213.100.028.002.002.066.000	6 OFF 9 CBD MINOR ARTERIAL
4 6 19.0 36.0 16.0 12.0 35.0	
01 1 1	
.589.213.100.028.002.002.066.000	6 OFF 9 CBD COLLECTOR
4 6 11.3 36.0 16.0 12.0 35.0	
01 1 1	
.589.213.100.028.002.002.066.000	6 OFF 9 CBD LOCAL
4 6 47.5 36.0 9.0 10.0 16.0	
01 1 1	
.517.241.113.037.002.003.087.000	6 OFF 9 FRINGE FREEWAY
4 6 37.2 36.0 9.0 10.0 16.0	
01 1 1	
.517.241.113.037.002.003.087.000	6 OFF 9 FRINGE MAJOR REGIONAL
4 6 32.2 36.0 22.0 25.0 39.0	
01 1 1	
.648.187.087.022.002.002.052.000	6 OFF 9 FRINGE PRINCIPAL ARTERIAL
4 6 27.9 36.0 22.0 25.0 39.0	
01 1 1	
.648.187.087.022.002.002.052.000	6 OFF 9 FRINGE MINOR ARTERIAL
4 6 24.3 36.0 15.0 19.0 29.0	
01 1 1	
.648.187.087.022.002.002.052.000	6 OFF 9 FRINGE COLLECTOR
4 6 34.1 36.0 22.0 25.0 39.0	
01 1 1	
.648.187.087.022.002.002.052.000	6 OFF 9 FRINGE RAMP
4 6 13.1 36.0 15.0 19.0 29.0	
01 1 1	
.648.187.087.022.002.002.052.000	6 OFF 9 FRINGE LOCAL
4 6 50.5 36.0 14.0 14.0 23.0	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

01 1 1			
.618.200.094.025.002.002.059.000	6 OFF 9 URBAN	FREEWAY	
4 6 38.2 36.0 14.0 14.0 24.0			
01 1 1			
.547.248.116.025.002.003.059.000	6 OFF 9 URBAN	MAJOR REGIONAL	
4 6 34.7 36.0 20.0 21.0 34.0			
01 1 1			
.630.210.098.017.002.002.041.000	6 OFF 9 URBAN	PRINCIPAL ARTERIAL	
4 6 33.1 36.0 33.0 33.0 54.0			
01 1 1			
.658.180.084.022.002.002.052.000	6 OFF 9 URBAN	MINOR ARTERIAL	
4 6 24.7 36.0 26.0 28.0 43.0			
01 1 1			
.658.207.097.010.002.002.024.000	6 OFF 9 URBAN	COLLECTOR	
4 6 35.1 36.0 20.0 21.0 34.0			
01 1 1			
.630.210.098.017.002.002.041.000	6 OFF 9 URBAN	RAMP	
4 6 16.3 36.0 18.0 20.0 20.0			
01 1 1			
.658.207.097.010.002.002.024.000	6 OFF 9 URBAN	LOCAL	
4 6 55.1 36.0 13.0 11.0 21.0			
01 1 1			
.549.233.109.031.002.003.073.000	6 OFF 9 SUBURBAN	FREEWAY	
4 6 43.2 36.0 15.0 15.0 25.0			
01 1 1			
.477.275.129.034.002.003.080.000	6 OFF 9 SUBURBAN	MAJOR REGIONAL	
4 6 41.3 36.0 22.0 21.0 36.0			
01 1 1			
.608.207.097.025.002.002.059.000	6 OFF 9 SUBURBAN	PRINCIPAL ARTERIAL	
4 6 38.7 36.0 32.0 30.0 52.0			
01 1 1			
.609.212.099.022.002.002.054.000	6 OFF 9 SUBURBAN	MINOR ARTERIAL	
4 6 29.8 36.0 23.0 22.0 37.0			
01 1 1			
.568.268.125.010.002.003.024.000	6 OFF 9 SUBURBAN	COLLECTOR	
4 6 35.6 36.0 22.0 21.0 36.0			
01 1 1			
.608.207.097.025.002.002.059.000	6 OFF 9 SUBURBAN	RAMP	
4 6 19.8 36.0 19.0 19.0 32.0			
01 1 1			
.568.268.125.010.002.003.024.000	6 OFF 9 SUBURBAN	LOCAL	
4 6 62.5 36.0 15.0 9.0 25.0			
01 1 1			
.440.220.103.069.001.002.165.000	6 OFF 9 RURAL	FREEWAY	
4 6 49.0 36.0 4.0 2.0 6.0			
01 1 1			
.487.241.113.045.002.003.109.000	6 OFF 9 RURAL	MAJOR REGIONAL	
4 6 47.1 36.0 18.0 12.0 29.0			
01 1 1			
.458.288.135.034.002.003.080.000	6 OFF 9 RURAL	PRINCIPAL ARTERIAL	
4 6 43.7 36.0 18.0 12.0 29.0			
01 1 1			
.458.288.135.034.002.003.080.000	6 OFF 9 RURAL	MINOR ARTERIAL	
4 6 34.7 36.0 23.0 13.0 48.0			
01 1 1			
.458.288.135.034.002.003.080.000	6 OFF 9 RURAL	COLLECTOR	
4 6 39.2 36.0 18.0 12.0 29.0			
01 1 1			
.458.288.135.034.002.003.080.000	6 OFF 9 RURAL	RAMP	
4 6 21.0 36.0 23.0 13.0 48.0			
01 1 1			
.458.288.135.034.002.003.080.000	6 OFF 9 RURAL	LOCAL	
4 6 25.2 36.0 21.0 17.0 43.0			
01 1 1			
.589.213.100.028.002.002.066.000	6 OFF10 CBD	PRINCIPAL ARTERIAL	
4 6 22.3 36.0 21.0 17.0 43.0			
01 1 1			
.589.213.100.028.002.002.066.000	6 OFF10 CBD	MINOR ARTERIAL	
4 6 18.4 36.0 16.0 12.0 35.0			
01 1 1			
.589.213.100.028.002.002.066.000	6 OFF10 CBD	COLLECTOR	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4	6	11.3	36.0	16.0	12.0	35.0			
01	1	1							
		.589	.213	.100	.028	.002	.002	.066	.000
4	6	42.9	36.0	9.0	10.0	16.0	6	OFF10	CBD LOCAL
01	1	1							
		.517	.241	.113	.037	.002	.003	.087	.000
4	6	34.3	36.0	9.0	10.0	16.0	6	OFF10	FRINGE FREEWAY
01	1	1							
		.517	.241	.113	.037	.002	.003	.087	.000
4	6	29.5	36.0	22.0	25.0	39.0	6	OFF10	FRINGE MAJOR REGIONAL
01	1	1							
		.648	.187	.087	.022	.002	.002	.052	.000
4	6	25.7	36.0	22.0	25.0	39.0	6	OFF10	FRINGE PRINCIPAL ARTERIAL
01	1	1							
		.648	.187	.087	.022	.002	.002	.052	.000
4	6	23.6	36.0	15.0	19.0	29.0	6	OFF10	FRINGE MINOR ARTERIAL
01	1	1							
		.648	.187	.087	.022	.002	.002	.052	.000
4	6	32.6	36.0	22.0	25.0	39.0	6	OFF10	FRINGE COLLECTOR
01	1	1							
		.648	.187	.087	.022	.002	.002	.052	.000
4	6	13.1	36.0	15.0	19.0	29.0	6	OFF10	FRINGE RAMP
01	1	1							
		.648	.187	.087	.022	.002	.002	.052	.000
4	6	45.6	36.0	14.0	14.0	23.0	6	OFF10	FRINGE LOCAL
01	1	1							
		.618	.200	.094	.025	.002	.002	.059	.000
4	6	36.4	36.0	14.0	14.0	24.0	6	OFF10	URBAN FREEWAY
01	1	1							
		.547	.248	.116	.025	.002	.003	.059	.000
4	6	32.6	36.0	20.0	21.0	34.0	6	OFF10	URBAN MAJOR REGIONAL
01	1	1							
		.630	.210	.098	.017	.002	.002	.041	.000
4	6	31.3	36.0	33.0	33.0	54.0	6	OFF10	URBAN PRINCIPAL ARTERIAL
01	1	1							
		.658	.180	.084	.022	.002	.002	.052	.000
4	6	24.5	36.0	26.0	28.0	43.0	6	OFF10	URBAN MINOR ARTERIAL
01	1	1							
		.658	.207	.097	.010	.002	.002	.024	.000
4	6	33.7	36.0	20.0	21.0	34.0	6	OFF10	URBAN COLLECTOR
01	1	1							
		.630	.210	.098	.017	.002	.002	.041	.000
4	6	16.3	36.0	18.0	20.0	20.0	6	OFF10	URBAN RAMP
01	1	1							
		.658	.207	.097	.010	.002	.002	.024	.000
4	6	52.2	36.0	13.0	11.0	21.0	6	OFF10	URBAN LOCAL
01	1	1							
		.549	.233	.109	.031	.002	.003	.073	.000
4	6	41.4	36.0	15.0	15.0	25.0	6	OFF10	SUBURBAN FREEWAY
01	1	1							
		.477	.275	.129	.034	.002	.003	.080	.000
4	6	38.9	36.0	22.0	21.0	36.0	6	OFF10	SUBURBAN MAJOR REGIONAL
01	1	1							
		.608	.207	.097	.025	.002	.002	.059	.000
4	6	37.3	36.0	32.0	30.0	52.0	6	OFF10	SUBURBAN PRINCIPAL ARTERIAL
01	1	1							
		.609	.212	.099	.022	.002	.002	.054	.000
4	6	29.6	36.0	23.0	22.0	37.0	6	OFF10	SUBURBAN MINOR ARTERIAL
01	1	1							
		.568	.268	.125	.010	.002	.003	.024	.000
4	6	34.2	36.0	22.0	21.0	36.0	6	OFF10	SUBURBAN COLLECTOR
01	1	1							
		.608	.207	.097	.025	.002	.002	.059	.000
4	6	19.8	36.0	19.0	19.0	32.0	6	OFF10	SUBURBAN RAMP
01	1	1							
		.568	.268	.125	.010	.002	.003	.024	.000
4	6	61.2	36.0	15.0	9.0	25.0	6	OFF10	SUBURBAN LOCAL
01	1	1							
		.440	.220	.103	.069	.001	.002	.165	.000
4	6	48.9	36.0	4.0	2.0	6.0	6	OFF10	RURAL FREEWAY
01	1	1							

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.487.241.113.045.002.003.109.000	6	OFF10	RURAL	MAJOR REGIONAL
4 6 46.5 36.0 18.0 12.0 29.0				
01 1 1				
.458.288.135.034.002.003.080.000	6	OFF10	RURAL	PRINCIPAL ARTERIAL
4 6 43.4 36.0 18.0 12.0 29.0				
01 1 1				
.458.288.135.034.002.003.080.000	6	OFF10	RURAL	MINOR ARTERIAL
4 6 34.5 36.0 23.0 13.0 48.0				
01 1 1				
.458.288.135.034.002.003.080.000	6	OFF10	RURAL	COLLECTOR
4 6 39.0 36.0 18.0 12.0 29.0				
01 1 1				
.458.288.135.034.002.003.080.000	6	OFF10	RURAL	RAMP
4 6 21.0 36.0 23.0 13.0 48.0				
01 1 1				
.458.288.135.034.002.003.080.000	6	OFF10	RURAL	LOCAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

12006
MOBILE5b (14-Sep-96)

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0
-M 22 Warning:
+      0.346E-01 mileage with zero registration
-M 22 Warning:
+      0.626E-01 mileage with zero registration
-M 22 Warning:
+      0.373E-01 mileage with zero registration
-M 22 Warning:
+      0.222E-01 mileage with zero registration

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OR	Amb.				P													
g	CY	Tmp	Cold/Hot	Start	1	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	AllVeh	LDGV	LDGT1L	
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	16.0	8.0	16.0	2	14.64	20.57	23.28	21.43	18.25	1.14	1.27	9.78	0.00	16.51	.595	.214
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	16.0	8.0	16.0	2	16.78	23.29	26.34	24.26	21.22	1.32	1.47	11.29	0.00	18.85	.595	.214
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	7.0	11.0	7.0	2	16.13	21.92	25.12	22.94	23.31	1.37	1.53	12.34	0.00	18.16	.595	.214
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	7.0	11.0	7.0	2	20.33	27.27	31.31	28.56	34.08	1.95	2.19	17.58	0.00	23.03	.595	.214
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	8.0	1.0	8.0	2	6.95	10.43	12.01	10.93	10.97	0.62	0.69	5.79	0.00	8.24	.571	.218
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	8.0	1.0	8.0	2	8.82	12.82	14.74	13.43	12.68	0.73	0.81	6.80	0.00	10.24	.571	.218
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	41.0	5.0	42.0	2	15.46	22.87	25.21	23.61	15.63	1.17	1.30	8.40	0.00	16.74	.667	.154
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	41.0	5.0	42.0	2	17.79	25.97	28.59	26.80	17.71	1.33	1.47	9.50	0.00	19.15	.667	.154
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	22.0	2.0	22.0	2	15.80	22.45	25.23	23.33	18.63	1.19	1.32	9.97	0.00	17.10	.667	.154
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	41.0	5.0	42.0	2	12.01	18.26	20.18	18.87	12.72	0.95	1.06	6.82	0.00	13.16	.667	.154
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	22.0	1.0	23.0	2	21.68	30.21	33.95	31.40	30.20	1.87	2.08	15.72	0.00	23.62	.667	.154
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	
	LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																	
1	6	27	22.0	2.0	22.0	2	6.85	10.75	12.18	11.21	10.39	0.64	0.71	5.39	0.00	8.03	.644	.187
0	Emission factors are as of Jan. 1st of the indicated calendar year.																	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	24.0	2.0	24.0	2	9.26	13.98	15.74	14.54	11.85	0.77	0.85	6.32	0.00	10.88	.584	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	4.0	40.0	2	12.62	19.01	21.03	19.65	13.37	0.99	1.10	7.18	0.00	14.26	.641	.190	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	81.0	7.0	83.0	2	22.52	34.13	36.48	34.88	14.17	1.51	1.67	7.62	0.00	24.73	.683	.171	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	69.0	7.0	71.0	2	23.78	35.28	37.93	36.12	16.80	1.61	1.79	9.02	0.00	26.00	.652	.181	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	4.0	40.0	2	11.15	17.04	18.88	17.63	12.20	0.90	1.00	6.53	0.00	12.69	.641	.190	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	44.0	4.0	46.0	2	23.62	33.90	37.18	34.95	24.48	1.85	2.05	12.92	0.00	25.98	.652	.181	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	28.0	2.0	28.0	2	6.01	9.83	11.09	10.23	10.19	0.64	0.71	5.11	0.00	7.48	.570	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	19.0	2.0	19.0	2	7.65	11.69	13.27	12.19	10.93	0.67	0.75	5.76	0.00	9.18	.514	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	3.0	39.0	2	10.06	15.56	17.28	16.11	11.50	0.83	0.92	6.12	0.00	11.85	.583	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	77.0	8.0	77.0	2	16.62	25.89	27.84	26.51	11.88	1.20	1.33	6.34	0.00	18.74	.637	.194	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	73.0	7.0	73.0	2	19.59	29.71	31.97	30.43	13.96	1.37	1.51	7.51	0.00	22.81	.626	.229	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	3.0	39.0	2	11.61	17.63	19.54	18.24	12.64	0.92	1.02	6.78	0.00	13.53	.583	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	52.0	5.0	52.0	2	22.79	33.08	36.05	34.02	19.96	1.62	1.79	10.65	0.00	26.16	.626	.229	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	36.0	1.0	35.0	2	8.12	13.41	15.15	13.96	12.81	0.74	0.82	5.62	0.00	9.89	.389	.222	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	8.0	0.0	8.0	2	5.08	8.04	9.29	8.43	10.18	0.55	0.61	5.13	0.00	6.44	.493	.225	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	13.0	1.0	13.0	2	5.85	9.17	10.52	9.60	10.23	0.58	0.65	5.25	0.00	7.21	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	13.0	1.0	13.0	2	6.02	9.39	10.76	9.83	10.28	0.59	0.65	5.29	0.00	7.38	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	57.0	2.0	57.0	2	13.31	20.59	22.49	21.20	12.20	1.02	1.12	6.53	0.00	15.58	.564	.238	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 13.0 1.0 13.0 2 7.69 11.55 13.20 12.07 11.27 0.67 0.74 5.98 0.00 9.17 .564 .238 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 57.0 2.0 57.0 2 21.14 31.13 33.84 31.99 17.89 1.49 1.65 9.59 0.00 24.08 .564 .238 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 16.0 8.0 16.0 2 18.01 24.89 28.17 25.94 24.48 1.51 1.68 12.92 0.00 20.29 .595 .214 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 16.0 8.0 16.0 2 19.21 26.44 29.94 27.56 27.47 1.68 1.88 14.39 0.00 21.68 .595 .214 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 7.0 11.0 7.0 2 17.18 23.26 26.67 24.35 26.24 1.53 1.72 13.79 0.00 19.40 .595 .214 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 7.0 11.0 7.0 2 20.33 27.27 31.31 28.56 34.08 1.95 2.19 17.58 0.00 23.03 .595 .214 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 8.0 1.0 8.0 2 9.90 14.20 16.30 14.87 13.85 0.80 0.89 7.45 0.00 11.40 .571 .218 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 8.0 1.0 8.0 2 12.46 17.49 20.04 18.30 16.88 0.98 1.08 9.06 0.00 14.17 .571 .218 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 41.0 5.0 42.0 2 20.85 30.00 32.99 30.95 20.75 1.54 1.71 11.05 0.00 22.34 .667 .154 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 41.0 5.0 42.0 2 21.92 31.46 34.61 32.46 23.03 1.70 1.89 12.20 0.00 23.55 .667 .154 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 22.0 2.0 22.0 2 18.11 25.43 28.56 26.42 22.22 1.41 1.56 11.80 0.00 19.58 .667 .154 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 41.0 5.0 42.0 2 14.38 21.42 23.63 22.12 14.68 1.10 1.22 7.90 0.00 15.61 .667 .154 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 22.0 1.0 23.0 2 21.68 30.21 33.95 31.40 30.20 1.87 2.08 15.72 0.00 23.62 .667 .154 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 22.0 2.0 22.0 2 9.31 13.96 15.76 14.54 12.04 0.77 0.85 6.43 0.00 10.62 .644 .187 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 24.0 2.0 24.0 2 11.43 16.82 18.91 17.48 13.80 0.90 1.00 7.42 0.00 13.23 .584 .226 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 39.0 4.0 40.0 2 16.52 24.20 26.71 25.00 16.80 1.24 1.38 9.02 0.00 18.42 .641 .190 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 81.0 7.0 83.0 2 29.06 42.96 45.80 43.86 17.71 1.88 2.08 9.50 0.00 31.60 .683 .171 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	6	27	69.0	7.0	71.0	2	27.42	40.18	43.14	41.13	19.12	1.83	2.03	10.22	0.00	29.82	.652	.181	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	4.0	40.0	2	12.79	19.24	21.28	19.89	13.51	1.00	1.11	7.26	0.00	14.44	.641	.190	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	44.0	4.0	46.0	2	23.62	33.90	37.18	34.95	24.48	1.85	2.05	12.92	0.00	25.98	.652	.181	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	28.0	2.0	28.0	2	7.65	11.99	13.49	12.47	10.57	0.69	0.76	5.52	0.00	9.21	.570	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	19.0	2.0	19.0	2	9.61	14.25	16.13	14.85	12.53	0.78	0.87	6.71	0.00	11.27	.514	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	3.0	39.0	2	13.20	19.74	21.85	20.42	13.96	1.02	1.13	7.51	0.00	15.25	.583	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	77.0	8.0	77.0	2	20.98	31.77	34.07	32.50	14.12	1.44	1.60	7.59	0.00	23.34	.637	.194	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	73.0	7.0	73.0	2	22.95	34.24	36.79	35.05	15.98	1.56	1.73	8.59	0.00	26.51	.626	.229	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	3.0	39.0	2	13.02	19.50	21.59	20.17	13.80	1.01	1.12	7.42	0.00	15.06	.583	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	52.0	5.0	52.0	2	22.79	33.08	36.05	34.02	19.96	1.62	1.79	10.65	0.00	26.16	.626	.229	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	36.0	1.0	35.0	2	5.90	9.91	11.12	10.29	11.12	0.68	0.75	5.20	0.00	7.61	.389	.222	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	8.0	0.0	8.0	2	6.08	9.31	10.74	9.76	10.42	0.58	0.64	5.41	0.00	7.41	.493	.225	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	13.0	1.0	13.0	2	6.71	10.28	11.77	10.75	10.59	0.62	0.68	5.54	0.00	8.12	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	13.0	1.0	13.0	2	6.71	10.28	11.77	10.75	10.59	0.62	0.68	5.54	0.00	8.12	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	57.0	2.0	57.0	2	14.49	22.18	24.20	22.82	12.97	1.08	1.20	6.96	0.00	16.86	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	13.0	1.0	13.0	2	8.97	13.20	15.07	13.80	12.42	0.74	0.82	6.65	0.00	10.56	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	57.0	2.0	57.0	2	21.14	31.13	33.84	31.99	17.89	1.49	1.65	9.59	0.00	24.08	.564	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	16.0	8.0	16.0	2	21.68	29.66	33.61	30.92	33.10	2.00	2.23	17.11	0.00	24.52	.595	.214	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	16.0	8.0	16.0	2	22.27	30.42	34.49	31.71	34.33	2.06	2.31	17.69	0.00	25.19	.595	.214	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	7.0	11.0	7.0	2	18.86	25.41	29.15	26.60	30.62	1.76	1.98	15.92	0.00	21.35	.595	.214	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	7.0	11.0	7.0	2	20.33	27.27	31.31	28.56	34.08	1.95	2.19	17.58	0.00	23.03	.595	.214	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	8.0	1.0	8.0	2	13.90	19.33	22.13	20.22	18.63	1.07	1.19	9.97	0.00	15.73	.571	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	8.0	1.0	8.0	2	15.97	21.95	25.12	22.96	22.35	1.28	1.42	11.86	0.00	18.04	.571	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	41.0	5.0	42.0	2	24.51	34.96	38.51	36.09	28.21	2.06	2.29	14.75	0.00	26.44	.667	.154	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	41.0	5.0	42.0	2	25.81	36.72	40.47	37.91	30.62	2.22	2.47	15.92	0.00	27.87	.667	.154	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	22.0	2.0	22.0	2	20.27	28.28	31.80	29.40	27.47	1.71	1.90	14.39	0.00	22.05	.667	.154	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	41.0	5.0	42.0	2	17.88	26.10	28.73	26.94	17.80	1.33	1.48	9.54	0.00	19.25	.667	.154	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	22.0	1.0	23.0	2	21.68	30.21	33.95	31.40	30.20	1.87	2.08	15.72	0.00	23.62	.667	.154	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	22.0	2.0	22.0	2	12.49	18.12	20.40	18.85	15.10	0.97	1.07	8.13	0.00	14.02	.644	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	24.0	2.0	24.0	2	15.08	21.59	24.22	22.43	17.54	1.14	1.26	9.41	0.00	17.21	.584	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	4.0	40.0	2	21.03	30.17	33.25	31.16	21.84	1.59	1.77	11.60	0.00	23.29	.641	.190	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	81.0	7.0	83.0	2	35.81	52.04	55.44	53.12	23.03	2.42	2.68	12.20	0.00	38.75	.683	.171	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	69.0	7.0	71.0	2	30.98	44.94	48.26	46.00	22.89	2.17	2.40	12.13	0.00	33.64	.652	.181	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	39.0	4.0	40.0	2	15.00	22.18	24.50	22.92	15.43	1.14	1.27	8.30	0.00	16.80	.641	.190	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	44.0	4.0	46.0	2	23.62	33.90	37.18	34.95	24.48	1.85	2.05	12.92	0.00	25.98	.652	.181	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	27	28.0	2.0	28.0	2	10.04	15.14	16.97	15.72	12.20	0.81	0.90	6.53	0.00	11.79	.570	.234	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 19.0 2.0 19.0 2 11.65 16.90 19.10 17.60 14.56 0.91 1.01 7.83 0.00 13.47 .514 .241 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 39.0 3.0 39.0 2 17.64 25.66 28.33 26.51 17.98 1.31 1.45 9.64 0.00 20.09 .583 .227 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 77.0 8.0 77.0 2 28.42 41.80 44.70 42.73 18.44 1.88 2.08 9.87 0.00 31.21 .637 .194 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 73.0 7.0 73.0 2 27.51 40.41 43.34 41.34 18.83 1.84 2.03 10.07 0.00 31.55 .626 .229 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 39.0 3.0 39.0 2 14.79 21.86 24.17 22.60 15.36 1.12 1.25 8.26 0.00 16.98 .583 .227 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 52.0 5.0 52.0 2 22.79 33.08 36.05 34.02 19.96 1.62 1.79 10.65 0.00 26.16 .626 .229 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 36.0 1.0 35.0 2 6.00 10.04 11.26 10.43 10.28 0.67 0.74 5.08 0.00 7.60 .389 .222 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 8.0 0.0 8.0 2 7.51 11.14 12.82 11.68 11.42 0.65 0.72 6.07 0.00 8.88 .493 .225 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 13.0 1.0 13.0 2 7.81 11.70 13.37 12.24 11.37 0.67 0.75 6.04 0.00 9.30 .564 .238 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 13.0 1.0 13.0 2 7.81 11.70 13.37 12.24 11.37 0.67 0.75 6.04 0.00 9.30 .564 .238 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 57.0 2.0 57.0 2 15.84 23.99 26.15 24.68 13.91 1.16 1.28 7.48 0.00 18.32 .564 .238 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 13.0 1.0 13.0 2 11.23 16.12 18.36 16.83 14.80 0.89 0.98 7.96 0.00 13.03 .564 .238 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 27 57.0 2.0 57.0 2 21.14 31.13 33.84 31.99 17.89 1.49 1.65 9.59 0.00 24.08 .564 .238 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 46.0 12.0 59.0 2 15.57 21.64 23.89 22.36 15.95 1.44 1.63 9.02 0.00 16.82 .648 .173 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 46.0 12.0 59.0 2 18.71 25.59 28.22 26.43 18.84 1.69 1.91 10.60 0.00 20.07 .648 .173 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 45.0 8.0 56.0 2 19.23 26.18 28.95 27.06 21.60 1.85 2.08 12.06 0.00 20.74 .648 .173 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 45.0 8.0 56.0 2 24.54 33.00 36.59 34.15 32.35 2.70 3.03 17.58 0.00 26.65 .648 .173 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	6	52	8.0	7.0	12.0	2	5.75	8.29	9.57	8.70	10.27	0.64	0.71	5.69	0.00	6.89	.547	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	8.0	7.0	12.0	2	6.51	9.23	10.62	9.67	10.94	0.69	0.77	6.14	0.00	7.70	.547	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	30.0	19.0	43.0	2	11.40	15.94	17.81	16.53	13.55	1.11	1.27	7.68	0.00	12.65	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	30.0	19.0	43.0	2	13.76	18.87	21.05	19.56	15.95	1.31	1.49	9.02	0.00	15.13	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	34.0	14.0	46.0	2	14.36	19.74	21.99	20.45	16.49	1.35	1.54	9.32	0.00	15.79	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	30.0	19.0	43.0	2	10.28	14.53	16.26	15.08	12.48	1.02	1.17	7.06	0.00	11.46	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	34.0	14.0	46.0	2	21.10	28.22	31.46	29.25	28.67	2.29	2.59	15.72	0.00	23.20	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	8.0	7.0	12.0	2	4.95	7.31	8.45	7.68	9.78	0.59	0.67	5.31	0.00	5.89	.618	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	15.0	14.0	23.0	2	7.77	10.98	12.51	11.47	11.65	0.81	0.92	6.57	0.00	9.06	.587	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	19.0	17.0	30.0	2	8.76	12.35	13.97	12.87	12.27	0.90	1.03	6.94	0.00	9.96	.624	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	39.0	37.0	60.0	2	14.05	19.60	21.59	20.24	12.78	1.31	1.53	7.24	0.00	15.65	.648	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	24.0	24.0	38.0	2	12.93	17.67	19.79	18.35	15.44	1.24	1.43	8.74	0.00	14.24	.698	.180	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	19.0	17.0	30.0	2	8.18	11.63	13.17	12.12	11.68	0.86	0.97	6.59	0.00	9.34	.624	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	19.0	19.0	31.0	2	16.49	21.90	24.65	22.77	23.24	1.70	1.95	12.92	0.00	18.07	.698	.180	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	13.0	10.0	19.0	2	4.12	6.41	7.38	6.72	9.88	0.60	0.67	5.08	0.00	5.18	.577	.232	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	14.0	23.0	22.0	2	6.02	8.78	10.03	9.18	10.13	0.71	0.81	5.59	0.00	7.40	.478	.281	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	12.0	11.0	18.0	2	6.25	9.02	10.34	9.44	10.47	0.68	0.77	5.83	0.00	7.48	.558	.254	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	25.0	24.0	37.0	2	7.66	11.12	12.53	11.57	10.55	0.83	0.96	5.88	0.00	8.92	.599	.229	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	28.0	26.0	43.0	2	10.85	15.22	17.01	15.79	12.65	1.07	1.23	7.16	0.00	12.22	.648	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	12.0	11.0	18.0	2	7.10	10.05	11.51	10.52	11.24	0.74	0.84	6.32	0.00	8.39	.558	.254	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	19.0	18.0	29.0	2	14.41	19.32	21.79	20.11	18.95	1.38	1.58	10.65	0.00	16.03	.648	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	9.0	23.0	2	6.48	9.91	11.47	10.40	12.87	0.70	0.79	5.83	0.00	8.16	.418	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	3.0	2.0	5.0	2	3.72	5.70	6.64	6.00	9.82	0.53	0.59	5.07	0.00	4.89	.498	.261	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	13.0	24.0	2	4.69	7.20	8.25	7.54	9.67	0.63	0.72	5.12	0.00	5.69	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	13.0	24.0	2	5.13	7.75	8.86	8.10	9.70	0.65	0.73	5.23	0.00	6.15	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	23.0	13.0	34.0	2	7.58	10.98	12.41	11.43	10.97	0.81	0.92	6.15	0.00	8.80	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	13.0	24.0	2	5.99	8.80	10.05	9.20	10.08	0.69	0.78	5.56	0.00	7.05	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	23.0	13.0	34.0	2	13.27	18.08	20.33	18.80	17.15	1.27	1.45	9.68	0.00	14.93	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	46.0	12.0	59.0	2	20.61	27.97	30.85	28.89	22.39	1.99	2.25	12.48	0.00	22.15	.648	.173	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	46.0	12.0	59.0	2	22.49	30.38	33.55	31.39	26.25	2.31	2.61	14.48	0.00	24.25	.648	.173	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	45.0	8.0	56.0	2	20.65	28.01	31.00	28.96	24.75	2.10	2.36	13.71	0.00	22.35	.648	.173	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	45.0	8.0	56.0	2	24.54	33.00	36.59	34.15	32.35	2.70	3.03	17.58	0.00	26.65	.648	.173	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	8.0	7.0	12.0	2	8.48	11.64	13.37	12.19	13.20	0.84	0.94	7.48	0.00	9.82	.547	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	8.0	7.0	12.0	2	9.65	13.06	14.99	13.68	14.71	0.93	1.05	8.33	0.00	11.09	.547	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	30.0	19.0	43.0	2	17.28	23.23	25.88	24.07	20.14	1.64	1.87	11.29	0.00	18.86	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	30.0	19.0	43.0	2	18.38	24.61	27.44	25.51	22.81	1.84	2.10	12.70	0.00	20.11	.629	.193	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 34.0 14.0 46.0 2 17.53 23.67 26.34 24.52 20.49 1.67 1.89 11.48 0.00 19.16 .629 .193 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 30.0 19.0 43.0 2 13.20 18.17 20.29 18.85 15.37 1.26 1.44 8.70 0.00 14.54 .629 .193 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 34.0 14.0 46.0 2 21.10 28.22 31.46 29.25 28.67 2.29 2.59 15.72 0.00 23.20 .629 .193 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 8.0 7.0 12.0 2 7.82 10.83 12.45 11.35 12.39 0.78 0.88 7.01 0.00 8.93 .618 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 15.0 14.0 23.0 2 9.80 13.48 15.33 14.07 13.93 0.97 1.10 7.90 0.00 11.26 .587 .241 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 19.0 17.0 30.0 2 12.51 17.00 19.17 17.69 16.57 1.22 1.39 9.36 0.00 13.97 .624 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 39.0 37.0 60.0 2 20.56 27.63 30.32 28.49 17.78 1.82 2.12 10.02 0.00 22.53 .648 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 24.0 24.0 38.0 2 15.12 20.38 22.79 21.15 17.78 1.42 1.64 10.02 0.00 16.56 .698 .180 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 19.0 17.0 30.0 2 9.75 13.58 15.35 14.15 13.35 0.98 1.12 7.56 0.00 11.02 .624 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 19.0 19.0 31.0 2 16.49 21.90 24.65 22.77 23.24 1.70 1.95 12.92 0.00 18.07 .698 .180 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 13.0 10.0 19.0 2 5.56 8.18 9.39 8.57 9.96 0.64 0.73 5.47 0.00 6.66 .577 .232 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 14.0 23.0 22.0 2 7.46 10.54 12.02 11.02 11.33 0.81 0.92 6.38 0.00 8.94 .478 .281 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 12.0 11.0 18.0 2 8.64 11.96 13.66 12.50 12.96 0.86 0.97 7.34 0.00 10.07 .558 .254 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 25.0 24.0 37.0 2 10.28 14.36 16.13 14.92 12.82 1.03 1.18 7.26 0.00 11.72 .599 .229 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 28.0 26.0 43.0 2 12.83 17.68 19.72 18.33 14.52 1.23 1.42 8.23 0.00 14.34 .648 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 12.0 11.0 18.0 2 8.05 11.23 12.84 11.74 12.27 0.82 0.92 6.94 0.00 9.42 .558 .254 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 19.0 18.0 29.0 2 14.41 19.32 21.79 20.11 18.95 1.38 1.58 10.65 0.00 16.03 .648 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	6	52	16.0	9.0	23.0	2	4.26	6.66	7.65	6.97	10.92	0.64	0.72	5.29	0.00	5.81	.418	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	3.0	2.0	5.0	2	4.24	6.33	7.37	6.66	9.66	0.54	0.60	5.16	0.00	5.41	.498	.261	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	13.0	24.0	2	5.43	8.11	9.27	8.48	9.80	0.66	0.75	5.33	0.00	6.46	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	13.0	24.0	2	5.59	8.31	9.49	8.69	9.86	0.67	0.75	5.39	0.00	6.63	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	23.0	13.0	34.0	2	8.25	11.82	13.35	12.31	11.58	0.86	0.97	6.53	0.00	9.52	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	13.0	24.0	2	6.41	9.32	10.63	9.74	10.37	0.71	0.81	5.76	0.00	7.50	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	23.0	13.0	34.0	2	13.27	18.08	20.33	18.80	17.15	1.27	1.45	9.68	0.00	14.93	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	46.0	12.0	59.0	2	24.54	33.01	36.48	34.11	30.11	2.63	2.97	16.45	0.00	26.51	.648	.173	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	46.0	12.0	59.0	2	26.72	35.81	39.61	37.02	33.81	2.92	3.30	18.31	0.00	28.89	.648	.173	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	45.0	8.0	56.0	2	22.77	30.72	34.04	31.78	29.07	2.44	2.75	15.92	0.00	24.70	.648	.173	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	45.0	8.0	56.0	2	24.54	33.00	36.59	34.15	32.35	2.70	3.03	17.58	0.00	26.65	.648	.173	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	8.0	7.0	12.0	2	11.40	15.21	17.44	15.92	17.07	1.08	1.21	9.64	0.00	12.99	.547	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	8.0	7.0	12.0	2	12.56	16.63	19.05	17.40	18.64	1.17	1.32	10.49	0.00	14.25	.547	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	30.0	19.0	43.0	2	19.94	26.59	29.67	27.57	26.43	2.11	2.41	14.57	0.00	21.88	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	30.0	19.0	43.0	2	22.00	29.19	32.60	30.27	30.76	2.43	2.77	16.77	0.00	24.17	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	34.0	14.0	46.0	2	19.46	26.13	29.10	27.07	25.07	2.02	2.29	13.88	0.00	21.36	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	30.0	19.0	43.0	2	16.05	21.73	24.22	22.52	18.35	1.50	1.71	10.33	0.00	17.54	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	34.0	14.0	46.0	2	21.10	28.22	31.46	29.25	28.67	2.29	2.59	15.72	0.00	23.20	.629	.193	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	8.0	7.0	12.0	2	10.91	14.62	16.76	15.30	16.41	1.04	1.16	9.28	0.00	12.24	.618	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	15.0	14.0	23.0	2	13.19	17.68	20.04	18.43	18.15	1.26	1.43	10.22	0.00	14.96	.587	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	19.0	17.0	30.0	2	15.67	20.90	23.55	21.75	21.86	1.58	1.80	12.20	0.00	17.42	.624	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	39.0	37.0	60.0	2	24.36	32.31	35.46	33.31	22.81	2.30	2.69	12.70	0.00	26.61	.648	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	24.0	24.0	38.0	2	17.27	23.02	25.74	23.89	21.22	1.68	1.94	11.86	0.00	18.87	.698	.180	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	19.0	17.0	30.0	2	11.27	15.46	17.45	16.10	15.10	1.11	1.27	8.55	0.00	12.64	.624	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	19.0	19.0	31.0	2	16.49	21.90	24.65	22.77	23.24	1.70	1.95	12.92	0.00	18.07	.698	.180	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	13.0	10.0	19.0	2	7.20	10.20	11.66	10.67	11.30	0.75	0.85	6.36	0.00	8.40	.577	.232	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	14.0	23.0	22.0	2	8.94	12.35	14.06	12.90	12.91	0.92	1.06	7.31	0.00	10.54	.478	.281	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	12.0	11.0	18.0	2	11.32	15.25	17.38	15.93	16.33	1.08	1.22	9.23	0.00	12.99	.558	.254	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	25.0	24.0	37.0	2	13.28	18.08	20.25	18.77	15.95	1.28	1.47	9.02	0.00	14.94	.599	.229	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	28.0	26.0	43.0	2	14.81	20.13	22.43	20.87	16.49	1.39	1.60	9.32	0.00	16.45	.648	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	12.0	11.0	18.0	2	8.88	12.25	13.99	12.81	13.25	0.88	1.00	7.51	0.00	10.33	.558	.254	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	19.0	18.0	29.0	2	14.41	19.32	21.79	20.11	18.95	1.38	1.58	10.65	0.00	16.03	.648	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	9.0	23.0	2	4.22	6.60	7.58	6.91	9.99	0.61	0.69	5.09	0.00	5.68	.418	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	3.0	2.0	5.0	2	4.88	7.11	8.27	7.48	9.87	0.56	0.63	5.40	0.00	6.07	.498	.261	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	13.0	24.0	2	6.24	9.11	10.40	9.52	10.25	0.70	0.79	5.68	0.00	7.32	.619	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	52	16.0	13.0	24.0	2	6.29	9.17	10.46	9.58	10.29	0.70	0.80	5.70	0.00	7.37	.619	.220	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 23.0 13.0 34.0 2 8.87 12.59 14.21 13.11 12.19 0.91 1.03 6.89 0.00 10.18 .619 .220 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 16.0 13.0 24.0 2 6.73 9.72 11.09 10.16 10.64 0.73 0.83 5.94 0.00 7.85 .619 .220 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 52 23.0 13.0 34.0 2 13.27 18.08 20.33 18.80 17.15 1.27 1.45 9.68 0.00 14.93 .619 .220 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 21.0 17.0 43.0 2 13.07 19.06 21.03 19.69 13.53 1.07 1.23 7.68 0.00 14.75 .589 .213 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 21.0 17.0 43.0 2 14.32 20.68 22.79 21.36 14.61 1.15 1.33 8.30 0.00 16.08 .589 .213 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 16.0 12.0 35.0 2 16.70 23.54 26.11 24.36 18.70 1.35 1.55 10.54 0.00 18.69 .589 .213 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 16.0 12.0 35.0 2 23.32 32.21 35.83 33.37 32.52 2.27 2.60 17.69 0.00 26.27 .589 .213 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 9.0 10.0 16.0 2 4.37 7.01 8.03 7.33 10.87 0.61 0.69 5.28 0.00 5.72 .517 .241 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 9.0 10.0 16.0 2 5.79 8.81 10.06 9.21 9.88 0.62 0.70 5.42 0.00 7.10 .517 .241 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 22.0 25.0 39.0 2 9.18 13.83 15.35 14.32 10.66 0.85 0.98 5.97 0.00 10.42 .648 .187 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 22.0 25.0 39.0 2 11.26 16.52 18.29 17.08 12.17 0.98 1.13 6.89 0.00 12.61 .648 .187 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 15.0 19.0 29.0 2 12.16 17.35 19.39 18.00 14.68 1.07 1.23 8.33 0.00 13.57 .648 .187 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 22.0 25.0 39.0 2 7.93 12.22 13.59 12.65 9.99 0.78 0.90 5.50 0.00 9.11 .648 .187 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 15.0 19.0 29.0 2 20.32 27.87 31.13 28.90 28.61 2.02 2.32 15.72 0.00 22.54 .648 .187 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 14.0 14.0 23.0 2 6.00 9.58 10.96 10.02 11.77 0.68 0.77 5.52 0.00 7.28 .618 .200 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 14.0 14.0 24.0 2 5.22 8.29 9.40 8.65 9.64 0.63 0.71 5.13 0.00 6.55 .547 .248 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 20.0 21.0 34.0 2 7.86 11.97 13.37 12.42 10.26 0.77 0.89 5.70 0.00 9.19 .630 .210 .00

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	6	36	33.0	33.0	54.0	2	11.57	17.47	19.11	17.99	10.66	1.00	1.16	5.97	0.00	12.91	.658	.180	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	26.0	28.0	43.0	2	15.14	21.66	23.82	22.35	14.68	1.25	1.44	8.33	0.00	17.11	.658	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	20.0	21.0	34.0	2	7.28	11.22	12.54	11.64	9.96	0.74	0.85	5.48	0.00	8.57	.630	.210	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	20.0	20.0	2	16.54	22.52	25.37	23.43	23.19	1.62	1.84	12.92	0.00	18.55	.658	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	13.0	11.0	21.0	2	5.87	9.35	10.72	9.79	11.77	0.66	0.74	5.52	0.00	7.34	.549	.233	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	15.0	25.0	2	5.27	8.39	9.51	8.75	9.64	0.64	0.72	5.13	0.00	6.79	.477	.275	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	21.0	36.0	2	6.07	9.72	10.89	10.10	9.64	0.71	0.81	5.13	0.00	7.31	.608	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	32.0	30.0	52.0	2	9.30	14.47	15.90	14.93	9.88	0.88	1.02	5.42	0.00	10.82	.609	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	23.0	22.0	37.0	2	10.86	15.93	17.68	16.49	12.17	0.96	1.10	6.89	0.00	12.94	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	21.0	36.0	2	7.49	11.55	12.89	11.98	9.97	0.76	0.87	5.49	0.00	8.77	.608	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	19.0	19.0	32.0	2	16.89	23.53	26.14	24.36	19.01	1.42	1.62	10.71	0.00	19.62	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	9.0	25.0	2	8.33	13.19	15.14	13.81	14.02	0.75	0.84	6.17	0.00	10.11	.440	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	4.0	2.0	6.0	2	3.94	6.23	7.23	6.55	9.85	0.54	0.60	5.08	0.00	5.23	.487	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	4.96	8.11	9.16	8.44	9.76	0.64	0.73	5.07	0.00	6.58	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	5.65	9.00	10.15	9.37	9.64	0.65	0.74	5.16	0.00	7.30	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	23.0	13.0	48.0	2	9.72	14.88	16.42	15.37	10.66	0.84	0.97	5.97	0.00	11.80	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	6.60	10.22	11.50	10.63	9.90	0.69	0.78	5.44	0.00	8.29	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	23.0	13.0	48.0	2	18.42	26.28	28.81	27.09	17.65	1.40	1.61	9.97	0.00	21.30	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	21.0	17.0	43.0	2	13.26	19.30	21.29	19.94	13.69	1.08	1.25	7.77	0.00	14.95	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	21.0	17.0	43.0	2	14.75	21.24	23.41	21.93	15.00	1.19	1.36	8.51	0.00	16.54	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	16.0	12.0	35.0	2	17.16	24.09	26.71	24.93	19.12	1.38	1.58	10.76	0.00	19.16	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	16.0	12.0	35.0	2	23.32	32.21	35.83	33.37	32.52	2.27	2.60	17.69	0.00	26.27	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	9.0	10.0	16.0	2	4.37	7.01	8.03	7.33	10.28	0.59	0.67	5.14	0.00	5.69	.517	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	9.0	10.0	16.0	2	6.09	9.20	10.50	9.61	10.05	0.64	0.72	5.55	0.00	7.41	.517	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	25.0	39.0	2	9.59	14.36	15.92	14.85	10.92	0.87	1.01	6.14	0.00	10.84	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	25.0	39.0	2	11.71	17.10	18.92	17.68	12.53	1.01	1.17	7.11	0.00	13.09	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	19.0	29.0	2	12.28	17.51	19.56	18.16	14.80	1.08	1.24	8.40	0.00	13.70	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	25.0	39.0	2	8.90	13.47	14.96	13.95	10.49	0.83	0.96	5.86	0.00	10.13	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	19.0	29.0	2	20.32	27.87	31.13	28.90	28.61	2.02	2.32	15.72	0.00	22.54	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	14.0	14.0	23.0	2	4.77	7.72	8.78	8.06	10.92	0.65	0.74	5.29	0.00	5.91	.618	.200	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	14.0	14.0	24.0	2	6.23	9.59	10.85	9.99	9.87	0.66	0.75	5.41	0.00	7.62	.547	.248	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	20.0	21.0	34.0	2	8.11	12.28	13.72	12.74	10.41	0.79	0.90	5.80	0.00	9.45	.630	.210	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	33.0	33.0	54.0	2	11.84	17.83	19.49	18.36	10.80	1.01	1.18	6.06	0.00	13.20	.658	.180	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	26.0	28.0	43.0	2	15.29	21.85	24.03	22.55	14.80	1.26	1.46	8.40	0.00	17.27	.658	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	20.0	21.0	34.0	2	7.95	12.09	13.50	12.54	10.32	0.78	0.89	5.74	0.00	9.29	.630	.210	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	20.0	20.0	2	16.54	22.52	25.37	23.43	23.19	1.62	1.84	12.92	0.00	18.55	.658	.207	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	13.0	11.0	21.0	2	5.53	8.83	10.11	9.24	11.50	0.65	0.73	5.45	0.00	6.95 .549 .233 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	15.0	15.0	25.0	2	5.40	8.55	9.69	8.91	9.64	0.64	0.73	5.15	0.00	6.92 .477 .275 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	22.0	21.0	36.0	2	6.39	10.13	11.34	10.52	9.65	0.71	0.82	5.18	0.00	7.63 .608 .207 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	32.0	30.0	52.0	2	9.51	14.74	16.19	15.20	9.95	0.89	1.03	5.47	0.00	11.03 .609 .212 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	23.0	22.0	37.0	2	10.90	15.99	17.75	16.55	12.21	0.96	1.11	6.92	0.00	12.99 .568 .268 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	22.0	21.0	36.0	2	8.03	12.26	13.67	12.71	10.25	0.78	0.90	5.69	0.00	9.34 .608 .207 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	19.0	19.0	32.0	2	16.89	23.53	26.14	24.36	19.01	1.42	1.62	10.71	0.00	19.62 .568 .268 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	15.0	9.0	25.0	2	8.28	13.12	15.06	13.74	13.97	0.75	0.84	6.15	0.00	10.06 .440 .220 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	4.0	2.0	6.0	2	3.94	6.23	7.23	6.55	9.85	0.54	0.60	5.08	0.00	5.23 .487 .241 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	18.0	12.0	29.0	2	5.03	8.19	9.26	8.53	9.73	0.64	0.73	5.08	0.00	6.65 .458 .288 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	18.0	12.0	29.0	2	5.67	9.02	10.18	9.39	9.65	0.65	0.74	5.17	0.00	7.32 .458 .288 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	23.0	13.0	48.0	2	9.75	14.93	16.48	15.42	10.68	0.84	0.97	5.98	0.00	11.84 .458 .288 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	18.0	12.0	29.0	2	6.64	10.28	11.57	10.69	9.93	0.69	0.78	5.46	0.00	8.34 .458 .288 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	23.0	13.0	48.0	2	18.53	26.42	28.96	27.23	17.74	1.41	1.62	10.02	0.00	21.42 .458 .288 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	21.0	17.0	43.0	2	13.70	19.88	21.92	20.54	14.07	1.11	1.28	7.99	0.00	15.43 .589 .213 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	21.0	17.0	43.0	2	15.52	22.25	24.50	22.97	15.69	1.24	1.43	8.90	0.00	17.36 .589 .213 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	6	36	16.0	12.0	35.0	2	17.43	24.44	27.11	25.29	19.76	1.43	1.63	11.11	0.00	19.47 .589 .213 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	6	36	16.0	12.0	35.0	2	23.32	32.21	35.83	33.37	32.52	2.27	2.60	17.69	0.00	26.27	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	9.0	10.0	16.0	2	4.44	7.10	8.13	7.43	9.73	0.58	0.66	5.08	0.00	5.73	.517	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	9.0	10.0	16.0	2	6.37	9.55	10.90	9.98	10.23	0.65	0.74	5.68	0.00	7.70	.517	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	25.0	39.0	2	10.27	15.23	16.88	15.76	11.40	0.92	1.06	6.43	0.00	11.56	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	25.0	39.0	2	12.36	17.93	19.83	18.54	13.08	1.06	1.22	7.42	0.00	13.77	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	19.0	29.0	2	12.59	17.91	20.00	18.57	15.13	1.11	1.27	8.59	0.00	14.03	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	25.0	39.0	2	9.51	14.26	15.82	14.75	10.87	0.87	1.00	6.10	0.00	10.77	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	19.0	29.0	2	20.32	27.87	31.13	28.90	28.61	2.02	2.32	15.72	0.00	22.54	.648	.187	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	14.0	14.0	23.0	2	4.69	7.59	8.63	7.92	10.02	0.62	0.71	5.09	0.00	5.78	.618	.200	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	14.0	14.0	24.0	2	6.63	10.10	11.42	10.52	10.08	0.68	0.78	5.57	0.00	8.04	.547	.248	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	20.0	21.0	34.0	2	8.59	12.91	14.40	13.38	10.73	0.81	0.93	6.01	0.00	9.96	.630	.210	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	33.0	33.0	54.0	2	12.47	18.64	20.36	19.19	11.14	1.05	1.22	6.27	0.00	13.85	.658	.180	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	26.0	28.0	43.0	2	15.37	21.95	24.14	22.65	14.87	1.26	1.46	8.44	0.00	17.35	.658	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	20.0	21.0	34.0	2	8.46	12.73	14.21	13.20	10.64	0.81	0.93	5.95	0.00	9.82	.630	.210	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	20.0	20.0	2	16.54	22.52	25.37	23.43	23.19	1.62	1.84	12.92	0.00	18.55	.658	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	13.0	11.0	21.0	2	4.62	7.47	8.51	7.80	10.90	0.63	0.71	5.29	0.00	5.93	.549	.233	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	15.0	25.0	2	5.61	8.82	9.98	9.19	9.66	0.65	0.73	5.20	0.00	7.14	.477	.275	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	21.0	36.0	2	6.89	10.79	12.06	11.19	9.75	0.73	0.84	5.31	0.00	8.16	.608	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	32.0	30.0	52.0	2	9.68	14.96	16.43	15.43	10.01	0.90	1.04	5.52	0.00	11.22	.609	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	23.0	22.0	37.0	2	10.95	16.05	17.82	16.61	12.25	0.97	1.11	6.94	0.00	13.04	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	21.0	36.0	2	8.50	12.86	14.33	13.33	10.53	0.81	0.93	5.88	0.00	9.84	.608	.207	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	19.0	19.0	32.0	2	16.79	23.40	25.99	24.22	18.91	1.41	1.61	10.65	0.00	19.51	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	9.0	25.0	2	8.10	12.85	14.74	13.45	13.74	0.74	0.83	6.09	0.00	9.86	.440	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	4.0	2.0	6.0	2	3.94	6.23	7.23	6.55	9.85	0.54	0.60	5.08	0.00	5.23	.487	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	5.09	8.28	9.35	8.62	9.71	0.64	0.73	5.08	0.00	6.72	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	5.71	9.07	10.24	9.45	9.65	0.65	0.74	5.17	0.00	7.36	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	23.0	13.0	48.0	2	9.83	15.03	16.58	15.53	10.73	0.85	0.97	6.01	0.00	11.92	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	6.69	10.34	11.64	10.76	9.95	0.69	0.78	5.47	0.00	8.40	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	23.0	13.0	48.0	2	18.53	26.42	28.96	27.23	17.74	1.41	1.62	10.02	0.00	21.42	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	21.0	17.0	43.0	2	14.25	20.59	22.69	21.26	14.55	1.15	1.32	8.26	0.00	16.00	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	21.0	17.0	43.0	2	16.53	23.57	25.94	24.33	16.62	1.31	1.51	9.41	0.00	18.45	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	16.0	12.0	35.0	2	17.71	24.82	27.52	25.68	20.45	1.47	1.69	11.48	0.00	19.80	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	16.0	12.0	35.0	2	23.32	32.21	35.83	33.37	32.52	2.27	2.60	17.69	0.00	26.27	.589	.213	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	9.0	10.0	16.0	2	5.19	8.05	9.20	8.42	9.67	0.60	0.68	5.21	0.00	6.48	.517	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	9.0	10.0	16.0	2	7.13	10.51	11.97	10.98	10.82	0.70	0.79	6.07	0.00	8.50	.517	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	22.0	25.0	39.0	2	11.51	16.84	18.64	17.41	12.37	1.00	1.15	7.01	0.00	12.87	.648	.187	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 22.0 25.0 39.0 2 13.70 19.66 21.73 20.32 14.25 1.15 1.33 8.09 0.00 15.19 .648 .187 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 15.0 19.0 29.0 2 13.05 18.50 20.65 19.18 15.62 1.14 1.31 8.86 0.00 14.52 .648 .187 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 22.0 25.0 39.0 2 10.10 15.02 16.65 15.54 11.28 0.90 1.04 6.36 0.00 11.39 .648 .187 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 15.0 19.0 29.0 2 20.32 27.87 31.13 28.90 28.61 2.02 2.32 15.72 0.00 22.54 .648 .187 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 14.0 14.0 23.0 2 5.08 8.09 9.18 8.44 9.65 0.63 0.71 5.11 0.00 6.16 .618 .200 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 14.0 14.0 24.0 2 7.09 10.70 12.08 11.14 10.37 0.71 0.80 5.78 0.00 8.54 .547 .248 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 20.0 21.0 34.0 2 9.34 13.87 15.46 14.38 11.28 0.86 0.99 6.36 0.00 10.77 .630 .210 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 33.0 33.0 54.0 2 13.43 19.88 21.70 20.46 11.69 1.11 1.29 6.61 0.00 14.84 .658 .180 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 26.0 28.0 43.0 2 15.52 22.15 24.35 22.85 15.00 1.27 1.47 8.51 0.00 17.52 .658 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 20.0 21.0 34.0 2 8.94 13.35 14.89 13.84 10.97 0.84 0.96 6.17 0.00 10.34 .630 .210 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 18.0 20.0 20.0 2 16.54 22.52 25.37 23.43 23.19 1.62 1.84 12.92 0.00 18.55 .658 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 13.0 11.0 21.0 2 4.58 7.40 8.43 7.73 10.28 0.61 0.69 5.14 0.00 5.85 .549 .233 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 15.0 15.0 25.0 2 5.97 9.28 10.50 9.67 9.75 0.66 0.75 5.30 0.00 7.52 .477 .275 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 22.0 21.0 36.0 2 7.51 11.59 12.93 12.02 9.99 0.76 0.87 5.50 0.00 8.80 .608 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 32.0 30.0 52.0 2 10.20 15.63 17.15 16.11 10.21 0.92 1.07 5.67 0.00 11.75 .609 .212 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 23.0 22.0 37.0 2 11.05 16.18 17.95 16.74 12.33 0.97 1.12 6.99 0.00 13.15 .568 .268 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 6 36 22.0 21.0 36.0 2 8.98 13.48 15.01 13.97 10.85 0.84 0.96 6.09 0.00 10.34 .608 .207 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	6	36	19.0	19.0	32.0	2	16.79	23.40	25.99	24.22	18.91	1.41	1.61	10.65	0.00	19.51	.568	.268	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	15.0	9.0	25.0	2	7.52	11.96	13.71	12.52	13.08	0.71	0.81	5.90	0.00	9.23	.440	.220	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	4.0	2.0	6.0	2	3.94	6.23	7.23	6.55	9.84	0.54	0.60	5.07	0.00	5.23	.487	.241	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	5.20	8.41	9.50	8.76	9.68	0.64	0.73	5.09	0.00	6.82	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	5.77	9.15	10.32	9.52	9.66	0.65	0.74	5.19	0.00	7.42	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	23.0	13.0	48.0	2	9.91	15.13	16.69	15.63	10.77	0.85	0.98	6.04	0.00	12.00	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	18.0	12.0	29.0	2	6.74	10.41	11.71	10.82	9.97	0.69	0.79	5.49	0.00	8.45	.458	.288	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	6	36	23.0	13.0	48.0	2	18.53	26.42	28.96	27.23	17.74	1.41	1.62	10.02	0.00	21.42	.458	.288	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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1      PROMPT                # No prompting, vertical format
1      TAMFLG                # Use MOBILE 5 tampering rates
1      SPDFLG                # Use one speed for all vehicle types
2      VMFLAG                # Each scenario has its own VMT mix
3      MYMRFG                # Use local registration distribution
1      NEWFLG                # Use MOBILE 5 BER's
6      IMFLAG                # Use one I/M programs
1      ALHFLG                # No additional correction factors
2      ATPFLG                # Anti-tampering, no press/purge check
1      RLFLAG                # Uncontrolled refueling emission rates
2      LOCFLG                # Only one LAP record
2      TEMFLG                # MOBILE 5 uses max and min temp.
2      OUTFMT                # 80 column descriptive format
2      PRTFLG                # Calculate CO only
1      IDLFLG                # No idle emissions
3      NMHFLG                # VOC emission factors
1      HCFLAG                # No component emission factor output
.049 .065 .067 .074 .080 .083 .082 .068 .065 .043 # Colorado LDGV
.058 .052 .045 .034 .028 .024 .021 .019 .017 .009 # registration distribution
.007 .005 .003 .001 .001
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDGT1
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDGT2
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.066 .062 .049 .050 .052 .084 .096 .069 .064 .042 # Colorado HDGV
.052 .054 .044 .030 .026 .025 .027 .027 .027 .018 # registration distribution
.014 .011 .007 .004 .000
.049 .065 .067 .074 .080 .083 .082 .068 .065 .043 # Colorado LDDV
.058 .052 .045 .034 .028 .024 .021 .019 .017 .009 # registration distribution
.007 .005 .003 .001 .001
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDDT
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.110 .095 .116 .113 .080 .102 .079 .062 .037 .050 # Colorado HDDV
.048 .055 .044 .001 .001 .001 .001 .001 .001 .001 # registration distribution
.001 .001 .000 .000 .000
.001 .001 .001 .001 .001 .001 .001 .001 .001 .001 # Colorado MC
.001 .989 .000 .000 .000 .000 .000 .000 .000 .000 # registration distribution
.000 .000 .000 .000 .000
2 1 2 1
82 20 82 09 00 00 098 1 2 2221 4222 .6 10.0 1.5
82 20 82 09 00 00 098 1 2 1112 2222 220. 1.2 999.
TECH12RSD80.D
IMDATRSD80.D
82 75 09 2222 12 098. 22111112
      C 26. 52. 12.4 12.4 92 2
.001 .999 .027 .017 2
2 13 19.8 27.0 16.0 8.0 16.0
.580.219.101.028.002.003.067.000 13 AM 1 CBD PRINCIPAL ARTERIAL
2 13 18.7 27.0 16.0 8.0 16.0
.580.219.101.028.002.003.067.000 13 AM 1 CBD MINOR ARTERIAL
2 13 15.9 27.0 7.0 11.0 7.0
.580.219.101.028.002.003.067.000 13 AM 1 CBD COLLECTOR
2 13 11.2 27.0 7.0 11.0 7.0
.580.219.101.028.002.003.067.000 13 AM 1 CBD LOCAL
2 13 35.9 27.0 8.0 1.0 8.0
.556.223.103.033.002.003.080.000 13 AM 1 FRINGE FREEWAY
2 13 29.5 27.0 8.0 1.0 8.0
.556.223.103.033.002.003.080.000 13 AM 1 FRINGE MAJOR REGIONAL
2 13 25.8 27.0 41.0 5.0 42.0
.652.159.073.032.002.003.079.000 13 AM 1 FRINGE PRINCIPAL ARTERIAL
2 13 23.0 27.0 41.0 5.0 42.0
.652.159.073.032.002.003.079.000 13 AM 1 FRINGE MINOR ARTERIAL
2 13 19.5 27.0 22.0 2.0 22.0
.652.159.073.032.002.003.079.000 13 AM 1 FRINGE COLLECTOR
2 13 28.6 27.0 41.0 5.0 42.0
.652.159.073.032.002.003.079.000 13 AM 1 FRINGE RAMP
2 13 14.1 27.0 22.0 1.0 23.0
.652.159.073.032.002.003.079.000 13 AM 1 FRINGE LOCAL

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 13 40.4 27.0 22.0 2.0 22.0					
.629.192.089.025.002.003.060.000	13	AM	1	URBAN	FREEWAY
2 13 33.1 27.0 24.0 2.0 24.0					
.569.231.106.026.002.004.062.000	13	AM	1	URBAN	MAJOR REGIONAL
2 13 30.2 27.0 39.0 4.0 40.0					
.626.195.090.025.002.003.059.000	13	AM	1	URBAN	PRINCIPAL ARTERIAL
2 13 28.4 27.0 81.0 7.0 83.0					
.668.176.081.020.002.003.050.000	13	AM	1	URBAN	MINOR ARTERIAL
2 13 23.0 27.0 69.0 7.0 71.0					
.637.186.086.025.002.003.061.000	13	AM	1	URBAN	COLLECTOR
2 13 31.9 27.0 39.0 4.0 40.0					
.626.195.090.025.002.003.059.000	13	AM	1	URBAN	RAMP
2 13 17.1 27.0 44.0 4.0 46.0					
.637.186.086.025.002.003.061.000	13	AM	1	URBAN	LOCAL
2 13 46.2 27.0 28.0 2.0 28.0					
.555.239.110.026.002.004.064.000	13	AM	1	SUBURBAN	FREEWAY
2 13 35.4 27.0 19.0 2.0 19.0					
.498.247.114.039.002.004.096.000	13	AM	1	SUBURBAN	MAJOR REGIONAL
2 13 36.4 27.0 39.0 3.0 39.0					
.567.232.107.026.002.004.062.000	13	AM	1	SUBURBAN	PRINCIPAL ARTERIAL
2 13 32.8 27.0 77.0 8.0 77.0					
.622.199.092.024.002.003.058.000	13	AM	1	SUBURBAN	MINOR ARTERIAL
2 13 27.9 27.0 73.0 7.0 73.0					
.610.234.108.012.002.004.030.000	13	AM	1	SUBURBAN	COLLECTOR
2 13 29.5 27.0 39.0 3.0 39.0					
.567.232.107.026.002.004.062.000	13	AM	1	SUBURBAN	RAMP
2 13 19.8 27.0 52.0 5.0 52.0					
.610.234.108.012.002.004.030.000	13	AM	1	SUBURBAN	LOCAL
2 13 60.2 27.0 36.0 1.0 35.0					
.373.227.105.085.001.004.205.000	13	AM	1	RURAL	FREEWAY
2 13 46.6 27.0 8.0 0.0 8.0					
.477.230.106.053.002.004.128.000	13	AM	1	RURAL	MAJOR REGIONAL
2 13 42.5 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13	AM	1	RURAL	PRINCIPAL ARTERIAL
2 13 43.1 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13	AM	1	RURAL	MINOR ARTERIAL
2 13 32.2 27.0 57.0 2.0 57.0					
.549.243.112.026.002.004.064.000	13	AM	1	RURAL	COLLECTOR
2 13 35.5 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13	AM	1	RURAL	RAMP
2 13 21.5 27.0 57.0 2.0 57.0					
.549.243.112.026.002.004.064.000	13	AM	1	RURAL	LOCAL
2 13 15.5 27.0 16.0 8.0 16.0					
.580.219.101.028.002.003.067.000	13	AM	2	CBD	PRINCIPAL ARTERIAL
2 13 14.1 27.0 16.0 8.0 16.0					
.580.219.101.028.002.003.067.000	13	AM	2	CBD	MINOR ARTERIAL
2 13 13.5 27.0 7.0 11.0 7.0					
.580.219.101.028.002.003.067.000	13	AM	2	CBD	COLLECTOR
2 13 11.2 27.0 7.0 11.0 7.0					
.580.219.101.028.002.003.067.000	13	AM	2	CBD	LOCAL
2 13 29.4 27.0 8.0 1.0 8.0					
.556.223.103.033.002.003.080.000	13	AM	2	FRINGE	FREEWAY
2 13 22.7 27.0 8.0 1.0 8.0					
.556.223.103.033.002.003.080.000	13	AM	2	FRINGE	MAJOR REGIONAL
2 13 19.9 27.0 41.0 5.0 42.0					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	PRINCIPAL ARTERIAL
2 13 18.3 27.0 41.0 5.0 42.0					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	MINOR ARTERIAL
2 13 15.8 27.0 22.0 2.0 22.0					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	COLLECTOR
2 13 24.5 27.0 41.0 5.0 42.0					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	RAMP
2 13 14.1 27.0 22.0 1.0 23.0					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	LOCAL
2 13 34.0 27.0 22.0 2.0 22.0					
.629.192.089.025.002.003.060.000	13	AM	2	URBAN	FREEWAY
2 13 27.0 27.0 24.0 2.0 24.0					
.569.231.106.026.002.004.062.000	13	AM	2	URBAN	MAJOR REGIONAL
2 13 25.3 27.0 39.0 4.0 40.0					
.626.195.090.025.002.003.059.000	13	AM	2	URBAN	PRINCIPAL ARTERIAL
2 13 22.9 27.0 81.0 7.0 83.0					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.668.176.081.020.002.003.050.000	13	AM	2	URBAN	MINOR ARTERIAL
2 13 20.6 27.0 69.0 7.0 71.0					
.637.186.086.025.002.003.061.000	13	AM	2	URBAN	COLLECTOR
2 13 28.6 27.0 39.0 4.0 40.0					
.626.195.090.025.002.003.059.000	13	AM	2	URBAN	RAMP
2 13 17.1 27.0 44.0 4.0 46.0					
.637.186.086.025.002.003.061.000	13	AM	2	URBAN	LOCAL
2 13 39.6 27.0 28.0 2.0 28.0					
.555.239.110.026.002.004.064.000	13	AM	2	SUBURBAN	FREEWAY
2 13 28.5 27.0 19.0 2.0 19.0					
.498.247.114.039.002.004.096.000	13	AM	2	SUBURBAN	MAJOR REGIONAL
2 13 29.9 27.0 39.0 3.0 39.0					
.567.232.107.026.002.004.062.000	13	AM	2	SUBURBAN	PRINCIPAL ARTERIAL
2 13 26.6 27.0 77.0 8.0 77.0					
.622.199.092.024.002.003.058.000	13	AM	2	SUBURBAN	MINOR ARTERIAL
2 13 24.4 27.0 73.0 7.0 73.0					
.610.234.108.012.002.004.030.000	13	AM	2	SUBURBAN	COLLECTOR
2 13 26.2 27.0 39.0 3.0 39.0					
.567.232.107.026.002.004.062.000	13	AM	2	SUBURBAN	RAMP
2 13 19.8 27.0 52.0 5.0 52.0					
.610.234.108.012.002.004.030.000	13	AM	2	SUBURBAN	LOCAL
2 13 56.8 27.0 36.0 1.0 35.0					
.373.227.105.085.001.004.205.000	13	AM	2	RURAL	FREEWAY
2 13 41.0 27.0 8.0 0.0 8.0					
.477.230.106.053.002.004.128.000	13	AM	2	RURAL	MAJOR REGIONAL
2 13 38.4 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13	AM	2	RURAL	PRINCIPAL ARTERIAL
2 13 41.7 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13	AM	2	RURAL	MINOR ARTERIAL
2 13 30.8 27.0 57.0 2.0 57.0					
.549.243.112.026.002.004.064.000	13	AM	2	RURAL	COLLECTOR
2 13 31.8 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13	AM	2	RURAL	RAMP
2 13 21.5 27.0 57.0 2.0 57.0					
.549.243.112.026.002.004.064.000	13	AM	2	RURAL	LOCAL
2 13 11.3 27.0 16.0 8.0 16.0					
.580.219.101.028.002.003.067.000	13	AM	3	CBD	PRINCIPAL ARTERIAL
2 13 10.6 27.0 16.0 8.0 16.0					
.580.219.101.028.002.003.067.000	13	AM	3	CBD	MINOR ARTERIAL
2 13 11.1 27.0 7.0 11.0 7.0					
.580.219.101.028.002.003.067.000	13	AM	3	CBD	COLLECTOR
2 13 11.2 27.0 7.0 11.0 7.0					
.580.219.101.028.002.003.067.000	13	AM	3	CBD	LOCAL
2 13 23.3 27.0 8.0 1.0 8.0					
.556.223.103.033.002.003.080.000	13	AM	3	FRINGE	FREEWAY
2 13 16.5 27.0 8.0 1.0 8.0					
.556.223.103.033.002.003.080.000	13	AM	3	FRINGE	MAJOR REGIONAL
2 13 15.0 27.0 41.0 5.0 42.0					
.652.159.073.032.002.003.079.000	13	AM	3	FRINGE	PRINCIPAL ARTERIAL
2 13 14.5 27.0 41.0 5.0 42.0					
.652.159.073.032.002.003.079.000	13	AM	3	FRINGE	MINOR ARTERIAL
2 13 12.9 27.0 22.0 2.0 22.0					
.652.159.073.032.002.003.079.000	13	AM	3	FRINGE	COLLECTOR
2 13 20.7 27.0 41.0 5.0 42.0					
.652.159.073.032.002.003.079.000	13	AM	3	FRINGE	RAMP
2 13 14.1 27.0 22.0 1.0 23.0					
.652.159.073.032.002.003.079.000	13	AM	3	FRINGE	LOCAL
2 13 27.6 27.0 22.0 2.0 22.0					
.629.192.089.025.002.003.060.000	13	AM	3	URBAN	FREEWAY
2 13 21.2 27.0 24.0 2.0 24.0					
.569.231.106.026.002.004.062.000	13	AM	3	URBAN	MAJOR REGIONAL
2 13 20.7 27.0 39.0 4.0 40.0					
.626.195.090.025.002.003.059.000	13	AM	3	URBAN	PRINCIPAL ARTERIAL
2 13 18.8 27.0 81.0 7.0 83.0					
.668.176.081.020.002.003.050.000	13	AM	3	URBAN	MINOR ARTERIAL
2 13 17.9 27.0 69.0 7.0 71.0					
.637.186.086.025.002.003.061.000	13	AM	3	URBAN	COLLECTOR
2 13 25.5 27.0 39.0 4.0 40.0					
.626.195.090.025.002.003.059.000	13	AM	3	URBAN	RAMP
2 13 17.1 27.0 44.0 4.0 46.0					
.637.186.086.025.002.003.061.000	13	AM	3	URBAN	LOCAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 13 31.7 27.0 28.0 2.0 28.0					
.555.239.110.026.002.004.064.000	13 AM	3	SUBURBAN	FREEWAY	
2 13 22.9 27.0 19.0 2.0 19.0					
.498.247.114.039.002.004.096.000	13 AM	3	SUBURBAN	MAJOR REGIONAL	
2 13 24.2 27.0 39.0 3.0 39.0					
.567.232.107.026.002.004.062.000	13 AM	3	SUBURBAN	PRINCIPAL ARTERIAL	
2 13 21.2 27.0 77.0 8.0 77.0					
.622.199.092.024.002.003.058.000	13 AM	3	SUBURBAN	MINOR ARTERIAL	
2 13 21.3 27.0 73.0 7.0 73.0					
.610.234.108.012.002.004.030.000	13 AM	3	SUBURBAN	COLLECTOR	
2 13 23.6 27.0 39.0 3.0 39.0					
.567.232.107.026.002.004.062.000	13 AM	3	SUBURBAN	RAMP	
2 13 19.8 27.0 52.0 5.0 52.0					
.610.234.108.012.002.004.030.000	13 AM	3	SUBURBAN	LOCAL	
2 13 51.6 27.0 36.0 1.0 35.0					
.373.227.105.085.001.004.205.000	13 AM	3	RURAL	FREEWAY	
2 13 35.4 27.0 8.0 0.0 8.0					
.477.230.106.053.002.004.128.000	13 AM	3	RURAL	MAJOR REGIONAL	
2 13 33.9 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13 AM	3	RURAL	PRINCIPAL ARTERIAL	
2 13 38.5 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13 AM	3	RURAL	MINOR ARTERIAL	
2 13 29.4 27.0 57.0 2.0 57.0					
.549.243.112.026.002.004.064.000	13 AM	3	RURAL	COLLECTOR	
2 13 29.3 27.0 13.0 1.0 13.0					
.549.243.112.026.002.004.064.000	13 AM	3	RURAL	RAMP	
2 13 21.5 27.0 57.0 2.0 57.0					
.549.243.112.026.002.004.064.000	13 AM	3	RURAL	LOCAL	
2 13 22.4 52.0 46.0 12.0 59.0					
.633.178.082.030.002.003.072.000	13 PM	4	CBD	PRINCIPAL ARTERIAL	
2 13 19.3 52.0 46.0 12.0 59.0					
.633.178.082.030.002.003.072.000	13 PM	4	CBD	MINOR ARTERIAL	
2 13 16.4 52.0 45.0 8.0 56.0					
.633.178.082.030.002.003.072.000	13 PM	4	CBD	COLLECTOR	
2 13 11.2 52.0 45.0 8.0 56.0					
.633.178.082.030.002.003.072.000	13 PM	4	CBD	LOCAL	
2 13 36.7 52.0 8.0 7.0 12.0					
.533.246.113.030.002.004.072.000	13 PM	4	FRINGE	FREEWAY	
2 13 31.6 52.0 8.0 7.0 12.0					
.533.246.113.030.002.004.072.000	13 PM	4	FRINGE	MAJOR REGIONAL	
2 13 27.0 52.0 30.0 19.0 43.0					
.614.198.091.027.002.003.065.000	13 PM	4	FRINGE	PRINCIPAL ARTERIAL	
2 13 23.8 52.0 30.0 19.0 43.0					
.614.198.091.027.002.003.065.000	13 PM	4	FRINGE	MINOR ARTERIAL	
2 13 20.8 52.0 34.0 14.0 46.0					
.614.198.091.027.002.003.065.000	13 PM	4	FRINGE	COLLECTOR	
2 13 27.4 52.0 30.0 19.0 43.0					
.614.198.091.027.002.003.065.000	13 PM	4	FRINGE	RAMP	
2 13 14.1 52.0 34.0 14.0 46.0					
.614.198.091.027.002.003.065.000	13 PM	4	FRINGE	LOCAL	
2 13 41.7 52.0 8.0 7.0 12.0					
.603.212.098.024.002.003.058.000	13 PM	4	URBAN	FREEWAY	
2 13 35.5 52.0 15.0 14.0 23.0					
.573.246.113.018.002.004.044.000	13 PM	4	URBAN	MAJOR REGIONAL	
2 13 31.0 52.0 19.0 17.0 30.0					
.609.212.098.022.002.003.054.000	13 PM	4	URBAN	PRINCIPAL ARTERIAL	
2 13 29.1 52.0 39.0 37.0 60.0					
.633.212.098.015.002.003.037.000	13 PM	4	URBAN	MINOR ARTERIAL	
2 13 23.8 52.0 24.0 24.0 38.0					
.683.185.085.012.002.003.030.000	13 PM	4	URBAN	COLLECTOR	
2 13 31.3 52.0 19.0 17.0 30.0					
.609.212.098.022.002.003.054.000	13 PM	4	URBAN	RAMP	
2 13 17.1 52.0 19.0 19.0 31.0					
.683.185.085.012.002.003.030.000	13 PM	4	URBAN	LOCAL	
2 13 50.5 52.0 13.0 10.0 19.0					
.562.237.109.025.002.004.061.000	13 PM	4	SUBURBAN	FREEWAY	
2 13 39.1 52.0 14.0 23.0 22.0					
.462.287.132.033.002.005.079.000	13 PM	4	SUBURBAN	MAJOR REGIONAL	
2 13 38.1 52.0 12.0 11.0 18.0					
.544.259.119.021.002.004.051.000	13 PM	4	SUBURBAN	PRINCIPAL ARTERIAL	
2 13 35.9 52.0 25.0 24.0 37.0					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.583.234.108.020.002.004.049.000	13 PM	4	SUBURBAN	MINOR ARTERIAL
2 13 28.9 52.0 28.0 26.0 43.0				
.633.212.098.015.002.003.037.000	13 PM	4	SUBURBAN	COLLECTOR
2 13 31.9 52.0 12.0 11.0 18.0				
.544.259.119.021.002.004.051.000	13 PM	4	SUBURBAN	RAMP
2 13 19.8 52.0 19.0 18.0 29.0				
.633.212.098.015.002.003.037.000	13 PM	4	SUBURBAN	LOCAL
2 13 61.5 52.0 16.0 9.0 23.0				
.404.246.113.068.001.004.164.000	13 PM	4	RURAL	FREEWAY
2 13 48.4 52.0 3.0 2.0 5.0				
.483.266.123.036.002.004.086.000	13 PM	4	RURAL	MAJOR REGIONAL
2 13 45.2 52.0 16.0 13.0 24.0				
.602.226.104.018.002.004.044.000	13 PM	4	RURAL	PRINCIPAL ARTERIAL
2 13 43.5 52.0 16.0 13.0 24.0				
.602.226.104.018.002.004.044.000	13 PM	4	RURAL	MINOR ARTERIAL
2 13 33.9 52.0 23.0 13.0 34.0				
.602.226.104.018.002.004.044.000	13 PM	4	RURAL	COLLECTOR
2 13 37.6 52.0 16.0 13.0 24.0				
.602.226.104.018.002.004.044.000	13 PM	4	RURAL	RAMP
2 13 21.3 52.0 23.0 13.0 34.0				
.602.226.104.018.002.004.044.000	13 PM	4	RURAL	LOCAL
2 13 15.5 52.0 46.0 12.0 59.0				
.633.178.082.030.002.003.072.000	13 PM	5	CBD	PRINCIPAL ARTERIAL
2 13 13.5 52.0 46.0 12.0 59.0				
.633.178.082.030.002.003.072.000	13 PM	5	CBD	MINOR ARTERIAL
2 13 13.1 52.0 45.0 8.0 56.0				
.633.178.082.030.002.003.072.000	13 PM	5	CBD	COLLECTOR
2 13 11.2 52.0 45.0 8.0 56.0				
.633.178.082.030.002.003.072.000	13 PM	5	CBD	LOCAL
2 13 28.3 52.0 8.0 7.0 12.0				
.533.246.113.030.002.004.072.000	13 PM	5	FRINGE	FREEWAY
2 13 25.0 52.0 8.0 7.0 12.0				
.533.246.113.030.002.004.072.000	13 PM	5	FRINGE	MAJOR REGIONAL
2 13 19.6 52.0 30.0 19.0 43.0				
.614.198.091.027.002.003.065.000	13 PM	5	FRINGE	PRINCIPAL ARTERIAL
2 13 17.8 52.0 30.0 19.0 43.0				
.614.198.091.027.002.003.065.000	13 PM	5	FRINGE	MINOR ARTERIAL
2 13 17.7 52.0 34.0 14.0 46.0				
.614.198.091.027.002.003.065.000	13 PM	5	FRINGE	COLLECTOR
2 13 23.0 52.0 30.0 19.0 43.0				
.614.198.091.027.002.003.065.000	13 PM	5	FRINGE	RAMP
2 13 14.1 52.0 34.0 14.0 46.0				
.614.198.091.027.002.003.065.000	13 PM	5	FRINGE	LOCAL
2 13 31.7 52.0 8.0 7.0 12.0				
.603.212.098.024.002.003.058.000	13 PM	5	URBAN	FREEWAY
2 13 26.0 52.0 15.0 14.0 23.0				
.573.246.113.018.002.004.044.000	13 PM	5	URBAN	MAJOR REGIONAL
2 13 24.3 52.0 19.0 17.0 30.0				
.609.212.098.022.002.003.054.000	13 PM	5	URBAN	PRINCIPAL ARTERIAL
2 13 22.6 52.0 39.0 37.0 60.0				
.633.212.098.015.002.003.037.000	13 PM	5	URBAN	MINOR ARTERIAL
2 13 21.2 52.0 24.0 24.0 38.0				
.683.185.085.012.002.003.030.000	13 PM	5	URBAN	COLLECTOR
2 13 27.5 52.0 19.0 17.0 30.0				
.609.212.098.022.002.003.054.000	13 PM	5	URBAN	RAMP
2 13 17.1 52.0 19.0 19.0 31.0				
.683.185.085.012.002.003.030.000	13 PM	5	URBAN	LOCAL
2 13 41.7 52.0 13.0 10.0 19.0				
.562.237.109.025.002.004.061.000	13 PM	5	SUBURBAN	FREEWAY
2 13 30.8 52.0 14.0 23.0 22.0				
.462.287.132.033.002.005.079.000	13 PM	5	SUBURBAN	MAJOR REGIONAL
2 13 31.1 52.0 12.0 11.0 18.0				
.544.259.119.021.002.004.051.000	13 PM	5	SUBURBAN	PRINCIPAL ARTERIAL
2 13 29.9 52.0 25.0 24.0 37.0				
.583.234.108.020.002.004.049.000	13 PM	5	SUBURBAN	MINOR ARTERIAL
2 13 26.1 52.0 28.0 26.0 43.0				
.633.212.098.015.002.003.037.000	13 PM	5	SUBURBAN	COLLECTOR
2 13 27.7 52.0 12.0 11.0 18.0				
.544.259.119.021.002.004.051.000	13 PM	5	SUBURBAN	RAMP
2 13 19.8 52.0 19.0 18.0 29.0				
.633.212.098.015.002.003.037.000	13 PM	5	SUBURBAN	LOCAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 13 58.5 52.0 16.0 9.0 23.0					
.404.246.113.068.001.004.164.000	13	PM	5	RURAL	FREEWAY
2 13 44.5 52.0 3.0 2.0 5.0					
.483.266.123.036.002.004.086.000	13	PM	5	RURAL	MAJOR REGIONAL
2 13 40.8 52.0 16.0 13.0 24.0					
.602.226.104.018.002.004.044.000	13	PM	5	RURAL	PRINCIPAL ARTERIAL
2 13 42.7 52.0 16.0 13.0 24.0					
.602.226.104.018.002.004.044.000	13	PM	5	RURAL	MINOR ARTERIAL
2 13 32.8 52.0 23.0 13.0 34.0					
.602.226.104.018.002.004.044.000	13	PM	5	RURAL	COLLECTOR
2 13 35.4 52.0 16.0 13.0 24.0					
.602.226.104.018.002.004.044.000	13	PM	5	RURAL	RAMP
2 13 21.3 52.0 23.0 13.0 34.0					
.602.226.104.018.002.004.044.000	13	PM	5	RURAL	LOCAL
2 13 11.6 52.0 46.0 12.0 59.0					
.633.178.082.030.002.003.072.000	13	PM	6	CBD	PRINCIPAL ARTERIAL
2 13 9.7 52.0 46.0 12.0 59.0					
.633.178.082.030.002.003.072.000	13	PM	6	CBD	MINOR ARTERIAL
2 13 10.4 52.0 45.0 8.0 56.0					
.633.178.082.030.002.003.072.000	13	PM	6	CBD	COLLECTOR
2 13 11.2 52.0 45.0 8.0 56.0					
.633.178.082.030.002.003.072.000	13	PM	6	CBD	LOCAL
2 13 22.6 52.0 8.0 7.0 12.0					
.533.246.113.030.002.004.072.000	13	PM	6	FRINGE	FREEWAY
2 13 19.5 52.0 8.0 7.0 12.0					
.533.246.113.030.002.004.072.000	13	PM	6	FRINGE	MAJOR REGIONAL
2 13 15.1 52.0 30.0 19.0 43.0					
.614.198.091.027.002.003.065.000	13	PM	6	FRINGE	PRINCIPAL ARTERIAL
2 13 13.6 52.0 30.0 19.0 43.0					
.614.198.091.027.002.003.065.000	13	PM	6	FRINGE	MINOR ARTERIAL
2 13 14.1 52.0 34.0 14.0 46.0					
.614.198.091.027.002.003.065.000	13	PM	6	FRINGE	COLLECTOR
2 13 19.5 52.0 30.0 19.0 43.0					
.614.198.091.027.002.003.065.000	13	PM	6	FRINGE	RAMP
2 13 14.1 52.0 34.0 14.0 46.0					
.614.198.091.027.002.003.065.000	13	PM	6	FRINGE	LOCAL
2 13 25.2 52.0 8.0 7.0 12.0					
.603.212.098.024.002.003.058.000	13	PM	6	URBAN	FREEWAY
2 13 20.7 52.0 15.0 14.0 23.0					
.573.246.113.018.002.004.044.000	13	PM	6	URBAN	MAJOR REGIONAL
2 13 19.4 52.0 19.0 17.0 30.0					
.609.212.098.022.002.003.054.000	13	PM	6	URBAN	PRINCIPAL ARTERIAL
2 13 17.5 52.0 39.0 37.0 60.0					
.633.212.098.015.002.003.037.000	13	PM	6	URBAN	MINOR ARTERIAL
2 13 18.5 52.0 24.0 24.0 38.0					
.683.185.085.012.002.003.030.000	13	PM	6	URBAN	COLLECTOR
2 13 24.9 52.0 19.0 17.0 30.0					
.609.212.098.022.002.003.054.000	13	PM	6	URBAN	RAMP
2 13 17.1 52.0 19.0 19.0 31.0					
.683.185.085.012.002.003.030.000	13	PM	6	URBAN	LOCAL
2 13 34.6 52.0 13.0 10.0 19.0					
.562.237.109.025.002.004.061.000	13	PM	6	SUBURBAN	FREEWAY
2 13 25.2 52.0 14.0 23.0 22.0					
.462.287.132.033.002.005.079.000	13	PM	6	SUBURBAN	MAJOR REGIONAL
2 13 25.4 52.0 12.0 11.0 18.0					
.544.259.119.021.002.004.051.000	13	PM	6	SUBURBAN	PRINCIPAL ARTERIAL
2 13 24.2 52.0 25.0 24.0 37.0					
.583.234.108.020.002.004.049.000	13	PM	6	SUBURBAN	MINOR ARTERIAL
2 13 23.3 52.0 28.0 26.0 43.0					
.633.212.098.015.002.003.037.000	13	PM	6	SUBURBAN	COLLECTOR
2 13 25.4 52.0 12.0 11.0 18.0					
.544.259.119.021.002.004.051.000	13	PM	6	SUBURBAN	RAMP
2 13 19.8 52.0 19.0 18.0 29.0					
.633.212.098.015.002.003.037.000	13	PM	6	SUBURBAN	LOCAL
2 13 53.9 52.0 16.0 9.0 23.0					
.404.246.113.068.001.004.164.000	13	PM	6	RURAL	FREEWAY
2 13 39.0 52.0 3.0 2.0 5.0					
.483.266.123.036.002.004.086.000	13	PM	6	RURAL	MAJOR REGIONAL
2 13 37.1 52.0 16.0 13.0 24.0					
.602.226.104.018.002.004.044.000	13	PM	6	RURAL	PRINCIPAL ARTERIAL
2 13 39.9 52.0 16.0 13.0 24.0					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.602.226.104.018.002.004.044.000	13 PM 6 RURAL	MINOR ARTERIAL
2 13 31.7 52.0 23.0 13.0 34.0		
.602.226.104.018.002.004.044.000	13 PM 6 RURAL	COLLECTOR
2 13 32.9 52.0 16.0 13.0 24.0		
.602.226.104.018.002.004.044.000	13 PM 6 RURAL	RAMP
2 13 21.3 52.0 23.0 13.0 34.0		
.602.226.104.018.002.004.044.000	13 PM 6 RURAL	LOCAL
2 13 27.0 36.0 21.0 17.0 43.0		
.575.218.100.030.002.003.072.000	13 OFF 7 CBD	PRINCIPAL ARTERIAL
2 13 25.1 36.0 21.0 17.0 43.0		
.575.218.100.030.002.003.072.000	13 OFF 7 CBD	MINOR ARTERIAL
2 13 20.0 36.0 16.0 12.0 35.0		
.575.218.100.030.002.003.072.000	13 OFF 7 CBD	COLLECTOR
2 13 11.2 36.0 16.0 12.0 35.0		
.575.218.100.030.002.003.072.000	13 OFF 7 CBD	LOCAL
2 13 55.0 36.0 9.0 10.0 16.0		
.503.246.113.039.002.004.093.000	13 OFF 7 FRINGE	FREEWAY
2 13 39.8 36.0 9.0 10.0 16.0		
.503.246.113.039.002.004.093.000	13 OFF 7 FRINGE	MAJOR REGIONAL
2 13 35.0 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	PRINCIPAL ARTERIAL
2 13 30.0 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	MINOR ARTERIAL
2 13 25.0 36.0 15.0 19.0 29.0		
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	COLLECTOR
2 13 38.9 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	RAMP
2 13 14.1 36.0 15.0 19.0 29.0		
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	LOCAL
2 13 58.0 36.0 14.0 14.0 23.0		
.603.205.095.027.002.003.065.000	13 OFF 7 URBAN	FREEWAY
2 13 45.0 36.0 14.0 14.0 24.0		
.533.253.116.027.002.004.065.000	13 OFF 7 URBAN	MAJOR REGIONAL
2 13 37.0 36.0 20.0 21.0 34.0		
.615.215.099.019.002.003.047.000	13 OFF 7 URBAN	PRINCIPAL ARTERIAL
2 13 35.0 36.0 33.0 33.0 54.0		
.643.185.085.024.002.003.058.000	13 OFF 7 URBAN	MINOR ARTERIAL
2 13 25.0 36.0 26.0 28.0 43.0		
.643.212.098.012.002.003.030.000	13 OFF 7 URBAN	COLLECTOR
2 13 39.0 36.0 20.0 21.0 34.0		
.615.215.099.019.002.003.047.000	13 OFF 7 URBAN	RAMP
2 13 17.1 36.0 18.0 20.0 20.0		
.643.212.098.012.002.003.030.000	13 OFF 7 URBAN	LOCAL
2 13 58.0 36.0 13.0 11.0 21.0		
.534.238.110.033.002.004.079.000	13 OFF 7 SUBURBAN	FREEWAY
2 13 45.0 36.0 15.0 15.0 25.0		
.463.280.129.036.002.004.086.000	13 OFF 7 SUBURBAN	MAJOR REGIONAL
2 13 45.0 36.0 22.0 21.0 36.0		
.593.212.098.027.002.003.065.000	13 OFF 7 SUBURBAN	PRINCIPAL ARTERIAL
2 13 39.8 36.0 32.0 30.0 52.0		
.594.217.100.025.002.003.059.000	13 OFF 7 SUBURBAN	MINOR ARTERIAL
2 13 30.0 36.0 23.0 22.0 37.0		
.553.273.126.012.002.004.030.000	13 OFF 7 SUBURBAN	COLLECTOR
2 13 39.0 36.0 22.0 21.0 36.0		
.593.212.098.027.002.003.065.000	13 OFF 7 SUBURBAN	RAMP
2 13 19.7 36.0 19.0 19.0 32.0		
.553.273.126.012.002.004.030.000	13 OFF 7 SUBURBAN	LOCAL
2 13 63.0 36.0 15.0 9.0 25.0		
.423.226.104.071.001.004.171.000	13 OFF 7 RURAL	FREEWAY
2 13 49.0 36.0 4.0 2.0 6.0		
.473.246.113.047.002.004.115.000	13 OFF 7 RURAL	MAJOR REGIONAL
2 13 48.0 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	PRINCIPAL ARTERIAL
2 13 44.0 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	MINOR ARTERIAL
2 13 35.0 36.0 23.0 13.0 48.0		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	COLLECTOR
2 13 39.1 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	RAMP
2 13 20.6 36.0 23.0 13.0 48.0		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	LOCAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 13 26.2 36.0 21.0 17.0 43.0		
.575.218.100.030.002.003.072.000	13 OFF 8 CBD	PRINCIPAL ARTERIAL
2 13 24.3 36.0 21.0 17.0 43.0		
.575.218.100.030.002.003.072.000	13 OFF 8 CBD	MINOR ARTERIAL
2 13 19.3 36.0 16.0 12.0 35.0		
.575.218.100.030.002.003.072.000	13 OFF 8 CBD	COLLECTOR
2 13 11.2 36.0 16.0 12.0 35.0		
.575.218.100.030.002.003.072.000	13 OFF 8 CBD	LOCAL
2 13 51.3 36.0 9.0 10.0 16.0		
.503.246.113.039.002.004.093.000	13 OFF 8 FRINGE	FREEWAY
2 13 38.4 36.0 9.0 10.0 16.0		
.503.246.113.039.002.004.093.000	13 OFF 8 FRINGE	MAJOR REGIONAL
2 13 34.0 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	PRINCIPAL ARTERIAL
2 13 28.9 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	MINOR ARTERIAL
2 13 24.4 36.0 15.0 19.0 29.0		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	COLLECTOR
2 13 36.2 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	RAMP
2 13 14.1 36.0 15.0 19.0 29.0		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	LOCAL
2 13 54.7 36.0 14.0 14.0 23.0		
.603.205.095.027.002.003.065.000	13 OFF 8 URBAN	FREEWAY
2 13 43.3 36.0 14.0 14.0 24.0		
.533.253.116.027.002.004.065.000	13 OFF 8 URBAN	MAJOR REGIONAL
2 13 36.3 36.0 20.0 21.0 34.0		
.615.215.099.019.002.003.047.000	13 OFF 8 URBAN	PRINCIPAL ARTERIAL
2 13 34.3 36.0 33.0 33.0 54.0		
.643.185.085.024.002.003.058.000	13 OFF 8 URBAN	MINOR ARTERIAL
2 13 24.8 36.0 26.0 28.0 43.0		
.643.212.098.012.002.003.030.000	13 OFF 8 URBAN	COLLECTOR
2 13 36.7 36.0 20.0 21.0 34.0		
.615.215.099.019.002.003.047.000	13 OFF 8 URBAN	RAMP
2 13 17.1 36.0 18.0 20.0 20.0		
.643.212.098.012.002.003.030.000	13 OFF 8 URBAN	LOCAL
2 13 57.0 36.0 13.0 11.0 21.0		
.534.238.110.033.002.004.079.000	13 OFF 8 SUBURBAN	FREEWAY
2 13 44.4 36.0 15.0 15.0 25.0		
.463.280.129.036.002.004.086.000	13 OFF 8 SUBURBAN	MAJOR REGIONAL
2 13 44.1 36.0 22.0 21.0 36.0		
.593.212.098.027.002.003.065.000	13 OFF 8 SUBURBAN	PRINCIPAL ARTERIAL
2 13 39.3 36.0 32.0 30.0 52.0		
.594.217.100.025.002.003.059.000	13 OFF 8 SUBURBAN	MINOR ARTERIAL
2 13 29.9 36.0 23.0 22.0 37.0		
.553.273.126.012.002.004.030.000	13 OFF 8 SUBURBAN	COLLECTOR
2 13 36.6 36.0 22.0 21.0 36.0		
.593.212.098.027.002.003.065.000	13 OFF 8 SUBURBAN	RAMP
2 13 19.8 36.0 19.0 19.0 32.0		
.553.273.126.012.002.004.030.000	13 OFF 8 SUBURBAN	LOCAL
2 13 62.9 36.0 15.0 9.0 25.0		
.423.226.104.071.001.004.171.000	13 OFF 8 RURAL	FREEWAY
2 13 49.0 36.0 4.0 2.0 6.0		
.473.246.113.047.002.004.115.000	13 OFF 8 RURAL	MAJOR REGIONAL
2 13 47.6 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 8 RURAL	PRINCIPAL ARTERIAL
2 13 44.0 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 8 RURAL	MINOR ARTERIAL
2 13 34.8 36.0 23.0 13.0 48.0		
.443.293.135.036.002.005.086.000	13 OFF 8 RURAL	COLLECTOR
2 13 38.9 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 8 RURAL	RAMP
2 13 20.6 36.0 23.0 13.0 48.0		
.443.293.135.036.002.005.086.000	13 OFF 8 RURAL	LOCAL
2 13 25.4 36.0 21.0 17.0 43.0		
.575.218.100.030.002.003.072.000	13 OFF 9 CBD	PRINCIPAL ARTERIAL
2 13 23.3 36.0 21.0 17.0 43.0		
.575.218.100.030.002.003.072.000	13 OFF 9 CBD	MINOR ARTERIAL
2 13 18.7 36.0 16.0 12.0 35.0		
.575.218.100.030.002.003.072.000	13 OFF 9 CBD	COLLECTOR
2 13 11.2 36.0 16.0 12.0 35.0		

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.575.218.100.030.002.003.072.000	13 OFF 9 CBD	LOCAL
2 13 46.5 36.0 9.0 10.0 16.0		
.503.246.113.039.002.004.093.000	13 OFF 9 FRINGE	FREEWAY
2 13 35.9 36.0 9.0 10.0 16.0		
.503.246.113.039.002.004.093.000	13 OFF 9 FRINGE	MAJOR REGIONAL
2 13 31.9 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 9 FRINGE	PRINCIPAL ARTERIAL
2 13 27.6 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 9 FRINGE	MINOR ARTERIAL
2 13 23.2 36.0 15.0 19.0 29.0		
.633.192.088.024.002.003.058.000	13 OFF 9 FRINGE	COLLECTOR
2 13 33.0 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF 9 FRINGE	RAMP
2 13 14.1 36.0 15.0 19.0 29.0		
.633.192.088.024.002.003.058.000	13 OFF 9 FRINGE	LOCAL
2 13 50.3 36.0 14.0 14.0 23.0		
.603.205.095.027.002.003.065.000	13 OFF 9 URBAN	FREEWAY
2 13 41.3 36.0 14.0 14.0 24.0		
.533.253.116.027.002.004.065.000	13 OFF 9 URBAN	MAJOR REGIONAL
2 13 35.1 36.0 20.0 21.0 34.0		
.615.215.099.019.002.003.047.000	13 OFF 9 URBAN	PRINCIPAL ARTERIAL
2 13 33.0 36.0 33.0 33.0 54.0		
.643.185.085.024.002.003.058.000	13 OFF 9 URBAN	MINOR ARTERIAL
2 13 24.6 36.0 26.0 28.0 43.0		
.643.212.098.012.002.003.030.000	13 OFF 9 URBAN	COLLECTOR
2 13 35.1 36.0 20.0 21.0 34.0		
.615.215.099.019.002.003.047.000	13 OFF 9 URBAN	RAMP
2 13 17.1 36.0 18.0 20.0 20.0		
.643.212.098.012.002.003.030.000	13 OFF 9 URBAN	LOCAL
2 13 54.9 36.0 13.0 11.0 21.0		
.534.238.110.033.002.004.079.000	13 OFF 9 SUBURBAN	FREEWAY
2 13 43.2 36.0 15.0 15.0 25.0		
.463.280.129.036.002.004.086.000	13 OFF 9 SUBURBAN	MAJOR REGIONAL
2 13 42.4 36.0 22.0 21.0 36.0		
.593.212.098.027.002.003.065.000	13 OFF 9 SUBURBAN	PRINCIPAL ARTERIAL
2 13 38.6 36.0 32.0 30.0 52.0		
.594.217.100.025.002.003.059.000	13 OFF 9 SUBURBAN	MINOR ARTERIAL
2 13 29.7 36.0 23.0 22.0 37.0		
.553.273.126.012.002.004.030.000	13 OFF 9 SUBURBAN	COLLECTOR
2 13 35.3 36.0 22.0 21.0 36.0		
.593.212.098.027.002.003.065.000	13 OFF 9 SUBURBAN	RAMP
2 13 19.8 36.0 19.0 19.0 32.0		
.553.273.126.012.002.004.030.000	13 OFF 9 SUBURBAN	LOCAL
2 13 62.6 36.0 15.0 9.0 25.0		
.423.226.104.071.001.004.171.000	13 OFF 9 RURAL	FREEWAY
2 13 49.0 36.0 4.0 2.0 6.0		
.473.246.113.047.002.004.115.000	13 OFF 9 RURAL	MAJOR REGIONAL
2 13 47.2 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 9 RURAL	PRINCIPAL ARTERIAL
2 13 43.9 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 9 RURAL	MINOR ARTERIAL
2 13 34.7 36.0 23.0 13.0 48.0		
.443.293.135.036.002.005.086.000	13 OFF 9 RURAL	COLLECTOR
2 13 38.7 36.0 18.0 12.0 29.0		
.443.293.135.036.002.005.086.000	13 OFF 9 RURAL	RAMP
2 13 20.7 36.0 23.0 13.0 48.0		
.443.293.135.036.002.005.086.000	13 OFF 9 RURAL	LOCAL
2 13 24.4 36.0 21.0 17.0 43.0		
.575.218.100.030.002.003.072.000	13 OFF10 CBD	PRINCIPAL ARTERIAL
2 13 21.9 36.0 21.0 17.0 43.0		
.575.218.100.030.002.003.072.000	13 OFF10 CBD	MINOR ARTERIAL
2 13 18.1 36.0 16.0 12.0 35.0		
.575.218.100.030.002.003.072.000	13 OFF10 CBD	COLLECTOR
2 13 11.2 36.0 16.0 12.0 35.0		
.575.218.100.030.002.003.072.000	13 OFF10 CBD	LOCAL
2 13 42.2 36.0 9.0 10.0 16.0		
.503.246.113.039.002.004.093.000	13 OFF10 FRINGE	FREEWAY
2 13 32.8 36.0 9.0 10.0 16.0		
.503.246.113.039.002.004.093.000	13 OFF10 FRINGE	MAJOR REGIONAL
2 13 29.6 36.0 22.0 25.0 39.0		
.633.192.088.024.002.003.058.000	13 OFF10 FRINGE	PRINCIPAL ARTERIAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2 13 25.6 36.0 22.0 25.0 39.0			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	MINOR ARTERIAL
2 13 22.4 36.0 15.0 19.0 29.0			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	COLLECTOR
2 13 29.9 36.0 22.0 25.0 39.0			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	RAMP
2 13 14.1 36.0 15.0 19.0 29.0			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	LOCAL
2 13 45.8 36.0 14.0 14.0 23.0			
.603.205.095.027.002.003.065.000	13	OFF10 URBAN	FREEWAY
2 13 38.3 36.0 14.0 14.0 24.0			
.533.253.116.027.002.004.065.000	13	OFF10 URBAN	MAJOR REGIONAL
2 13 33.3 36.0 20.0 21.0 34.0			
.615.215.099.019.002.003.047.000	13	OFF10 URBAN	PRINCIPAL ARTERIAL
2 13 31.2 36.0 33.0 33.0 54.0			
.643.185.085.024.002.003.058.000	13	OFF10 URBAN	MINOR ARTERIAL
2 13 24.4 36.0 26.0 28.0 43.0			
.643.212.098.012.002.003.030.000	13	OFF10 URBAN	COLLECTOR
2 13 33.6 36.0 20.0 21.0 34.0			
.615.215.099.019.002.003.047.000	13	OFF10 URBAN	RAMP
2 13 17.1 36.0 18.0 20.0 20.0			
.643.212.098.012.002.003.030.000	13	OFF10 URBAN	LOCAL
2 13 52.6 36.0 13.0 11.0 21.0			
.534.238.110.033.002.004.079.000	13	OFF10 SUBURBAN	FREEWAY
2 13 41.4 36.0 15.0 15.0 25.0			
.463.280.129.036.002.004.086.000	13	OFF10 SUBURBAN	MAJOR REGIONAL
2 13 40.5 36.0 22.0 21.0 36.0			
.593.212.098.027.002.003.065.000	13	OFF10 SUBURBAN	PRINCIPAL ARTERIAL
2 13 37.2 36.0 32.0 30.0 52.0			
.594.217.100.025.002.003.059.000	13	OFF10 SUBURBAN	MINOR ARTERIAL
2 13 29.4 36.0 23.0 22.0 37.0			
.553.273.126.012.002.004.030.000	13	OFF10 SUBURBAN	COLLECTOR
2 13 33.6 36.0 22.0 21.0 36.0			
.593.212.098.027.002.003.065.000	13	OFF10 SUBURBAN	RAMP
2 13 19.8 36.0 19.0 19.0 32.0			
.553.273.126.012.002.004.030.000	13	OFF10 SUBURBAN	LOCAL
2 13 62.0 36.0 15.0 9.0 25.0			
.423.226.104.071.001.004.171.000	13	OFF10 RURAL	FREEWAY
2 13 48.9 36.0 4.0 2.0 6.0			
.473.246.113.047.002.004.115.000	13	OFF10 RURAL	MAJOR REGIONAL
2 13 46.6 36.0 18.0 12.0 29.0			
.443.293.135.036.002.005.086.000	13	OFF10 RURAL	PRINCIPAL ARTERIAL
2 13 43.8 36.0 18.0 12.0 29.0			
.443.293.135.036.002.005.086.000	13	OFF10 RURAL	MINOR ARTERIAL
2 13 34.5 36.0 23.0 13.0 48.0			
.443.293.135.036.002.005.086.000	13	OFF10 RURAL	COLLECTOR
2 13 38.5 36.0 18.0 12.0 29.0			
.443.293.135.036.002.005.086.000	13	OFF10 RURAL	RAMP
2 13 20.6 36.0 23.0 13.0 48.0			
.443.293.135.036.002.005.086.000	13	OFF10 RURAL	LOCAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

12013 RAQC 6/16 strats; I/M 240 w/4 yr exempt, 80%rsd, 1.7% oxy
 MOBILE5b (14-Sep-96)

0
 -M 22 Warning:
 + 0.346E-01 mileage with zero registration
 -M 22 Warning:
 + 0.626E-01 mileage with zero registration
 -M 22 Warning:
 + 0.373E-01 mileage with zero registration
 -M 22 Warning:
 + 0.222E-01 mileage with zero registration

OR	Amb.				P														
e					o														
g	CY	Tmp	Cold/Hot	Start	l	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	AllVeh	LDGV	LDGT1L		
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	16.0	8.0	16.0	2	16.77	22.82	25.74	23.74	39.87	1.27	2.28	17.86	0.00	19.65	.580	.219	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	16.0	8.0	16.0	2	17.44	23.63	26.65	24.58	42.38	1.35	2.41	18.93	0.00	20.44	.580	.219	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	7.0	11.0	7.0	2	17.75	23.40	26.77	24.46	50.13	1.50	2.70	22.18	0.00	21.03	.580	.219	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	7.0	11.0	7.0	2	21.75	28.26	32.33	29.54	69.07	2.01	3.63	29.87	0.00	26.02	.580	.219	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	8.0	1.0	8.0	2	7.37	10.71	12.25	11.20	22.07	0.64	1.15	9.79	0.00	9.26	.556	.223	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	8.0	1.0	8.0	2	9.63	13.55	15.50	14.16	26.08	0.77	1.38	11.75	0.00	11.78	.556	.223	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	41.0	5.0	42.0	2	14.53	21.19	23.12	21.80	29.92	1.15	2.05	13.51	0.00	16.56	.652	.159	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	41.0	5.0	42.0	2	16.77	24.16	26.36	24.85	33.87	1.30	2.32	15.27	0.00	19.00	.652	.159	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	22.0	2.0	22.0	2	17.82	24.57	27.50	25.49	40.53	1.32	2.35	18.14	0.00	20.27	.652	.159	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	41.0	5.0	42.0	2	12.73	18.81	20.52	19.34	26.89	1.04	1.84	12.13	0.00	14.61	.652	.159	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	22.0	1.0	23.0	2	21.28	29.02	32.44	30.10	56.35	1.80	3.20	24.74	0.00	24.63	.652	.159	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	22.0	2.0	22.0	2	6.85	10.48	11.73	10.88	20.72	0.65	1.16	9.01	0.00	8.43	.629	.192	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	24.0	2.0	24.0	2	9.25	13.64	15.22	14.14	23.48	0.78	1.38	10.51	0.00	11.30	.569	.231	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	39.0	4.0	40.0	2	11.70	17.39	19.02	17.90	25.49	0.97	1.71	11.48	0.00	13.75	.626	.195	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	81.0	7.0	83.0	2	20.03	30.40	31.93	30.88	27.08	1.49	2.62	12.22	0.00	22.48	.668	.176	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	69.0	7.0	71.0	2	22.95	33.79	35.83	34.44	33.87	1.68	2.96	15.27	0.00	25.78	.637	.186	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	39.0	4.0	40.0	2	10.88	16.30	17.82	16.78	24.24	0.91	1.62	10.88	0.00	12.85	.626	.195	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	44.0	4.0	46.0	2	22.72	32.17	34.94	33.05	46.55	1.81	3.22	20.69	0.00	25.90	.637	.186	..
0	Emission	factors	are	as	of	Jan.	1st	of	the	indicated	calendar	year.							
2	13	27	28.0	2.0	28.0	2	5.82	9.31	10.33	9.63	20.39	0.65	1.16	8.54	0.00	7.67	.555	.239	..

Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	19.0	2.0	19.0	2	8.13	12.02	13.52	12.50	22.29	0.71	1.26	9.91	0.00	10.39	.498 .247 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	39.0	3.0	39.0	2	8.99	13.78	15.09	14.19	21.87	0.81	1.43	9.69	0.00	11.08	.567 .232 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	77.0	8.0	77.0	2	15.55	24.04	25.36	24.46	23.66	1.24	2.18	10.60	0.00	17.98	.622 .199 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	73.0	7.0	73.0	2	18.33	27.63	29.24	28.14	27.57	1.39	2.46	12.45	0.00	21.52	.610 .234 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	39.0	3.0	39.0	2	11.98	17.73	19.41	18.26	26.08	0.98	1.73	11.75	0.00	14.40	.567 .232 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	52.0	5.0	52.0	2	22.31	32.00	34.53	32.80	39.87	1.66	2.94	17.86	0.00	25.86	.610 .234 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	36.0	1.0	35.0	2	8.49	13.38	14.73	13.80	26.62	0.78	1.37	9.66	0.00	12.00	.373 .227 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	8.0	0.0	8.0	2	4.97	7.70	8.81	8.05	20.42	0.56	0.99	8.53	0.00	7.26	.477 .230 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	13.0	1.0	13.0	2	5.96	9.08	10.30	9.46	20.42	0.60	1.06	8.77	0.00	7.73	.549 .243 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	13.0	1.0	13.0	2	5.83	8.92	10.12	9.30	20.37	0.59	1.05	8.72	0.00	7.59	.549 .243 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	57.0	2.0	57.0	2	12.53	19.15	20.58	19.60	24.04	1.03	1.81	10.78	0.00	15.16	.549 .243 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	13.0	1.0	13.0	2	7.75	11.36	12.89	11.84	22.24	0.67	1.19	9.89	0.00	9.68	.549 .243 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	57.0	2.0	57.0	2	20.99	30.53	32.82	31.25	36.46	1.56	2.76	16.39	0.00	24.63	.549 .243 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	16.0	8.0	16.0	2	19.22	25.84	29.15	26.89	51.42	1.62	2.90	22.71	0.00	22.72	.580 .219 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	16.0	8.0	16.0	2	20.25	27.13	30.60	28.22	56.35	1.76	3.16	24.74	0.00	24.03	.580 .219 ..
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	7.0	11.0	7.0	2	19.44	25.46	29.12	26.62							

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	13	27	39.0	4.0	40.0	2	14.71	21.37	23.37	22.00	30.55	1.16	2.06	13.79	0.00	17.07	.626	.195	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	81.0	7.0	83.0	2	26.29	38.93	40.88	39.55	34.03	1.87	3.29	15.34	0.00	29.19	.668	.176	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	69.0	7.0	71.0	2	26.24	38.25	40.55	38.98	38.20	1.88	3.32	17.14	0.00	29.33	.637	.186	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	39.0	4.0	40.0	2	12.57	18.54	20.27	19.09	26.89	1.02	1.81	12.13	0.00	14.71	.626	.195	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	44.0	4.0	46.0	2	22.72	32.17	34.94	33.05	46.55	1.81	3.22	20.69	0.00	25.90	.637	.186	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	28.0	2.0	28.0	2	7.37	11.33	12.58	11.72	20.88	0.69	1.23	9.12	0.00	9.32	.555	.239	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	19.0	2.0	19.0	2	10.90	15.57	17.50	16.18	26.98	0.87	1.54	12.17	0.00	13.50	.498	.247	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	39.0	3.0	39.0	2	11.77	17.45	19.11	17.97	25.74	0.96	1.71	11.59	0.00	14.16	.567	.232	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	77.0	8.0	77.0	2	20.51	30.76	32.44	31.29	28.97	1.53	2.70	13.08	0.00	23.33	.622	.199	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	73.0	7.0	73.0	2	21.73	32.24	34.12	32.84	31.77	1.61	2.83	14.34	0.00	25.31	.610	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	39.0	3.0	39.0	2	13.97	20.35	22.29	20.96	29.44	1.11	1.96	13.29	0.00	16.63	.567	.232	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	52.0	5.0	52.0	2	22.31	32.00	34.53	32.80	39.87	1.66	2.94	17.86	0.00	25.86	.610	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	36.0	1.0	35.0	2	6.69	10.77	11.86	11.11	23.98	0.73	1.29	9.08	0.00	10.09	.373	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	8.0	0.0	8.0	2	6.06	9.08	10.39	9.49	20.61	0.58	1.04	8.93	0.00	8.32	.477	.230	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	13.0	1.0	13.0	2	6.93	10.31	11.70	10.75	21.19	0.63	1.12	9.31	0.00	8.77	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	13.0	1.0	13.0	2	6.13	9.30	10.55	9.70	20.51	0.60	1.07	8.86	0.00	7.91	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	57.0	2.0	57.0	2	13.30	20.19	21.70	20.66	25.02	1.07	1.89	11.26	0.00	16.02	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	13.0	1.0	13.0	2	9.02	12.97	14.72	13.52	24.31	0.74	1.32	10.91	0.00	11.09	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	57.0	2.0	57.0	2	20.99	30.53	32.82	31.25	36.46	1.56	2.76	16.39	0.00	24.63	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	16.0	8.0	16.0	2	23.09	30.66	34.58	31.90	68.57	2.11	3.78	29.67	0.00	27.52	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	16.0	8.0	16.0	2	24.04	31.83	35.90	33.12	72.21	2.21	3.97	31.11	0.00	28.66	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	7.0	11.0	7.0	2	21.87	28.41	32.49	29.70	69.58	2.03	3.66	30.07	0.00	26.17	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	7.0	11.0	7.0	2	21.75	28.26	32.33	29.54	69.07	2.01	3.63	29.87	0.00	26.02	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	8.0	1.0	8.0	2	13.01	17.79	20.34	18.59	33.40	0.99	1.76	15.06	0.00	15.61	.556	.223	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	8.0	1.0	8.0	2	17.56	23.44	26.81	24.51	48.29	1.40	2.50	21.41	0.00	21.07	.556	.223	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	41.0	5.0	42.0	2	23.46	32.91	35.90	33.85	53.10	2.00	3.55	23.40	0.00	26.71	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	27	41.0	5.0	42.0	2	23.91	33.48	36.53	34.44	54.87	2.06	3.66	24.13	0.00	27.26	.652	.159	..

Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	22.0	2.0	22.0	2	22.25	30.16	33.75	31.29	61.17	1.94	3.45	26.69	0.00	25.84	.652 .159 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	41.0	5.0	42.0	2	19.07	27.20	29.67	27.98	38.00	1.46	2.59	17.06	0.00	21.50	.652 .159 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	22.0	1.0	23.0	2	21.28	29.02	32.44	30.10	56.35	1.80	3.20	24.74	0.00	24.63	.652 .159 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	22.0	2.0	22.0	2	11.60	16.59	18.57	17.22	27.88	0.91	1.63	12.59	0.00	13.59	.629 .192 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	24.0	2.0	24.0	2	16.37	22.83	25.49	23.67	37.02	1.23	2.19	16.64	0.00	19.30	.569 .231 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	39.0	4.0	40.0	2	18.84	26.81	29.32	27.60	38.00	1.43	2.55	17.06	0.00	21.63	.626 .195 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	81.0	7.0	83.0	2	32.51	47.33	49.70	48.08	42.14	2.30	4.04	18.83	0.00	35.87	.668 .176 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	69.0	7.0	71.0	2	29.24	42.23	44.77	43.03	44.39	2.17	3.84	19.78	0.00	32.66	.637 .186 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	39.0	4.0	40.0	2	14.57	21.17	23.16	21.80	30.30	1.15	2.04	13.68	0.00	16.91	.626 .195 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	44.0	4.0	46.0	2	22.72	32.17	34.94	33.05	46.55	1.81	3.22	20.69	0.00	25.90	.637 .186 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	28.0	2.0	28.0	2	10.09	14.86	16.50	15.38	24.37	0.83	1.48	10.95	0.00	12.31	.555 .239 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	19.0	2.0	19.0	2	14.37	20.02	22.50	20.81	34.03	1.09	1.94	15.34	0.00	17.48	.498 .247 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	39.0	3.0	39.0	2	15.44	22.29	24.41	22.96	32.05	1.20	2.13	14.46	0.00	18.28	.567 .232 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	77.0	8.0	77.0	2	27.18	39.81	41.99	40.50	37.02	1.95	3.43	16.64	0.00	30.56	.622 .199 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	73.0	7.0	73.0	2	25.68	37.59	39.79	38.29	36.83	1.85	3.27	16.55	0.00	29.71	.610 .234 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	27	39.0	3.0	39.0												

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	13	52	45.0	8.0	56.0	2	20.22	26.60	29.09	27.39	46.27	2.03	3.64	21.54	0.00	22.88	.633	.178	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	45.0	8.0	56.0	2	25.19	32.62	35.67	33.58	65.77	2.81	5.04	29.87	0.00	28.82	.633	.178	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	8.0	7.0	12.0	2	6.12	8.49	9.70	8.88	20.71	0.66	1.18	9.62	0.00	7.77	.533	.246	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	8.0	7.0	12.0	2	7.53	10.18	11.63	10.63	23.28	0.75	1.35	10.98	0.00	9.33	.533	.246	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	30.0	19.0	43.0	2	11.67	15.72	17.35	16.23	27.16	1.14	2.08	12.88	0.00	13.43	.614	.198	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	30.0	19.0	43.0	2	13.68	18.17	20.06	18.76	31.08	1.31	2.38	14.72	0.00	15.63	.614	.198	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	34.0	14.0	46.0	2	16.17	21.34	23.51	22.02	35.99	1.51	2.74	16.97	0.00	18.38	.614	.198	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	30.0	19.0	43.0	2	11.45	15.45	17.06	15.96	26.75	1.12	2.05	12.68	0.00	13.20	.614	.198	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	34.0	14.0	46.0	2	20.72	26.80	29.53	27.66	53.66	2.20	3.99	24.74	0.00	23.79	.614	.198	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	8.0	7.0	12.0	2	5.07	7.24	8.27	7.57	19.53	0.60	1.09	8.86	0.00	6.39	.603	.212	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	15.0	14.0	23.0	2	6.85	9.52	10.73	9.90	21.18	0.74	1.35	9.89	0.00	8.30	.573	.246	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	19.0	17.0	30.0	2	8.58	11.71	13.10	12.15	23.69	0.89	1.62	11.19	0.00	10.12	.609	.212	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	39.0	37.0	60.0	2	13.86	18.69	20.25	19.18	25.17	1.33	2.47	11.92	0.00	15.55	.633	.212	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	24.0	24.0	38.0	2	13.40	17.66	19.57	18.26	31.08	1.28	2.35	14.72	0.00	14.91	.683	.185	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	19.0	17.0	30.0	2	8.47	11.58	12.95	12.01	23.48	0.88	1.60	11.08	0.00	10.00	.609	.212	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	19.0	19.0	31.0	2	16.72	21.48	23.99	22.27	44.33	1.67	3.05	20.69	0.00	18.60	.683	.185	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	13.0	10.0	19.0	2	4.22	6.32	7.16	6.58	20.13	0.61	1.11	8.54	0.00	5.68	.562	.237	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	14.0	23.0	22.0	2	5.97	8.41	9.47	8.74	20.00	0.71	1.30	9.19	0.00	7.82	.462	.287	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	12.0	11.0	18.0	2	6.00	8.43	9.56	8.79	20.26	0.67	1.21	9.36	0.00	7.50	.544	.259	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	25.0	24.0	37.0	2	7.72	10.79	11.97	11.16	21.02	0.85	1.56	9.79	0.00	9.23	.583	.234	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	28.0	26.0	43.0	2	11.09	14.98	16.51	15.47	25.34	1.10	2.02	12.00	0.00	12.65	.633	.212	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	12.0	11.0	18.0	2	7.70	10.46	11.86	10.90	23.08	0.78	1.41	10.88	0.00	9.36	.544	.259	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	19.0	18.0	29.0	2	15.02	19.45	21.77	20.19	37.96	1.42	2.59	17.86	0.00	17.01	.633	.212	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	16.0	9.0	23.0	2	6.90	9.92	11.19	10.32	26.56	0.73	1.32	9.95	0.00	9.94	.404	.246	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	3.0	2.0	5.0	2	3.88	5.75	6.63	6.03	19.68	0.54	0.97	8.51	0.00	5.67	.483	.266	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	16.0	13.0	24.0	2	4.80	7.07	7.96	7.35	19.37	0.65	1.17	8.58	0.00	6.05	.602	.226	.
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	16.0	13.0	24.0	2	5.10	7.43	8.37	7.73	19.38	0.66	1.19	8.69	0.00	6.36	.602	.226	.

Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	23.0	13.0	34.0	2	7.73	10.77	12.01	11.16	21.93	0.83	1.50	10.29	0.00	9.19	.602 .226 .1
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	16.0	13.0	24.0	2	6.34	8.93	10.05	9.28	20.41	0.71	1.29	9.45	0.00	7.67	.602 .226 .1
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	23.0	13.0	34.0	2	14.05	18.46	20.58	19.13	35.07	1.33	2.42	16.55	0.00	16.14	.602 .226 .1
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	46.0	12.0	59.0	2	21.90	28.68	31.26	29.49	48.96	2.23	4.01	22.71	0.00	24.65	.633 .178 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	46.0	12.0	59.0	2	23.66	30.80	33.58	31.68	55.88	2.52	4.54	25.69	0.00	26.76	.633 .178 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	45.0	8.0	56.0	2	22.92	29.87	32.66	30.75	57.44	2.48	4.45	26.35	0.00	26.14	.633 .178 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	45.0	8.0	56.0	2	25.19	32.62	35.67	33.58	65.77	2.81	5.04	29.87	0.00	28.82	.633 .178 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	8.0	7.0	12.0	2	8.71	11.59	13.24	12.11	25.88	0.83	1.50	12.26	0.00	10.66	.533 .246 .1
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	8.0	7.0	12.0	2	10.21	13.38	15.28	13.98	29.47	0.95	1.71	13.97	0.00	12.36	.533 .246 .1
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	30.0	19.0	43.0	2	17.38	22.65	25.00	23.39	38.38	1.60	2.92	18.05	0.00	19.65	.614 .198 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	30.0	19.0	43.0	2	18.23	23.66	26.12	24.44	42.52	1.76	3.22	19.89	0.00	20.71	.614 .198 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	34.0	14.0	46.0	2	18.34	23.94	26.38	24.71	42.77	1.78	3.23	20.00	0.00	20.87	.614 .198 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	30.0	19.0	43.0	2	14.27	18.89	20.85	19.50	32.26	1.35	2.47	15.27	0.00	16.27	.614 .198 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	34.0	14.0	46.0	2	20.72	26.80	29.53	27.66	53.66	2.20	3.99	24.74	0.00	23.79	.614 .198 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	8.0	7.0	12.0	2	7.50	10.14	11.58	10.60	23.21	0.75	1.34	10.95	0.00	9.00	.603 .212 .0
0	Emission factors are as of Jan. 1st of the indicated calendar year.																
2	13	52	15.0	14.0	23.0	2</											

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	13	52	12.0	11.0	18.0	2	9.28	12.35	14.01	12.88	26.45	0.90	1.63	12.54	0.00	11.12	.544	.259	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	19.0	18.0	29.0	2	15.02	19.45	21.77	20.19	37.96	1.42	2.59	17.86	0.00	17.01	.633	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	16.0	9.0	23.0	2	5.70	8.33	9.39	8.66	23.98	0.69	1.24	9.34	0.00	8.58	.404	.246	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	3.0	2.0	5.0	2	4.39	6.35	7.32	6.65	19.36	0.55	0.98	8.62	0.00	6.15	.483	.266	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	16.0	13.0	24.0	2	5.62	8.06	9.08	8.38	19.66	0.68	1.23	8.96	0.00	6.91	.602	.226	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	16.0	13.0	24.0	2	5.25	7.61	8.57	7.91	19.43	0.66	1.20	8.76	0.00	6.51	.602	.226	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	23.0	13.0	34.0	2	8.09	11.21	12.49	11.61	22.53	0.85	1.55	10.60	0.00	9.58	.602	.226	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	16.0	13.0	24.0	2	6.91	9.61	10.82	9.99	21.22	0.75	1.36	9.91	0.00	8.28	.602	.226	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	23.0	13.0	34.0	2	14.05	18.46	20.58	19.13	35.07	1.33	2.42	16.55	0.00	16.14	.602	.226	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	46.0	12.0	59.0	2	25.89	33.51	36.53	34.46	63.88	2.85	5.14	29.07	0.00	29.38	.633	.178	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	46.0	12.0	59.0	2	29.00	37.27	40.63	38.33	73.60	3.25	5.85	33.12	0.00	32.94	.633	.178	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	45.0	8.0	56.0	2	26.39	34.08	37.27	35.08	69.80	2.97	5.33	31.55	0.00	30.21	.633	.178	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	45.0	8.0	56.0	2	25.19	32.62	35.67	33.58	65.77	2.81	5.04	29.87	0.00	28.82	.633	.178	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	8.0	7.0	12.0	2	11.57	15.00	17.14	15.68	32.88	1.06	1.91	15.55	0.00	13.91	.533	.246	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	8.0	7.0	12.0	2	13.83	17.68	20.19	18.47	38.59	1.23	2.23	18.14	0.00	16.48	.533	.246	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	30.0	19.0	43.0	2	19.89	25.64	28.30	26.47	50.24	2.06	3.76	23.26	0.00	22.75	.614	.198	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	30.0	19.0	43.0	2	21.09	27.07	29.88	27.96	55.50	2.26	4.13	25.53	0.00	24.21	.614	.198	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	34.0	14.0	46.0	2	20.72	26.80	29.53	27.66	53.66	2.20	3.99	24.74	0.00	23.79	.614	.198	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	30.0	19.0	43.0	2	17.43	22.70	25.06	23.44	38.59	1.61	2.94	18.14	0.00	19.71	.614	.198	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	34.0	14.0	46.0	2	20.72	26.80	29.53	27.66	53.66	2.20	3.99	24.74	0.00	23.79	.614	.198	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	8.0	7.0	12.0	2	10.11	13.26	15.14	13.85	29.22	0.94	1.70	13.85	0.00	11.90	.603	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	15.0	14.0	23.0	2	13.75	17.82	20.08	18.53	36.18	1.28	2.33	17.06	0.00	15.95	.573	.246	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	19.0	17.0	30.0	2	15.40	19.93	22.29	20.67	38.81	1.45	2.64	18.24	0.00	17.64	.609	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	39.0	37.0	60.0	2	24.09	30.95	33.53	31.76	43.28	2.25	4.20	20.22	0.00	26.51	.633	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	24.0	24.0	38.0	2	17.52	22.59	25.03	23.36	40.82	1.66	3.06	19.14	0.00	19.35	.683	.185	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	19.0	17.0	30.0	2	11.40	15.12	16.90	15.68	29.60	1.11	2.03	14.03	0.00	13.22	.609	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	52	19.0	19.0	31.0	2	16.72	21.48	23.99	22.27	44.33	1.67	3.05	20.69	0.00	18.60	.683	.185	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	13.0	10.0 19.0 2	6.91	9.55	10.81	9.95	21.58	0.73	1.31	10.10	0.00	8.49	.562	.237	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	14.0	23.0 22.0 2	10.82	14.19	15.98	14.76	29.22	1.07	1.96	13.85	0.00	13.25	.462	.287	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	12.0	11.0 18.0 2	10.36	13.66	15.48	14.23	28.97	0.98	1.78	13.74	0.00	12.33	.544	.259	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	25.0	24.0 37.0 2	13.01	17.16	19.04	17.75	30.52	1.25	2.30	14.46	0.00	14.99	.583	.234	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	28.0	26.0 43.0 2	14.58	19.20	21.16	19.82	31.80	1.38	2.54	15.06	0.00	16.42	.633	.212	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	12.0	11.0 18.0 2	10.36	13.66	15.48	14.23	28.97	0.98	1.78	13.74	0.00	12.33	.544	.259	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	19.0	18.0 29.0 2	15.02	19.45	21.77	20.19	37.96	1.42	2.59	17.86	0.00	17.01	.633	.212	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	16.0	9.0 23.0 2	4.31	6.47	7.30	6.73	21.31	0.64	1.16	8.75	0.00	7.05	.404	.246	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	3.0	2.0 5.0 2	5.36	7.50	8.65	7.86	20.02	0.59	1.05	9.21	0.00	7.17	.483	.266	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	16.0	13.0 24.0 2	6.46	9.07	10.22	9.44	20.57	0.72	1.31	9.54	0.00	7.80	.602	.226	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	16.0	13.0 24.0 2	5.81	8.29	9.34	8.62	19.82	0.68	1.24	9.08	0.00	7.11	.602	.226	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	23.0	13.0 34.0 2	8.47	11.67	13.01	12.10	23.21	0.88	1.60	10.95	0.00	10.00	.602	.226	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	16.0	13.0 24.0 2	7.65	10.50	11.83	10.92	22.47	0.80	1.45	10.57	0.00	9.08	.602	.226	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 52	23.0	13.0 34.0 2	14.05	18.46	20.58	19.13	35.07	1.33	2.42	16.55	0.00	16.14	.602	.226	..				
Emission	factors are as of Jan.	1st of the indicated calendar year.																	
2 13 36	21.0	17.0 43.0 2	12.98	18.48	20.13	19.00	27.02	1.10	2.02	12.88	0.00	15.							

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	13	36	14.0	14.0	24.0	2	5.23	8.03	8.96	8.32	19.26	0.64	1.17	8.59	0.00	6.94	.533	.253	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	20.0	21.0	34.0	2	7.83	11.55	12.71	11.92	20.50	0.79	1.45	9.56	0.00	9.40	.615	.215	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	33.0	33.0	54.0	2	11.25	16.58	17.80	16.96	21.29	1.03	1.91	10.00	0.00	12.91	.643	.185	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	26.0	28.0	43.0	2	15.07	21.04	22.87	21.62	29.31	1.28	2.37	13.97	0.00	17.17	.643	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	20.0	21.0	34.0	2	7.25	10.83	11.90	11.17	19.92	0.76	1.40	9.21	0.00	8.78	.615	.215	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	20.0	20.0	2	16.68	22.10	24.75	22.94	44.10	1.59	2.88	20.69	0.00	19.00	.643	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	13.0	11.0	21.0	2	5.87	8.95	10.02	9.29	23.50	0.67	1.22	9.26	0.00	7.88	.534	.238	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	15.0	15.0	25.0	2	5.27	8.11	9.03	8.40	19.26	0.65	1.19	8.59	0.00	7.32	.463	.280	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	21.0	36.0	2	5.96	9.25	10.15	9.53	19.26	0.72	1.33	8.59	0.00	7.57	.593	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	32.0	30.0	52.0	2	9.02	13.66	14.70	13.99	19.74	0.91	1.68	9.09	0.00	10.83	.594	.217	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	23.0	22.0	37.0	2	10.84	15.48	16.95	15.94	24.30	0.99	1.81	11.56	0.00	13.00	.553	.273	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	21.0	36.0	2	7.41	11.09	12.17	11.43	19.92	0.78	1.42	9.21	0.00	9.08	.593	.212	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	19.0	19.0	32.0	2	17.14	23.29	25.68	24.05	37.97	1.45	2.66	17.95	0.00	20.08	.553	.273	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	15.0	9.0	25.0	2	8.24	12.34	13.75	12.78	28.01	0.76	1.39	10.34	0.00	11.47	.423	.226	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	4.0	2.0	6.0	2	4.08	6.25	7.17	6.54	19.68	0.55	0.98	8.51	0.00	6.19	.473	.246	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	12.0	29.0	2	4.89	7.73	8.57	8.00	19.51	0.66	1.19	8.51	0.00	7.03	.443	.293	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	12.0	29.0	2	5.62	8.66	9.60	8.96	19.26	0.67	1.21	8.65	0.00	7.77	.443	.293	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	23.0	13.0	48.0	2	9.51	14.20	15.40	14.58	21.29	0.86	1.59	10.00	0.00	12.09	.443	.293	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	12.0	29.0	2	6.72	10.06	11.15	10.40	19.89	0.71	1.29	9.19	0.00	8.94	.443	.293	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	23.0	13.0	48.0	2	18.81	26.26	28.49	26.96	36.18	1.48	2.72	17.14	0.00	22.67	.443	.293	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	21.0	17.0	43.0	2	13.49	19.13	20.84	19.67	27.88	1.13	2.09	13.29	0.00	15.81	.575	.218	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	21.0	17.0	43.0	2	14.83	20.86	22.72	21.44	30.23	1.23	2.26	14.40	0.00	17.30	.575	.218	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	16.0	12.0	35.0	2	17.47	23.95	26.36	24.71	38.82	1.44	2.64	18.33	0.00	20.40	.575	.218	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	16.0	12.0	35.0	2	23.63	31.69	34.87	32.69	65.43	2.34	4.30	29.87	0.00	28.11	.575	.218	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	9.0	10.0	16.0	2	4.43	6.87	7.75	7.14	20.25	0.60	1.09	8.57	0.00	6.39	.503	.246	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	9.0	10.0	16.0	2	6.25	9.13	10.31	9.50	20.07	0.65	1.18	9.31	0.00	8.21	.503	.246	..
Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	25.0	39.0	2	9.47	13.79	15.06	14.19	21.76	0.89	1.65	10.26	0.00	11.09	.633	.192	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	13	36	21.0	17.0	43.0	2	15.62	21.88	23.84	22.49	31.64	1.28	2.36	15.06	0.00	18.18	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	16.0	12.0	35.0	2	17.74	24.30	26.73	25.06	40.15	1.49	2.72	18.93	0.00	20.75	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	16.0	12.0	35.0	2	23.63	31.69	34.87	32.69	65.43	2.34	4.30	29.87	0.00	28.11	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	9.0	10.0	16.0	2	4.66	7.16	8.08	7.45	19.34	0.60	1.08	8.53	0.00	6.57	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	9.0	10.0	16.0	2	6.88	9.92	11.20	10.32	20.91	0.69	1.25	9.79	0.00	8.90	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	25.0	39.0	2	10.33	14.88	16.26	15.32	22.96	0.95	1.75	10.88	0.00	12.02	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	25.0	39.0	2	12.51	17.65	19.28	18.16	26.41	1.10	2.03	12.59	0.00	14.37	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	15.0	19.0	29.0	2	13.54	18.63	20.62	19.26	31.79	1.19	2.18	15.13	0.00	15.61	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	25.0	39.0	2	9.86	14.29	15.61	14.71	22.30	0.92	1.70	10.54	0.00	11.52	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	15.0	19.0	29.0	2	19.82	26.46	29.28	27.35	53.38	1.94	3.57	24.74	0.00	22.93	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	14.0	14.0	23.0	2	4.68	7.33	8.18	7.60	19.97	0.64	1.16	8.54	0.00	6.20	.603	.205	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	14.0	14.0	24.0	2	5.97	8.96	9.99	9.29	19.48	0.67	1.21	8.90	0.00	7.72	.533	.253	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	20.0	21.0	34.0	2	8.43	12.32	13.55	12.71	21.24	0.83	1.52	9.98	0.00	10.06	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	33.0	33.0	54.0	2	12.21	17.80	19.11	18.21	22.30	1.08	2.01	10.54	0.00	13.92	.643	.185	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	26.0	28.0	43.0	2	15.38	21.43	23.29	22.02	29.83	1.30	2.41	14.21	0.00	17.51	.643	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	20.0	21.0	34.0	2	8.43	12.32	13.55	12.71	21.24	0.83	1.52	9.98	0.00	10.06	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	20.0	20.0	2	16.68	22.10	24.75	22.94	44.10	1.59	2.88	20.69	0.00	19.00	.643	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	13.0	11.0	21.0	2	4.60	7.18	8.05	7.45	21.67	0.64	1.17	8.84	0.00	6.47	.534	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	15.0	15.0	25.0	2	5.62	8.55	9.52	8.85	19.29	0.66	1.21	8.71	0.00	7.67	.463	.280	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	21.0	36.0	2	6.54	9.98	10.95	10.29	19.35	0.74	1.36	8.78	0.00	8.17	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	32.0	30.0	52.0	2	9.43	14.19	15.27	14.53	20.02	0.92	1.71	9.27	0.00	11.26	.594	.217	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	23.0	22.0	37.0	2	10.98	15.66	17.16	16.13	24.54	1.00	1.83	11.67	0.00	13.16	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	21.0	36.0	2	8.55	12.54	13.76	12.93	21.15	0.84	1.54	9.93	0.00	10.30	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	19.0	19.0	32.0	2	17.03	23.16	25.54	23.91	37.77	1.45	2.65	17.86	0.00	19.96	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	15.0	9.0	25.0	2	8.06	12.09	13.48	12.53	27.56	0.76	1.37	10.23	0.00	11.26	.423	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	4.0	2.0	6.0	2	4.08	6.25	7.17	6.54	19.68	0.55	0.98	8.51	0.00	6.19	.473	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	12.0	29.0	2	5.03	7.91	8.76	8.18	19.41	0.66	1.19	8.52	0.00	7.16	.443	.293	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	18.0	12.0 29.0 2	5.64	8.69	9.63	8.98	19.26	0.67	1.21	8.66	0.00	7.79	.443	.293	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	23.0	13.0 48.0 2	9.62	14.35	15.56	14.73	21.42	0.87	1.60	10.08	0.00	12.21	.443	.293	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	18.0	12.0 29.0 2	6.82	10.19	11.29	10.53	19.99	0.71	1.30	9.26	0.00	9.05	.443	.293	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	23.0	13.0 48.0 2	18.70	26.12	28.33	26.82	35.99	1.47	2.70	17.06	0.00	22.54	.443	.293	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	21.0	17.0 43.0 2	14.75	20.76	22.62	21.34	30.09	1.22	2.25	14.34	0.00	17.22	.575	.218	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	21.0	17.0 43.0 2	16.86	23.46	25.56	24.12	33.85	1.37	2.52	16.08	0.00	19.55	.575	.218	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	16.0	12.0 35.0 2	18.03	24.66	27.14	25.44	41.56	1.54	2.81	19.56	0.00	21.13	.575	.218	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	16.0	12.0 35.0 2	23.63	31.69	34.87	32.69	65.43	2.34	4.30	29.87	0.00	28.11	.575	.218	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	9.0	10.0 16.0 2	5.43	8.11	9.16	8.44	19.37	0.62	1.12	8.80	0.00	7.34	.503	.246	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	9.0	10.0 16.0 2	7.81	11.07	12.49	11.52	22.41	0.74	1.35	10.60	0.00	9.93	.503	.246	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	22.0	25.0 39.0 2	11.42	16.26	17.76	16.74	24.62	1.02	1.88	11.71	0.00	13.19	.633	.192	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	22.0	25.0 39.0 2	13.77	19.25	21.03	19.81	28.58	1.19	2.19	13.62	0.00	15.75	.633	.192	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	15.0	19.0 29.0 2	14.14	19.39	21.45	20.04	33.03	1.23	2.27	15.70	0.00	16.27	.633	.192	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	22.0	25.0 39.0 2	11.27	16.07	17.55	16.54	24.38	1.01	1.87	11.59	0.00	13.03	.633	.192	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	15.0	19.0 29.0 2	19.82	26.46	29.28	27.35	53.38	1.94	3.57	24.74	0.00	22.93	.633	.192	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														
2 13 36	14.0	14.0 23.0 2	5.06	7.79	8.70	8.08	19.29	0.64	1.17	8.56	0.00	6.55	.603	.205	.	.
0Emission	factors are as of Jan.	1st of the indicated calendar year.														

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2	13	36	23.0	22.0	37.0	2	11.13	15.85	17.36	16.33	24.78	1.01	1.85	11.79	0.00	13.33	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	22.0	21.0	36.0	2	9.16	13.31	14.61	13.72	21.97	0.87	1.60	10.37	0.00	10.96	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	19.0	19.0	32.0	2	17.03	23.16	25.54	23.91	37.77	1.45	2.65	17.86	0.00	19.96	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	15.0	9.0	25.0	2	7.80	11.73	13.07	12.15	26.92	0.75	1.35	10.08	0.00	10.95	.423	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	4.0	2.0	6.0	2	4.08	6.25	7.17	6.54	19.66	0.55	0.98	8.51	0.00	6.19	.473	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	12.0	29.0	2	5.13	8.04	8.91	8.31	19.35	0.66	1.19	8.53	0.00	7.27	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	12.0	29.0	2	5.66	8.71	9.66	9.01	19.27	0.67	1.21	8.67	0.00	7.81	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	23.0	13.0	48.0	2	9.70	14.45	15.67	14.83	21.52	0.87	1.61	10.13	0.00	12.30	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	18.0	12.0	29.0	2	6.87	10.25	11.36	10.60	20.05	0.72	1.30	9.29	0.00	9.11	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
2	13	36	23.0	13.0	48.0	2	18.81	26.26	28.49	26.96	36.18	1.48	2.72	17.14	0.00	22.67	.443	.293	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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5          PROMPT                                # No prompting, vertical format
2013 RAQC 6/16 strats; I/M 240 w/4 yr exempt; 80%RSD, 1.7% oxy
1          TAMFLG                                # Use MOBILE 5 tampering rates
1          SPDFLG                                # Use one speed for all vehicle types
2          VMFLAG                                # Each scenario has its own VMT mix
3          MYMRFG                                # Use local registration distribution
1          NEWFLG                                # Use MOBILE 5 BER's
6          IMFLAG                                # Use one I/M programs
1          ALHFLG                                # No additional correction factors
2          ATPFLG                                # Anti-tampering, no press/purge check
1          RLFLAG                                # Uncontrolled refueling emission rates
2          LOCFLG                                # Only one LAP record
2          TEMFLG                                # MOBILE 5 uses max and min temp.
2          OUTFMT                                # 80 column descriptive format
2          PRTFLG                                # Calculate CO only
1          IDLFLG                                # No idle emissions
3          NMHFLG                                # VOC emission factors
1          HCFLAG                                # No component emission factor output
.049 .065 .067 .074 .080 .083 .082 .068 .065 .043 # Colorado LDGV
.058 .052 .045 .034 .028 .024 .021 .019 .017 .009 # registration distribution
.007 .005 .003 .001 .001
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDGT1
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDGT2
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.066 .062 .049 .050 .052 .084 .096 .069 .064 .042 # Colorado HDGV
.052 .054 .044 .030 .026 .025 .027 .027 .027 .018 # registration distribution
.014 .011 .007 .004 .000
.049 .065 .067 .074 .080 .083 .082 .068 .065 .043 # Colorado LDDV
.058 .052 .045 .034 .028 .024 .021 .019 .017 .009 # registration distribution
.007 .005 .003 .001 .001
.058 .055 .044 .047 .047 .078 .071 .065 .062 .045 # Colorado LDDT
.056 .060 .051 .035 .032 .031 .033 .033 .033 .021 # registration distribution
.017 .013 .009 .004 .000
.110 .095 .116 .113 .080 .102 .079 .062 .037 .050 # Colorado HDDV
.048 .055 .044 .001 .001 .001 .001 .001 .001 .001 # registration distribution
.001 .001 .000 .000 .000
.001 .001 .001 .001 .001 .001 .001 .001 .001 .001 # Colorado MC
.001 .989 .000 .000 .000 .000 .000 .000 .000 .000 # registration distribution
.000 .000 .000 .000 .000
2 1 2 1
82 20 82 09 00 00 098 1 2 2221 4222 .6 10.0 1.5
82 20 82 09 00 00 098 1 2 1112 2222 220. 1.2 999.
TECH12RSD80.D
IMDATRSD80.D
82 75 09 2222 12 098. 22111112
      C 26. 52. 12.4 12.4 92 2
.001 .999 .027 .017 2
4 13 19.8 27.0 16.0 8.0 16.0
01 1 1
.580.219.101.028.002.003.067.000 13 AM 1 CBD PRINCIPAL ARTERIAL
4 13 18.7 27.0 16.0 8.0 16.0
01 1 1
.580.219.101.028.002.003.067.000 13 AM 1 CBD MINOR ARTERIAL
4 13 15.9 27.0 7.0 11.0 7.0
01 1 1
.580.219.101.028.002.003.067.000 13 AM 1 CBD COLLECTOR
4 13 11.2 27.0 7.0 11.0 7.0
01 1 1
.580.219.101.028.002.003.067.000 13 AM 1 CBD LOCAL
4 13 35.9 27.0 8.0 1.0 8.0
01 1 1
.556.223.103.033.002.003.080.000 13 AM 1 FRINGE FREEWAY
4 13 29.5 27.0 8.0 1.0 8.0
01 1 1
.556.223.103.033.002.003.080.000 13 AM 1 FRINGE MAJOR REGIONAL
4 13 25.8 27.0 41.0 5.0 42.0
01 1 1
.652.159.073.032.002.003.079.000 13 AM 1 FRINGE PRINCIPAL ARTERIAL

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4	13	23.0	27.0	41.0	5.0	42.0					
01	1	1									
		.652.159.073.032.002.003.079.000			13	AM	1	FRINGE		MINOR ARTERIAL	
4	13	19.5	27.0	22.0	2.0	22.0					
01	1	1									
		.652.159.073.032.002.003.079.000			13	AM	1	FRINGE		COLLECTOR	
4	13	28.6	27.0	41.0	5.0	42.0					
01	1	1									
		.652.159.073.032.002.003.079.000			13	AM	1	FRINGE		RAMP	
4	13	14.1	27.0	22.0	1.0	23.0					
01	1	1									
		.652.159.073.032.002.003.079.000			13	AM	1	FRINGE		LOCAL	
4	13	40.4	27.0	22.0	2.0	22.0					
01	1	1									
		.629.192.089.025.002.003.060.000			13	AM	1	URBAN		FREEWAY	
4	13	33.1	27.0	24.0	2.0	24.0					
01	1	1									
		.569.231.106.026.002.004.062.000			13	AM	1	URBAN		MAJOR REGIONAL	
4	13	30.2	27.0	39.0	4.0	40.0					
01	1	1									
		.626.195.090.025.002.003.059.000			13	AM	1	URBAN		PRINCIPAL ARTERIAL	
4	13	28.4	27.0	81.0	7.0	83.0					
01	1	1									
		.668.176.081.020.002.003.050.000			13	AM	1	URBAN		MINOR ARTERIAL	
4	13	23.0	27.0	69.0	7.0	71.0					
01	1	1									
		.637.186.086.025.002.003.061.000			13	AM	1	URBAN		COLLECTOR	
4	13	31.9	27.0	39.0	4.0	40.0					
01	1	1									
		.626.195.090.025.002.003.059.000			13	AM	1	URBAN		RAMP	
4	13	17.1	27.0	44.0	4.0	46.0					
01	1	1									
		.637.186.086.025.002.003.061.000			13	AM	1	URBAN		LOCAL	
4	13	46.2	27.0	28.0	2.0	28.0					
01	1	1									
		.555.239.110.026.002.004.064.000			13	AM	1	SUBURBAN		FREEWAY	
4	13	35.4	27.0	19.0	2.0	19.0					
01	1	1									
		.498.247.114.039.002.004.096.000			13	AM	1	SUBURBAN		MAJOR REGIONAL	
4	13	36.4	27.0	39.0	3.0	39.0					
01	1	1									
		.567.232.107.026.002.004.062.000			13	AM	1	SUBURBAN		PRINCIPAL ARTERIAL	
4	13	32.8	27.0	77.0	8.0	77.0					
01	1	1									
		.622.199.092.024.002.003.058.000			13	AM	1	SUBURBAN		MINOR ARTERIAL	
4	13	27.9	27.0	73.0	7.0	73.0					
01	1	1									
		.610.234.108.012.002.004.030.000			13	AM	1	SUBURBAN		COLLECTOR	
4	13	29.5	27.0	39.0	3.0	39.0					
01	1	1									
		.567.232.107.026.002.004.062.000			13	AM	1	SUBURBAN		RAMP	
4	13	19.8	27.0	52.0	5.0	52.0					
01	1	1									
		.610.234.108.012.002.004.030.000			13	AM	1	SUBURBAN		LOCAL	
4	13	60.2	27.0	36.0	1.0	35.0					
01	1	1									
		.373.227.105.085.001.004.205.000			13	AM	1	RURAL		FREEWAY	
4	13	46.6	27.0	8.0	0.0	8.0					
01	1	1									
		.477.230.106.053.002.004.128.000			13	AM	1	RURAL		MAJOR REGIONAL	
4	13	42.5	27.0	13.0	1.0	13.0					
01	1	1									
		.549.243.112.026.002.004.064.000			13	AM	1	RURAL		PRINCIPAL ARTERIAL	
4	13	43.1	27.0	13.0	1.0	13.0					
01	1	1									
		.549.243.112.026.002.004.064.000			13	AM	1	RURAL		MINOR ARTERIAL	
4	13	32.2	27.0	57.0	2.0	57.0					
01	1	1									
		.549.243.112.026.002.004.064.000			13	AM	1	RURAL		COLLECTOR	
4	13	35.5	27.0	13.0	1.0	13.0					
01	1	1									

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.549.243.112.026.002.004.064.000	13	AM	1	RURAL	RAMP
4 13 21.5 27.0 57.0 2.0 57.0					
01 1 1					
.549.243.112.026.002.004.064.000	13	AM	1	RURAL	LOCAL
4 13 15.5 27.0 16.0 8.0 16.0					
01 1 1					
.580.219.101.028.002.003.067.000	13	AM	2	CBD	PRINCIPAL ARTERIAL
4 13 14.1 27.0 16.0 8.0 16.0					
01 1 1					
.580.219.101.028.002.003.067.000	13	AM	2	CBD	MINOR ARTERIAL
4 13 13.5 27.0 7.0 11.0 7.0					
01 1 1					
.580.219.101.028.002.003.067.000	13	AM	2	CBD	COLLECTOR
4 13 11.2 27.0 7.0 11.0 7.0					
01 1 1					
.580.219.101.028.002.003.067.000	13	AM	2	CBD	LOCAL
4 13 29.4 27.0 8.0 1.0 8.0					
01 1 1					
.556.223.103.033.002.003.080.000	13	AM	2	FRINGE	FREEWAY
4 13 22.7 27.0 8.0 1.0 8.0					
01 1 1					
.556.223.103.033.002.003.080.000	13	AM	2	FRINGE	MAJOR REGIONAL
4 13 19.9 27.0 41.0 5.0 42.0					
01 1 1					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	PRINCIPAL ARTERIAL
4 13 18.3 27.0 41.0 5.0 42.0					
01 1 1					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	MINOR ARTERIAL
4 13 15.8 27.0 22.0 2.0 22.0					
01 1 1					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	COLLECTOR
4 13 24.5 27.0 41.0 5.0 42.0					
01 1 1					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	RAMP
4 13 14.1 27.0 22.0 1.0 23.0					
01 1 1					
.652.159.073.032.002.003.079.000	13	AM	2	FRINGE	LOCAL
4 13 34.0 27.0 22.0 2.0 22.0					
01 1 1					
.629.192.089.025.002.003.060.000	13	AM	2	URBAN	FREEWAY
4 13 27.0 27.0 24.0 2.0 24.0					
01 1 1					
.569.231.106.026.002.004.062.000	13	AM	2	URBAN	MAJOR REGIONAL
4 13 25.3 27.0 39.0 4.0 40.0					
01 1 1					
.626.195.090.025.002.003.059.000	13	AM	2	URBAN	PRINCIPAL ARTERIAL
4 13 22.9 27.0 81.0 7.0 83.0					
01 1 1					
.668.176.081.020.002.003.050.000	13	AM	2	URBAN	MINOR ARTERIAL
4 13 20.6 27.0 69.0 7.0 71.0					
01 1 1					
.637.186.086.025.002.003.061.000	13	AM	2	URBAN	COLLECTOR
4 13 28.6 27.0 39.0 4.0 40.0					
01 1 1					
.626.195.090.025.002.003.059.000	13	AM	2	URBAN	RAMP
4 13 17.1 27.0 44.0 4.0 46.0					
01 1 1					
.637.186.086.025.002.003.061.000	13	AM	2	URBAN	LOCAL
4 13 39.6 27.0 28.0 2.0 28.0					
01 1 1					
.555.239.110.026.002.004.064.000	13	AM	2	SUBURBAN	FREEWAY
4 13 28.5 27.0 19.0 2.0 19.0					
01 1 1					
.498.247.114.039.002.004.096.000	13	AM	2	SUBURBAN	MAJOR REGIONAL
4 13 29.9 27.0 39.0 3.0 39.0					
01 1 1					
.567.232.107.026.002.004.062.000	13	AM	2	SUBURBAN	PRINCIPAL ARTERIAL
4 13 26.6 27.0 77.0 8.0 77.0					
01 1 1					
.622.199.092.024.002.003.058.000	13	AM	2	SUBURBAN	MINOR ARTERIAL
4 13 24.4 27.0 73.0 7.0 73.0					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

01 1 1	.610.234.108.012.002.004.030.000	13 AM	2	SUBURBAN	COLLECTOR
4 13	26.2 27.0 39.0 3.0 39.0				
01 1 1	.567.232.107.026.002.004.062.000	13 AM	2	SUBURBAN	RAMP
4 13	19.8 27.0 52.0 5.0 52.0				
01 1 1	.610.234.108.012.002.004.030.000	13 AM	2	SUBURBAN	LOCAL
4 13	56.8 27.0 36.0 1.0 35.0				
01 1 1	.373.227.105.085.001.004.205.000	13 AM	2	RURAL	FREEWAY
4 13	41.0 27.0 8.0 0.0 8.0				
01 1 1	.477.230.106.053.002.004.128.000	13 AM	2	RURAL	MAJOR REGIONAL
4 13	38.4 27.0 13.0 1.0 13.0				
01 1 1	.549.243.112.026.002.004.064.000	13 AM	2	RURAL	PRINCIPAL ARTERIAL
4 13	41.7 27.0 13.0 1.0 13.0				
01 1 1	.549.243.112.026.002.004.064.000	13 AM	2	RURAL	MINOR ARTERIAL
4 13	30.8 27.0 57.0 2.0 57.0				
01 1 1	.549.243.112.026.002.004.064.000	13 AM	2	RURAL	COLLECTOR
4 13	31.8 27.0 13.0 1.0 13.0				
01 1 1	.549.243.112.026.002.004.064.000	13 AM	2	RURAL	RAMP
4 13	21.5 27.0 57.0 2.0 57.0				
01 1 1	.549.243.112.026.002.004.064.000	13 AM	2	RURAL	LOCAL
4 13	11.3 27.0 16.0 8.0 16.0				
01 1 1	.580.219.101.028.002.003.067.000	13 AM	3	CBD	PRINCIPAL ARTERIAL
4 13	10.6 27.0 16.0 8.0 16.0				
01 1 1	.580.219.101.028.002.003.067.000	13 AM	3	CBD	MINOR ARTERIAL
4 13	11.1 27.0 7.0 11.0 7.0				
01 1 1	.580.219.101.028.002.003.067.000	13 AM	3	CBD	COLLECTOR
4 13	11.2 27.0 7.0 11.0 7.0				
01 1 1	.580.219.101.028.002.003.067.000	13 AM	3	CBD	LOCAL
4 13	23.3 27.0 8.0 1.0 8.0				
01 1 1	.556.223.103.033.002.003.080.000	13 AM	3	FRINGE	FREEWAY
4 13	16.5 27.0 8.0 1.0 8.0				
01 1 1	.556.223.103.033.002.003.080.000	13 AM	3	FRINGE	MAJOR REGIONAL
4 13	15.0 27.0 41.0 5.0 42.0				
01 1 1	.652.159.073.032.002.003.079.000	13 AM	3	FRINGE	PRINCIPAL ARTERIAL
4 13	14.5 27.0 41.0 5.0 42.0				
01 1 1	.652.159.073.032.002.003.079.000	13 AM	3	FRINGE	MINOR ARTERIAL
4 13	12.9 27.0 22.0 2.0 22.0				
01 1 1	.652.159.073.032.002.003.079.000	13 AM	3	FRINGE	COLLECTOR
4 13	20.7 27.0 41.0 5.0 42.0				
01 1 1	.652.159.073.032.002.003.079.000	13 AM	3	FRINGE	RAMP
4 13	14.1 27.0 22.0 1.0 23.0				
01 1 1	.652.159.073.032.002.003.079.000	13 AM	3	FRINGE	LOCAL
4 13	27.6 27.0 22.0 2.0 22.0				
01 1 1	.629.192.089.025.002.003.060.000	13 AM	3	URBAN	FREEWAY
4 13	21.2 27.0 24.0 2.0 24.0				
01 1 1	.569.231.106.026.002.004.062.000	13 AM	3	URBAN	MAJOR REGIONAL
4 13	20.7 27.0 39.0 4.0 40.0				
01 1 1	.626.195.090.025.002.003.059.000	13 AM	3	URBAN	PRINCIPAL ARTERIAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4 13 18.8 27.0 81.0 7.0 83.0				
01 1 1				
.668.176.081.020.002.003.050.000	13 AM	3 URBAN	MINOR ARTERIAL	
4 13 17.9 27.0 69.0 7.0 71.0				
01 1 1				
.637.186.086.025.002.003.061.000	13 AM	3 URBAN	COLLECTOR	
4 13 25.5 27.0 39.0 4.0 40.0				
01 1 1				
.626.195.090.025.002.003.059.000	13 AM	3 URBAN	RAMP	
4 13 17.1 27.0 44.0 4.0 46.0				
01 1 1				
.637.186.086.025.002.003.061.000	13 AM	3 URBAN	LOCAL	
4 13 31.7 27.0 28.0 2.0 28.0				
01 1 1				
.555.239.110.026.002.004.064.000	13 AM	3 SUBURBAN	FREEWAY	
4 13 22.9 27.0 19.0 2.0 19.0				
01 1 1				
.498.247.114.039.002.004.096.000	13 AM	3 SUBURBAN	MAJOR REGIONAL	
4 13 24.2 27.0 39.0 3.0 39.0				
01 1 1				
.567.232.107.026.002.004.062.000	13 AM	3 SUBURBAN	PRINCIPAL ARTERIAL	
4 13 21.2 27.0 77.0 8.0 77.0				
01 1 1				
.622.199.092.024.002.003.058.000	13 AM	3 SUBURBAN	MINOR ARTERIAL	
4 13 21.3 27.0 73.0 7.0 73.0				
01 1 1				
.610.234.108.012.002.004.030.000	13 AM	3 SUBURBAN	COLLECTOR	
4 13 23.6 27.0 39.0 3.0 39.0				
01 1 1				
.567.232.107.026.002.004.062.000	13 AM	3 SUBURBAN	RAMP	
4 13 19.8 27.0 52.0 5.0 52.0				
01 1 1				
.610.234.108.012.002.004.030.000	13 AM	3 SUBURBAN	LOCAL	
4 13 51.6 27.0 36.0 1.0 35.0				
01 1 1				
.373.227.105.085.001.004.205.000	13 AM	3 RURAL	FREEWAY	
4 13 35.4 27.0 8.0 0.0 8.0				
01 1 1				
.477.230.106.053.002.004.128.000	13 AM	3 RURAL	MAJOR REGIONAL	
4 13 33.9 27.0 13.0 1.0 13.0				
01 1 1				
.549.243.112.026.002.004.064.000	13 AM	3 RURAL	PRINCIPAL ARTERIAL	
4 13 38.5 27.0 13.0 1.0 13.0				
01 1 1				
.549.243.112.026.002.004.064.000	13 AM	3 RURAL	MINOR ARTERIAL	
4 13 29.4 27.0 57.0 2.0 57.0				
01 1 1				
.549.243.112.026.002.004.064.000	13 AM	3 RURAL	COLLECTOR	
4 13 29.3 27.0 13.0 1.0 13.0				
01 1 1				
.549.243.112.026.002.004.064.000	13 AM	3 RURAL	RAMP	
4 13 21.5 27.0 57.0 2.0 57.0				
01 1 1				
.549.243.112.026.002.004.064.000	13 AM	3 RURAL	LOCAL	
4 13 22.4 52.0 46.0 12.0 59.0				
01 1 1				
.633.178.082.030.002.003.072.000	13 PM	4 CBD	PRINCIPAL ARTERIAL	
4 13 19.3 52.0 46.0 12.0 59.0				
01 1 1				
.633.178.082.030.002.003.072.000	13 PM	4 CBD	MINOR ARTERIAL	
4 13 16.4 52.0 45.0 8.0 56.0				
01 1 1				
.633.178.082.030.002.003.072.000	13 PM	4 CBD	COLLECTOR	
4 13 11.2 52.0 45.0 8.0 56.0				
01 1 1				
.633.178.082.030.002.003.072.000	13 PM	4 CBD	LOCAL	
4 13 36.7 52.0 8.0 7.0 12.0				
01 1 1				
.533.246.113.030.002.004.072.000	13 PM	4 FRINGE	FREEWAY	
4 13 31.6 52.0 8.0 7.0 12.0				
01 1 1				

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.533.246.113.030.002.004.072.000	13	PM	4	FRINGE	MAJOR REGIONAL
4 13 27.0 52.0 30.0 19.0 43.0					
01 1 1					
.614.198.091.027.002.003.065.000	13	PM	4	FRINGE	PRINCIPAL ARTERIAL
4 13 23.8 52.0 30.0 19.0 43.0					
01 1 1					
.614.198.091.027.002.003.065.000	13	PM	4	FRINGE	MINOR ARTERIAL
4 13 20.8 52.0 34.0 14.0 46.0					
01 1 1					
.614.198.091.027.002.003.065.000	13	PM	4	FRINGE	COLLECTOR
4 13 27.4 52.0 30.0 19.0 43.0					
01 1 1					
.614.198.091.027.002.003.065.000	13	PM	4	FRINGE	RAMP
4 13 14.1 52.0 34.0 14.0 46.0					
01 1 1					
.614.198.091.027.002.003.065.000	13	PM	4	FRINGE	LOCAL
4 13 41.7 52.0 8.0 7.0 12.0					
01 1 1					
.603.212.098.024.002.003.058.000	13	PM	4	URBAN	FREEWAY
4 13 35.5 52.0 15.0 14.0 23.0					
01 1 1					
.573.246.113.018.002.004.044.000	13	PM	4	URBAN	MAJOR REGIONAL
4 13 31.0 52.0 19.0 17.0 30.0					
01 1 1					
.609.212.098.022.002.003.054.000	13	PM	4	URBAN	PRINCIPAL ARTERIAL
4 13 29.1 52.0 39.0 37.0 60.0					
01 1 1					
.633.212.098.015.002.003.037.000	13	PM	4	URBAN	MINOR ARTERIAL
4 13 23.8 52.0 24.0 24.0 38.0					
01 1 1					
.683.185.085.012.002.003.030.000	13	PM	4	URBAN	COLLECTOR
4 13 31.3 52.0 19.0 17.0 30.0					
01 1 1					
.609.212.098.022.002.003.054.000	13	PM	4	URBAN	RAMP
4 13 17.1 52.0 19.0 19.0 31.0					
01 1 1					
.683.185.085.012.002.003.030.000	13	PM	4	URBAN	LOCAL
4 13 50.5 52.0 13.0 10.0 19.0					
01 1 1					
.562.237.109.025.002.004.061.000	13	PM	4	SUBURBAN	FREEWAY
4 13 39.1 52.0 14.0 23.0 22.0					
01 1 1					
.462.287.132.033.002.005.079.000	13	PM	4	SUBURBAN	MAJOR REGIONAL
4 13 38.1 52.0 12.0 11.0 18.0					
01 1 1					
.544.259.119.021.002.004.051.000	13	PM	4	SUBURBAN	PRINCIPAL ARTERIAL
4 13 35.9 52.0 25.0 24.0 37.0					
01 1 1					
.583.234.108.020.002.004.049.000	13	PM	4	SUBURBAN	MINOR ARTERIAL
4 13 28.9 52.0 28.0 26.0 43.0					
01 1 1					
.633.212.098.015.002.003.037.000	13	PM	4	SUBURBAN	COLLECTOR
4 13 31.9 52.0 12.0 11.0 18.0					
01 1 1					
.544.259.119.021.002.004.051.000	13	PM	4	SUBURBAN	RAMP
4 13 19.8 52.0 19.0 18.0 29.0					
01 1 1					
.633.212.098.015.002.003.037.000	13	PM	4	SUBURBAN	LOCAL
4 13 61.5 52.0 16.0 9.0 23.0					
01 1 1					
.404.246.113.068.001.004.164.000	13	PM	4	RURAL	FREEWAY
4 13 48.4 52.0 3.0 2.0 5.0					
01 1 1					
.483.266.123.036.002.004.086.000	13	PM	4	RURAL	MAJOR REGIONAL
4 13 45.2 52.0 16.0 13.0 24.0					
01 1 1					
.602.226.104.018.002.004.044.000	13	PM	4	RURAL	PRINCIPAL ARTERIAL
4 13 43.5 52.0 16.0 13.0 24.0					
01 1 1					
.602.226.104.018.002.004.044.000	13	PM	4	RURAL	MINOR ARTERIAL
4 13 33.9 52.0 23.0 13.0 34.0					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

01 1 1	.602.226.104.018.002.004.044.000	13	PM	4	RURAL	COLLECTOR
4 13	37.6 52.0 16.0 13.0 24.0					
01 1 1	.602.226.104.018.002.004.044.000	13	PM	4	RURAL	RAMP
4 13	21.3 52.0 23.0 13.0 34.0					
01 1 1	.602.226.104.018.002.004.044.000	13	PM	4	RURAL	LOCAL
4 13	15.5 52.0 46.0 12.0 59.0					
01 1 1	.633.178.082.030.002.003.072.000	13	PM	5	CBD	PRINCIPAL ARTERIAL
4 13	13.5 52.0 46.0 12.0 59.0					
01 1 1	.633.178.082.030.002.003.072.000	13	PM	5	CBD	MINOR ARTERIAL
4 13	13.1 52.0 45.0 8.0 56.0					
01 1 1	.633.178.082.030.002.003.072.000	13	PM	5	CBD	COLLECTOR
4 13	11.2 52.0 45.0 8.0 56.0					
01 1 1	.633.178.082.030.002.003.072.000	13	PM	5	CBD	LOCAL
4 13	28.3 52.0 8.0 7.0 12.0					
01 1 1	.533.246.113.030.002.004.072.000	13	PM	5	FRINGE	FREEWAY
4 13	25.0 52.0 8.0 7.0 12.0					
01 1 1	.533.246.113.030.002.004.072.000	13	PM	5	FRINGE	MAJOR REGIONAL
4 13	19.6 52.0 30.0 19.0 43.0					
01 1 1	.614.198.091.027.002.003.065.000	13	PM	5	FRINGE	PRINCIPAL ARTERIAL
4 13	17.8 52.0 30.0 19.0 43.0					
01 1 1	.614.198.091.027.002.003.065.000	13	PM	5	FRINGE	MINOR ARTERIAL
4 13	17.7 52.0 34.0 14.0 46.0					
01 1 1	.614.198.091.027.002.003.065.000	13	PM	5	FRINGE	COLLECTOR
4 13	23.0 52.0 30.0 19.0 43.0					
01 1 1	.614.198.091.027.002.003.065.000	13	PM	5	FRINGE	RAMP
4 13	14.1 52.0 34.0 14.0 46.0					
01 1 1	.614.198.091.027.002.003.065.000	13	PM	5	FRINGE	LOCAL
4 13	31.7 52.0 8.0 7.0 12.0					
01 1 1	.603.212.098.024.002.003.058.000	13	PM	5	URBAN	FREEWAY
4 13	26.0 52.0 15.0 14.0 23.0					
01 1 1	.573.246.113.018.002.004.044.000	13	PM	5	URBAN	MAJOR REGIONAL
4 13	24.3 52.0 19.0 17.0 30.0					
01 1 1	.609.212.098.022.002.003.054.000	13	PM	5	URBAN	PRINCIPAL ARTERIAL
4 13	22.6 52.0 39.0 37.0 60.0					
01 1 1	.633.212.098.015.002.003.037.000	13	PM	5	URBAN	MINOR ARTERIAL
4 13	21.2 52.0 24.0 24.0 38.0					
01 1 1	.683.185.085.012.002.003.030.000	13	PM	5	URBAN	COLLECTOR
4 13	27.5 52.0 19.0 17.0 30.0					
01 1 1	.609.212.098.022.002.003.054.000	13	PM	5	URBAN	RAMP
4 13	17.1 52.0 19.0 19.0 31.0					
01 1 1	.683.185.085.012.002.003.030.000	13	PM	5	URBAN	LOCAL
4 13	41.7 52.0 13.0 10.0 19.0					
01 1 1	.562.237.109.025.002.004.061.000	13	PM	5	SUBURBAN	FREEWAY
4 13	30.8 52.0 14.0 23.0 22.0					
01 1 1	.462.287.132.033.002.005.079.000	13	PM	5	SUBURBAN	MAJOR REGIONAL
4 13	31.1 52.0 12.0 11.0 18.0					
01 1 1	.544.259.119.021.002.004.051.000	13	PM	5	SUBURBAN	PRINCIPAL ARTERIAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4 13 29.9 52.0 25.0 24.0 37.0					
01 1 1					
.583.234.108.020.002.004.049.000	13 PM	5	SUBURBAN	MINOR ARTERIAL	
4 13 26.1 52.0 28.0 26.0 43.0					
01 1 1					
.633.212.098.015.002.003.037.000	13 PM	5	SUBURBAN	COLLECTOR	
4 13 27.7 52.0 12.0 11.0 18.0					
01 1 1					
.544.259.119.021.002.004.051.000	13 PM	5	SUBURBAN	RAMP	
4 13 19.8 52.0 19.0 18.0 29.0					
01 1 1					
.633.212.098.015.002.003.037.000	13 PM	5	SUBURBAN	LOCAL	
4 13 58.5 52.0 16.0 9.0 23.0					
01 1 1					
.404.246.113.068.001.004.164.000	13 PM	5	RURAL	FREEWAY	
4 13 44.5 52.0 3.0 2.0 5.0					
01 1 1					
.483.266.123.036.002.004.086.000	13 PM	5	RURAL	MAJOR REGIONAL	
4 13 40.8 52.0 16.0 13.0 24.0					
01 1 1					
.602.226.104.018.002.004.044.000	13 PM	5	RURAL	PRINCIPAL ARTERIAL	
4 13 42.7 52.0 16.0 13.0 24.0					
01 1 1					
.602.226.104.018.002.004.044.000	13 PM	5	RURAL	MINOR ARTERIAL	
4 13 32.8 52.0 23.0 13.0 34.0					
01 1 1					
.602.226.104.018.002.004.044.000	13 PM	5	RURAL	COLLECTOR	
4 13 35.4 52.0 16.0 13.0 24.0					
01 1 1					
.602.226.104.018.002.004.044.000	13 PM	5	RURAL	RAMP	
4 13 21.3 52.0 23.0 13.0 34.0					
01 1 1					
.602.226.104.018.002.004.044.000	13 PM	5	RURAL	LOCAL	
4 13 11.6 52.0 46.0 12.0 59.0					
01 1 1					
.633.178.082.030.002.003.072.000	13 PM	6	CBD	PRINCIPAL ARTERIAL	
4 13 9.7 52.0 46.0 12.0 59.0					
01 1 1					
.633.178.082.030.002.003.072.000	13 PM	6	CBD	MINOR ARTERIAL	
4 13 10.4 52.0 45.0 8.0 56.0					
01 1 1					
.633.178.082.030.002.003.072.000	13 PM	6	CBD	COLLECTOR	
4 13 11.2 52.0 45.0 8.0 56.0					
01 1 1					
.633.178.082.030.002.003.072.000	13 PM	6	CBD	LOCAL	
4 13 22.6 52.0 8.0 7.0 12.0					
01 1 1					
.533.246.113.030.002.004.072.000	13 PM	6	FRINGE	FREEWAY	
4 13 19.5 52.0 8.0 7.0 12.0					
01 1 1					
.533.246.113.030.002.004.072.000	13 PM	6	FRINGE	MAJOR REGIONAL	
4 13 15.1 52.0 30.0 19.0 43.0					
01 1 1					
.614.198.091.027.002.003.065.000	13 PM	6	FRINGE	PRINCIPAL ARTERIAL	
4 13 13.6 52.0 30.0 19.0 43.0					
01 1 1					
.614.198.091.027.002.003.065.000	13 PM	6	FRINGE	MINOR ARTERIAL	
4 13 14.1 52.0 34.0 14.0 46.0					
01 1 1					
.614.198.091.027.002.003.065.000	13 PM	6	FRINGE	COLLECTOR	
4 13 19.5 52.0 30.0 19.0 43.0					
01 1 1					
.614.198.091.027.002.003.065.000	13 PM	6	FRINGE	RAMP	
4 13 14.1 52.0 34.0 14.0 46.0					
01 1 1					
.614.198.091.027.002.003.065.000	13 PM	6	FRINGE	LOCAL	
4 13 25.2 52.0 8.0 7.0 12.0					
01 1 1					
.603.212.098.024.002.003.058.000	13 PM	6	URBAN	FREEWAY	
4 13 20.7 52.0 15.0 14.0 23.0					
01 1 1					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.573.246.113.018.002.004.044.000	13	PM	6	URBAN	MAJOR REGIONAL
4 13 19.4 52.0 19.0 17.0 30.0					
01 1 1					
.609.212.098.022.002.003.054.000	13	PM	6	URBAN	PRINCIPAL ARTERIAL
4 13 17.5 52.0 39.0 37.0 60.0					
01 1 1					
.633.212.098.015.002.003.037.000	13	PM	6	URBAN	MINOR ARTERIAL
4 13 18.5 52.0 24.0 24.0 38.0					
01 1 1					
.683.185.085.012.002.003.030.000	13	PM	6	URBAN	COLLECTOR
4 13 24.9 52.0 19.0 17.0 30.0					
01 1 1					
.609.212.098.022.002.003.054.000	13	PM	6	URBAN	RAMP
4 13 17.1 52.0 19.0 19.0 31.0					
01 1 1					
.683.185.085.012.002.003.030.000	13	PM	6	URBAN	LOCAL
4 13 34.6 52.0 13.0 10.0 19.0					
01 1 1					
.562.237.109.025.002.004.061.000	13	PM	6	SUBURBAN	FREEWAY
4 13 25.2 52.0 14.0 23.0 22.0					
01 1 1					
.462.287.132.033.002.005.079.000	13	PM	6	SUBURBAN	MAJOR REGIONAL
4 13 25.4 52.0 12.0 11.0 18.0					
01 1 1					
.544.259.119.021.002.004.051.000	13	PM	6	SUBURBAN	PRINCIPAL ARTERIAL
4 13 24.2 52.0 25.0 24.0 37.0					
01 1 1					
.583.234.108.020.002.004.049.000	13	PM	6	SUBURBAN	MINOR ARTERIAL
4 13 23.3 52.0 28.0 26.0 43.0					
01 1 1					
.633.212.098.015.002.003.037.000	13	PM	6	SUBURBAN	COLLECTOR
4 13 25.4 52.0 12.0 11.0 18.0					
01 1 1					
.544.259.119.021.002.004.051.000	13	PM	6	SUBURBAN	RAMP
4 13 19.8 52.0 19.0 18.0 29.0					
01 1 1					
.633.212.098.015.002.003.037.000	13	PM	6	SUBURBAN	LOCAL
4 13 53.9 52.0 16.0 9.0 23.0					
01 1 1					
.404.246.113.068.001.004.164.000	13	PM	6	RURAL	FREEWAY
4 13 39.0 52.0 3.0 2.0 5.0					
01 1 1					
.483.266.123.036.002.004.086.000	13	PM	6	RURAL	MAJOR REGIONAL
4 13 37.1 52.0 16.0 13.0 24.0					
01 1 1					
.602.226.104.018.002.004.044.000	13	PM	6	RURAL	PRINCIPAL ARTERIAL
4 13 39.9 52.0 16.0 13.0 24.0					
01 1 1					
.602.226.104.018.002.004.044.000	13	PM	6	RURAL	MINOR ARTERIAL
4 13 31.7 52.0 23.0 13.0 34.0					
01 1 1					
.602.226.104.018.002.004.044.000	13	PM	6	RURAL	COLLECTOR
4 13 32.9 52.0 16.0 13.0 24.0					
01 1 1					
.602.226.104.018.002.004.044.000	13	PM	6	RURAL	RAMP
4 13 21.3 52.0 23.0 13.0 34.0					
01 1 1					
.602.226.104.018.002.004.044.000	13	PM	6	RURAL	LOCAL
4 13 27.0 36.0 21.0 17.0 43.0					
01 1 1					
.575.218.100.030.002.003.072.000	13	OFF	7	CBD	PRINCIPAL ARTERIAL
4 13 25.1 36.0 21.0 17.0 43.0					
01 1 1					
.575.218.100.030.002.003.072.000	13	OFF	7	CBD	MINOR ARTERIAL
4 13 20.0 36.0 16.0 12.0 35.0					
01 1 1					
.575.218.100.030.002.003.072.000	13	OFF	7	CBD	COLLECTOR
4 13 11.2 36.0 16.0 12.0 35.0					
01 1 1					
.575.218.100.030.002.003.072.000	13	OFF	7	CBD	LOCAL
4 13 55.0 36.0 9.0 10.0 16.0					

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

01 1 1			
.503.246.113.039.002.004.093.000	13 OFF 7 FRINGE	FREEWAY	
4 13 39.8 36.0 9.0 10.0 16.0			
01 1 1			
.503.246.113.039.002.004.093.000	13 OFF 7 FRINGE	MAJOR REGIONAL	
4 13 35.0 36.0 22.0 25.0 39.0			
01 1 1			
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	PRINCIPAL ARTERIAL	
4 13 30.0 36.0 22.0 25.0 39.0			
01 1 1			
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	MINOR ARTERIAL	
4 13 25.0 36.0 15.0 19.0 29.0			
01 1 1			
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	COLLECTOR	
4 13 38.9 36.0 22.0 25.0 39.0			
01 1 1			
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	RAMP	
4 13 14.1 36.0 15.0 19.0 29.0			
01 1 1			
.633.192.088.024.002.003.058.000	13 OFF 7 FRINGE	LOCAL	
4 13 58.0 36.0 14.0 14.0 23.0			
01 1 1			
.603.205.095.027.002.003.065.000	13 OFF 7 URBAN	FREEWAY	
4 13 45.0 36.0 14.0 14.0 24.0			
01 1 1			
.533.253.116.027.002.004.065.000	13 OFF 7 URBAN	MAJOR REGIONAL	
4 13 37.0 36.0 20.0 21.0 34.0			
01 1 1			
.615.215.099.019.002.003.047.000	13 OFF 7 URBAN	PRINCIPAL ARTERIAL	
4 13 35.0 36.0 33.0 33.0 54.0			
01 1 1			
.643.185.085.024.002.003.058.000	13 OFF 7 URBAN	MINOR ARTERIAL	
4 13 25.0 36.0 26.0 28.0 43.0			
01 1 1			
.643.212.098.012.002.003.030.000	13 OFF 7 URBAN	COLLECTOR	
4 13 39.0 36.0 20.0 21.0 34.0			
01 1 1			
.615.215.099.019.002.003.047.000	13 OFF 7 URBAN	RAMP	
4 13 17.1 36.0 18.0 20.0 20.0			
01 1 1			
.643.212.098.012.002.003.030.000	13 OFF 7 URBAN	LOCAL	
4 13 58.0 36.0 13.0 11.0 21.0			
01 1 1			
.534.238.110.033.002.004.079.000	13 OFF 7 SUBURBAN	FREEWAY	
4 13 45.0 36.0 15.0 15.0 25.0			
01 1 1			
.463.280.129.036.002.004.086.000	13 OFF 7 SUBURBAN	MAJOR REGIONAL	
4 13 45.0 36.0 22.0 21.0 36.0			
01 1 1			
.593.212.098.027.002.003.065.000	13 OFF 7 SUBURBAN	PRINCIPAL ARTERIAL	
4 13 39.8 36.0 32.0 30.0 52.0			
01 1 1			
.594.217.100.025.002.003.059.000	13 OFF 7 SUBURBAN	MINOR ARTERIAL	
4 13 30.0 36.0 23.0 22.0 37.0			
01 1 1			
.553.273.126.012.002.004.030.000	13 OFF 7 SUBURBAN	COLLECTOR	
4 13 39.0 36.0 22.0 21.0 36.0			
01 1 1			
.593.212.098.027.002.003.065.000	13 OFF 7 SUBURBAN	RAMP	
4 13 19.7 36.0 19.0 19.0 32.0			
01 1 1			
.553.273.126.012.002.004.030.000	13 OFF 7 SUBURBAN	LOCAL	
4 13 63.0 36.0 15.0 9.0 25.0			
01 1 1			
.423.226.104.071.001.004.171.000	13 OFF 7 RURAL	FREEWAY	
4 13 49.0 36.0 4.0 2.0 6.0			
01 1 1			
.473.246.113.047.002.004.115.000	13 OFF 7 RURAL	MAJOR REGIONAL	
4 13 48.0 36.0 18.0 12.0 29.0			
01 1 1			
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	PRINCIPAL ARTERIAL	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4 13 44.0 36.0 18.0 12.0 29.0		
01 1 1		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	MINOR ARTERIAL
4 13 35.0 36.0 23.0 13.0 48.0		
01 1 1		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	COLLECTOR
4 13 39.1 36.0 18.0 12.0 29.0		
01 1 1		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	RAMP
4 13 20.6 36.0 23.0 13.0 48.0		
01 1 1		
.443.293.135.036.002.005.086.000	13 OFF 7 RURAL	LOCAL
4 13 26.2 36.0 21.0 17.0 43.0		
01 1 1		
.575.218.100.030.002.003.072.000	13 OFF 8 CBD	PRINCIPAL ARTERIAL
4 13 24.3 36.0 21.0 17.0 43.0		
01 1 1		
.575.218.100.030.002.003.072.000	13 OFF 8 CBD	MINOR ARTERIAL
4 13 19.3 36.0 16.0 12.0 35.0		
01 1 1		
.575.218.100.030.002.003.072.000	13 OFF 8 CBD	COLLECTOR
4 13 11.2 36.0 16.0 12.0 35.0		
01 1 1		
.575.218.100.030.002.003.072.000	13 OFF 8 CBD	LOCAL
4 13 51.3 36.0 9.0 10.0 16.0		
01 1 1		
.503.246.113.039.002.004.093.000	13 OFF 8 FRINGE	FREEWAY
4 13 38.4 36.0 9.0 10.0 16.0		
01 1 1		
.503.246.113.039.002.004.093.000	13 OFF 8 FRINGE	MAJOR REGIONAL
4 13 34.0 36.0 22.0 25.0 39.0		
01 1 1		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	PRINCIPAL ARTERIAL
4 13 28.9 36.0 22.0 25.0 39.0		
01 1 1		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	MINOR ARTERIAL
4 13 24.4 36.0 15.0 19.0 29.0		
01 1 1		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	COLLECTOR
4 13 36.2 36.0 22.0 25.0 39.0		
01 1 1		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	RAMP
4 13 14.1 36.0 15.0 19.0 29.0		
01 1 1		
.633.192.088.024.002.003.058.000	13 OFF 8 FRINGE	LOCAL
4 13 54.7 36.0 14.0 14.0 23.0		
01 1 1		
.603.205.095.027.002.003.065.000	13 OFF 8 URBAN	FREEWAY
4 13 43.3 36.0 14.0 14.0 24.0		
01 1 1		
.533.253.116.027.002.004.065.000	13 OFF 8 URBAN	MAJOR REGIONAL
4 13 36.3 36.0 20.0 21.0 34.0		
01 1 1		
.615.215.099.019.002.003.047.000	13 OFF 8 URBAN	PRINCIPAL ARTERIAL
4 13 34.3 36.0 33.0 33.0 54.0		
01 1 1		
.643.185.085.024.002.003.058.000	13 OFF 8 URBAN	MINOR ARTERIAL
4 13 24.8 36.0 26.0 28.0 43.0		
01 1 1		
.643.212.098.012.002.003.030.000	13 OFF 8 URBAN	COLLECTOR
4 13 36.7 36.0 20.0 21.0 34.0		
01 1 1		
.615.215.099.019.002.003.047.000	13 OFF 8 URBAN	RAMP
4 13 17.1 36.0 18.0 20.0 20.0		
01 1 1		
.643.212.098.012.002.003.030.000	13 OFF 8 URBAN	LOCAL
4 13 57.0 36.0 13.0 11.0 21.0		
01 1 1		
.534.238.110.033.002.004.079.000	13 OFF 8 SUBURBAN	FREEWAY
4 13 44.4 36.0 15.0 15.0 25.0		
01 1 1		

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.463.280.129.036.002.004.086.000	13	OFF	8	SUBURBAN	MAJOR	REGIONAL
4 13 44.1 36.0 22.0 21.0 36.0						
01 1 1						
.593.212.098.027.002.003.065.000	13	OFF	8	SUBURBAN	PRINCIPAL	ARTERIAL
4 13 39.3 36.0 32.0 30.0 52.0						
01 1 1						
.594.217.100.025.002.003.059.000	13	OFF	8	SUBURBAN	MINOR	ARTERIAL
4 13 29.9 36.0 23.0 22.0 37.0						
01 1 1						
.553.273.126.012.002.004.030.000	13	OFF	8	SUBURBAN	COLLECTOR	
4 13 36.6 36.0 22.0 21.0 36.0						
01 1 1						
.593.212.098.027.002.003.065.000	13	OFF	8	SUBURBAN	RAMP	
4 13 19.8 36.0 19.0 19.0 32.0						
01 1 1						
.553.273.126.012.002.004.030.000	13	OFF	8	SUBURBAN	LOCAL	
4 13 62.9 36.0 15.0 9.0 25.0						
01 1 1						
.423.226.104.071.001.004.171.000	13	OFF	8	RURAL	FREEWAY	
4 13 49.0 36.0 4.0 2.0 6.0						
01 1 1						
.473.246.113.047.002.004.115.000	13	OFF	8	RURAL	MAJOR	REGIONAL
4 13 47.6 36.0 18.0 12.0 29.0						
01 1 1						
.443.293.135.036.002.005.086.000	13	OFF	8	RURAL	PRINCIPAL	ARTERIAL
4 13 44.0 36.0 18.0 12.0 29.0						
01 1 1						
.443.293.135.036.002.005.086.000	13	OFF	8	RURAL	MINOR	ARTERIAL
4 13 34.8 36.0 23.0 13.0 48.0						
01 1 1						
.443.293.135.036.002.005.086.000	13	OFF	8	RURAL	COLLECTOR	
4 13 38.9 36.0 18.0 12.0 29.0						
01 1 1						
.443.293.135.036.002.005.086.000	13	OFF	8	RURAL	RAMP	
4 13 20.6 36.0 23.0 13.0 48.0						
01 1 1						
.443.293.135.036.002.005.086.000	13	OFF	8	RURAL	LOCAL	
4 13 25.4 36.0 21.0 17.0 43.0						
01 1 1						
.575.218.100.030.002.003.072.000	13	OFF	9	CBD	PRINCIPAL	ARTERIAL
4 13 23.3 36.0 21.0 17.0 43.0						
01 1 1						
.575.218.100.030.002.003.072.000	13	OFF	9	CBD	MINOR	ARTERIAL
4 13 18.7 36.0 16.0 12.0 35.0						
01 1 1						
.575.218.100.030.002.003.072.000	13	OFF	9	CBD	COLLECTOR	
4 13 11.2 36.0 16.0 12.0 35.0						
01 1 1						
.575.218.100.030.002.003.072.000	13	OFF	9	CBD	LOCAL	
4 13 46.5 36.0 9.0 10.0 16.0						
01 1 1						
.503.246.113.039.002.004.093.000	13	OFF	9	FRINGE	FREEWAY	
4 13 35.9 36.0 9.0 10.0 16.0						
01 1 1						
.503.246.113.039.002.004.093.000	13	OFF	9	FRINGE	MAJOR	REGIONAL
4 13 31.9 36.0 22.0 25.0 39.0						
01 1 1						
.633.192.088.024.002.003.058.000	13	OFF	9	FRINGE	PRINCIPAL	ARTERIAL
4 13 27.6 36.0 22.0 25.0 39.0						
01 1 1						
.633.192.088.024.002.003.058.000	13	OFF	9	FRINGE	MINOR	ARTERIAL
4 13 23.2 36.0 15.0 19.0 29.0						
01 1 1						
.633.192.088.024.002.003.058.000	13	OFF	9	FRINGE	COLLECTOR	
4 13 33.0 36.0 22.0 25.0 39.0						
01 1 1						
.633.192.088.024.002.003.058.000	13	OFF	9	FRINGE	RAMP	
4 13 14.1 36.0 15.0 19.0 29.0						
01 1 1						
.633.192.088.024.002.003.058.000	13	OFF	9	FRINGE	LOCAL	
4 13 50.3 36.0 14.0 14.0 23.0						

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

01 1 1					
.603.205.095.027.002.003.065.000	13	OFF	9	URBAN	FREEWAY
4 13 41.3 36.0 14.0 14.0 24.0					
01 1 1					
.533.253.116.027.002.004.065.000	13	OFF	9	URBAN	MAJOR REGIONAL
4 13 35.1 36.0 20.0 21.0 34.0					
01 1 1					
.615.215.099.019.002.003.047.000	13	OFF	9	URBAN	PRINCIPAL ARTERIAL
4 13 33.0 36.0 33.0 33.0 54.0					
01 1 1					
.643.185.085.024.002.003.058.000	13	OFF	9	URBAN	MINOR ARTERIAL
4 13 24.6 36.0 26.0 28.0 43.0					
01 1 1					
.643.212.098.012.002.003.030.000	13	OFF	9	URBAN	COLLECTOR
4 13 35.1 36.0 20.0 21.0 34.0					
01 1 1					
.615.215.099.019.002.003.047.000	13	OFF	9	URBAN	RAMP
4 13 17.1 36.0 18.0 20.0 20.0					
01 1 1					
.643.212.098.012.002.003.030.000	13	OFF	9	URBAN	LOCAL
4 13 54.9 36.0 13.0 11.0 21.0					
01 1 1					
.534.238.110.033.002.004.079.000	13	OFF	9	SUBURBAN	FREEWAY
4 13 43.2 36.0 15.0 15.0 25.0					
01 1 1					
.463.280.129.036.002.004.086.000	13	OFF	9	SUBURBAN	MAJOR REGIONAL
4 13 42.4 36.0 22.0 21.0 36.0					
01 1 1					
.593.212.098.027.002.003.065.000	13	OFF	9	SUBURBAN	PRINCIPAL ARTERIAL
4 13 38.6 36.0 32.0 30.0 52.0					
01 1 1					
.594.217.100.025.002.003.059.000	13	OFF	9	SUBURBAN	MINOR ARTERIAL
4 13 29.7 36.0 23.0 22.0 37.0					
01 1 1					
.553.273.126.012.002.004.030.000	13	OFF	9	SUBURBAN	COLLECTOR
4 13 35.3 36.0 22.0 21.0 36.0					
01 1 1					
.593.212.098.027.002.003.065.000	13	OFF	9	SUBURBAN	RAMP
4 13 19.8 36.0 19.0 19.0 32.0					
01 1 1					
.553.273.126.012.002.004.030.000	13	OFF	9	SUBURBAN	LOCAL
4 13 62.6 36.0 15.0 9.0 25.0					
01 1 1					
.423.226.104.071.001.004.171.000	13	OFF	9	RURAL	FREEWAY
4 13 49.0 36.0 4.0 2.0 6.0					
01 1 1					
.473.246.113.047.002.004.115.000	13	OFF	9	RURAL	MAJOR REGIONAL
4 13 47.2 36.0 18.0 12.0 29.0					
01 1 1					
.443.293.135.036.002.005.086.000	13	OFF	9	RURAL	PRINCIPAL ARTERIAL
4 13 43.9 36.0 18.0 12.0 29.0					
01 1 1					
.443.293.135.036.002.005.086.000	13	OFF	9	RURAL	MINOR ARTERIAL
4 13 34.7 36.0 23.0 13.0 48.0					
01 1 1					
.443.293.135.036.002.005.086.000	13	OFF	9	RURAL	COLLECTOR
4 13 38.7 36.0 18.0 12.0 29.0					
01 1 1					
.443.293.135.036.002.005.086.000	13	OFF	9	RURAL	RAMP
4 13 20.7 36.0 23.0 13.0 48.0					
01 1 1					
.443.293.135.036.002.005.086.000	13	OFF	9	RURAL	LOCAL
4 13 24.4 36.0 21.0 17.0 43.0					
01 1 1					
.575.218.100.030.002.003.072.000	13	OFF10		CBD	PRINCIPAL ARTERIAL
4 13 21.9 36.0 21.0 17.0 43.0					
01 1 1					
.575.218.100.030.002.003.072.000	13	OFF10		CBD	MINOR ARTERIAL
4 13 18.1 36.0 16.0 12.0 35.0					
01 1 1					
.575.218.100.030.002.003.072.000	13	OFF10		CBD	COLLECTOR

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4 13 11.2 36.0 16.0 12.0 35.0			
01 1 1			
.575.218.100.030.002.003.072.000	13	OFF10 CBD	LOCAL
4 13 42.2 36.0 9.0 10.0 16.0			
01 1 1			
.503.246.113.039.002.004.093.000	13	OFF10 FRINGE	FREEWAY
4 13 32.8 36.0 9.0 10.0 16.0			
01 1 1			
.503.246.113.039.002.004.093.000	13	OFF10 FRINGE	MAJOR REGIONAL
4 13 29.6 36.0 22.0 25.0 39.0			
01 1 1			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	PRINCIPAL ARTERIAL
4 13 25.6 36.0 22.0 25.0 39.0			
01 1 1			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	MINOR ARTERIAL
4 13 22.4 36.0 15.0 19.0 29.0			
01 1 1			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	COLLECTOR
4 13 29.9 36.0 22.0 25.0 39.0			
01 1 1			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	RAMP
4 13 14.1 36.0 15.0 19.0 29.0			
01 1 1			
.633.192.088.024.002.003.058.000	13	OFF10 FRINGE	LOCAL
4 13 45.8 36.0 14.0 14.0 23.0			
01 1 1			
.603.205.095.027.002.003.065.000	13	OFF10 URBAN	FREEWAY
4 13 38.3 36.0 14.0 14.0 24.0			
01 1 1			
.533.253.116.027.002.004.065.000	13	OFF10 URBAN	MAJOR REGIONAL
4 13 33.3 36.0 20.0 21.0 34.0			
01 1 1			
.615.215.099.019.002.003.047.000	13	OFF10 URBAN	PRINCIPAL ARTERIAL
4 13 31.2 36.0 33.0 33.0 54.0			
01 1 1			
.643.185.085.024.002.003.058.000	13	OFF10 URBAN	MINOR ARTERIAL
4 13 24.4 36.0 26.0 28.0 43.0			
01 1 1			
.643.212.098.012.002.003.030.000	13	OFF10 URBAN	COLLECTOR
4 13 33.6 36.0 20.0 21.0 34.0			
01 1 1			
.615.215.099.019.002.003.047.000	13	OFF10 URBAN	RAMP
4 13 17.1 36.0 18.0 20.0 20.0			
01 1 1			
.643.212.098.012.002.003.030.000	13	OFF10 URBAN	LOCAL
4 13 52.6 36.0 13.0 11.0 21.0			
01 1 1			
.534.238.110.033.002.004.079.000	13	OFF10 SUBURBAN	FREEWAY
4 13 41.4 36.0 15.0 15.0 25.0			
01 1 1			
.463.280.129.036.002.004.086.000	13	OFF10 SUBURBAN	MAJOR REGIONAL
4 13 40.5 36.0 22.0 21.0 36.0			
01 1 1			
.593.212.098.027.002.003.065.000	13	OFF10 SUBURBAN	PRINCIPAL ARTERIAL
4 13 37.2 36.0 32.0 30.0 52.0			
01 1 1			
.594.217.100.025.002.003.059.000	13	OFF10 SUBURBAN	MINOR ARTERIAL
4 13 29.4 36.0 23.0 22.0 37.0			
01 1 1			
.553.273.126.012.002.004.030.000	13	OFF10 SUBURBAN	COLLECTOR
4 13 33.6 36.0 22.0 21.0 36.0			
01 1 1			
.593.212.098.027.002.003.065.000	13	OFF10 SUBURBAN	RAMP
4 13 19.8 36.0 19.0 19.0 32.0			
01 1 1			
.553.273.126.012.002.004.030.000	13	OFF10 SUBURBAN	LOCAL
4 13 62.0 36.0 15.0 9.0 25.0			
01 1 1			
.423.226.104.071.001.004.171.000	13	OFF10 RURAL	FREEWAY
4 13 48.9 36.0 4.0 2.0 6.0			
01 1 1			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

.473.246.113.047.002.004.115.000	13	OFF10	RURAL	MAJOR REGIONAL
4 13 46.6 36.0 18.0 12.0 29.0				
01 1 1				
.443.293.135.036.002.005.086.000	13	OFF10	RURAL	PRINCIPAL ARTERIAL
4 13 43.8 36.0 18.0 12.0 29.0				
01 1 1				
.443.293.135.036.002.005.086.000	13	OFF10	RURAL	MINOR ARTERIAL
4 13 34.5 36.0 23.0 13.0 48.0				
01 1 1				
.443.293.135.036.002.005.086.000	13	OFF10	RURAL	COLLECTOR
4 13 38.5 36.0 18.0 12.0 29.0				
01 1 1				
.443.293.135.036.002.005.086.000	13	OFF10	RURAL	RAMP
4 13 20.6 36.0 23.0 13.0 48.0				
01 1 1				
.443.293.135.036.002.005.086.000	13	OFF10	RURAL	LOCAL

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

12013 RAQC 6/16 strats; I/M 240 w/4 yr exempt; 80%RSD, 1.7% oxy
MOBILE5b (14-Sep-96)

0
-M 22 Warning:
+ 0.346E-01 mileage with zero registration
-M 22 Warning:
+ 0.626E-01 mileage with zero registration
-M 22 Warning:
+ 0.373E-01 mileage with zero registration
-M 22 Warning:
+ 0.222E-01 mileage with zero registration

OR	e	Amb.		P		Composite Emission Factors														
g	CY	Tmp	Cold/Hot	Start	1	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	AllVeh	LDGV	LDGT1L			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	16.0	8.0	16.0	2	14.76	21.89	25.72	23.10	18.68	1.27	1.41	10.65	0.00	17.19	.580 .219 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	16.0	8.0	16.0	2	15.34	22.66	26.62	23.91	19.86	1.35	1.50	11.28	0.00	17.87	.580 .219 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	7.0	11.0	7.0	2	15.48	22.35	26.74	23.74	23.49	1.50	1.67	13.22	0.00	18.13	.580 .219 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	7.0	11.0	7.0	2	18.96	27.00	32.29	28.67	32.36	2.01	2.26	17.80	0.00	22.28	.580 .219 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	8.0	1.0	8.0	2	6.43	10.24	12.24	10.87	10.34	0.64	0.71	5.84	0.00	7.93	.556 .223 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	8.0	1.0	8.0	2	8.41	12.95	15.48	13.75	12.22	0.77	0.85	7.01	0.00	10.13	.556 .223 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	41.0	5.0	42.0	2	13.06	20.52	23.10	21.33	14.02	1.15	1.27	8.05	0.00	14.56	.652 .159 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	41.0	5.0	42.0	2	15.08	23.39	26.34	24.32	15.87	1.30	1.44	9.10	0.00	16.71	.652 .159 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	22.0	2.0	22.0	2	15.77	23.63	27.48	24.84	18.99	1.32	1.46	10.81	0.00	17.52	.652 .159 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	41.0	5.0	42.0	2	11.44	18.21	20.50	18.93	12.60	1.04	1.14	7.23	0.00	12.83	.652 .159 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	22.0	1.0	23.0	2	18.85	27.92	32.42	29.33	26.40	1.80	1.99	14.74	0.00	21.11	.652 .159 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				
1	13	27	22.0	2.0	22.0	2	6.07	10.08	11.72	10.60	9.71	0.65	0.72	5.37	0.00	7.36	.629 .192 .:			
0Emission factors are as of Jan. 1st of the indicated calendar year.																				
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																				

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	13	27	24.0	2.0	24.0	2	8.20	13.12	15.21	13.78	11.00	0.78	0.86	6.27	0.00	9.99	.569	.231	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	4.0	40.0	2	10.51	16.83	19.01	17.52	11.94	0.97	1.06	6.84	0.00	12.28	.626	.195	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	81.0	7.0	83.0	2	18.46	29.73	31.92	30.42	12.69	1.49	1.63	7.28	0.00	20.77	.668	.176	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	69.0	7.0	71.0	2	21.02	32.97	35.81	33.87	15.87	1.68	1.84	9.10	0.00	23.56	.637	.186	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	4.0	40.0	2	9.77	15.77	17.81	16.41	11.36	0.91	1.01	6.49	0.00	11.46	.626	.195	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	44.0	4.0	46.0	2	20.49	31.18	34.92	32.36	21.81	1.81	2.00	12.33	0.00	23.16	.637	.186	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	28.0	2.0	28.0	2	5.17	8.97	10.32	9.40	9.55	0.65	0.72	5.09	0.00	6.73	.555	.239	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	19.0	2.0	19.0	2	7.18	11.55	13.51	12.17	10.44	0.71	0.78	5.91	0.00	8.94	.498	.247	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	3.0	39.0	2	8.06	13.33	15.08	13.88	10.25	0.81	0.89	5.77	0.00	9.91	.567	.232	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	77.0	8.0	77.0	2	14.29	23.48	25.35	24.07	11.08	1.24	1.36	6.32	0.00	16.53	.622	.199	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	73.0	7.0	73.0	2	16.80	26.96	29.23	27.68	12.92	1.39	1.53	7.42	0.00	20.10	.610	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	3.0	39.0	2	10.75	17.15	19.40	17.86	12.22	0.98	1.08	7.01	0.00	12.91	.567	.232	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	52.0	5.0	52.0	2	20.20	31.07	34.51	32.16	18.68	1.66	1.83	10.65	0.00	23.87	.610	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	36.0	1.0	35.0	2	7.59	12.92	14.71	13.49	12.47	0.78	0.85	5.76	0.00	9.56	.373	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	8.0	0.0	8.0	2	4.34	7.36	8.80	7.82	9.57	0.56	0.62	5.08	0.00	5.86	.477	.230	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	13.0	1.0	13.0	2	5.23	8.70	10.29	9.20	9.57	0.60	0.66	5.23	0.00	6.72	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	13.0	1.0	13.0	2	5.12	8.54	10.11	9.04	9.55	0.59	0.65	5.20	0.00	6.60	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	57.0	2.0	57.0	2	11.38	18.62	20.57	19.23	11.26	1.03	1.13	6.43	0.00	13.79	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	13.0	1.0	13.0	2	6.81	10.88	12.88	11.51	10.42	0.67	0.74	5.89	0.00	8.48	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	57.0	2.0	57.0	2	19.06	29.68	32.80	30.67	17.08	1.56	1.71	9.77	0.00	22.43	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	16.0	8.0	16.0	2	16.91	24.79	29.12	26.16	24.09	1.62	1.80	13.54	0.00	19.77	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	16.0	8.0	16.0	2	17.82	26.03	30.57	27.46	26.40	1.76	1.96	14.74	0.00	20.86	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	7.0	11.0	7.0	2	16.96	24.32	29.09	25.83	27.50	1.73	1.94	15.31	0.00	19.90	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	7.0	11.0	7.0	2	18.96	27.00	32.29	28.67	32.36	2.01	2.26	17.80	0.00	22.28	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	8.0	1.0	8.0	2	8.45	13.00	15.54	13.80	12.26	0.77	0.86	7.03	0.00	10.17	.556	.223	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	8.0	1.0	8.0	2	11.73	17.51	20.93	18.59	16.10	1.01	1.12	9.23	0.00	13.86	.556	.223	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	41.0	5.0	42.0	2	17.97	27.52	30.98	28.61	18.58	1.52	1.67	10.59	0.00	19.79	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	41.0	5.0	42.0	2	19.00	28.93	32.58	30.08	20.32	1.65	1.82	11.53	0.00	20.94	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	22.0	2.0	22.0	2	17.56	26.09	30.34	27.42	23.64	1.62	1.79	13.30	0.00	19.63	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	41.0	5.0	42.0	2	13.94	21.77	24.51	22.64	14.82	1.22	1.35	8.51	0.00	15.49	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	22.0	1.0	23.0	2	18.85	27.92	32.42	29.33	26.40	1.80	1.99	14.74	0.00	21.11	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	22.0	2.0	22.0	2	7.77	12.46	14.49	13.11	10.76	0.75	0.82	6.11	0.00	9.21	.629	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	24.0	2.0	24.0	2	10.74	16.69	19.34	17.52	13.36	0.95	1.05	7.68	0.00	12.85	.569	.231	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	4.0	40.0	2	13.21	20.68	23.35	21.52	14.31	1.16	1.28	8.22	0.00	15.25	.626	.195	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	81.0	7.0	83.0	2	24.23	38.07	40.87	38.95	15.95	1.87	2.05	9.14	0.00	26.98	.668	.176	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	69.0	7.0	71.0	2	24.03	37.31	40.53	38.33	17.90	1.88	2.06	10.22	0.00	26.82	.637	.186	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 39.0 4.0 40.0 2 11.29 17.94 20.26 18.67 12.60 1.02 1.12 7.23 0.00 13.14 .626 .195 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 44.0 4.0 46.0 2 20.49 31.18 34.92 32.36 21.81 1.81 2.00 12.33 0.00 23.16 .637 .186 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 28.0 2.0 28.0 2 6.56 10.92 12.57 11.44 9.78 0.69 0.77 5.44 0.00 8.24 .555 .239 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 19.0 2.0 19.0 2 9.62 14.96 17.49 15.76 12.64 0.87 0.96 7.26 0.00 11.67 .498 .247 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 39.0 3.0 39.0 2 10.56 16.88 19.10 17.58 12.06 0.96 1.06 6.91 0.00 12.69 .567 .232 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 77.0 8.0 77.0 2 18.84 30.05 32.43 30.80 13.57 1.53 1.67 7.80 0.00 21.47 .622 .199 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 73.0 7.0 73.0 2 19.92 31.47 34.11 32.30 14.88 1.61 1.76 8.55 0.00 23.64 .610 .234 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 39.0 3.0 39.0 2 12.53 19.69 22.27 20.50 13.79 1.11 1.22 7.92 0.00 14.91 .567 .232 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 52.0 5.0 52.0 2 20.20 31.07 34.51 32.16 18.68 1.66 1.83 10.65 0.00 23.87 .610 .234 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 36.0 1.0 35.0 2 5.98 10.41 11.85 10.86 11.23 0.73 0.80 5.41 0.00 7.91 .373 .227 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 8.0 0.0 8.0 2 5.30 8.68 10.38 9.22 9.66 0.58 0.64 5.33 0.00 6.82 .477 .230 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 13.0 1.0 13.0 2 6.08 9.88 11.69 10.45 9.93 0.63 0.70 5.55 0.00 7.67 .549 .243 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 13.0 1.0 13.0 2 5.38 8.91 10.54 9.42 9.61 0.60 0.66 5.28 0.00 6.89 .549 .243 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 57.0 2.0 57.0 2 12.08 19.63 21.69 20.28 11.72 1.07 1.18 6.71 0.00 14.57 .549 .243 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 13.0 1.0 13.0 2 7.92 12.43 14.70 13.14 11.39 0.74 0.82 6.51 0.00 9.73 .549 .243 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 57.0 2.0 57.0 2 19.06 29.68 32.80 30.67 17.08 1.56 1.71 9.77 0.00 22.43 .549 .243 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 27 16.0 8.0 16.0 2 20.32 29.41 34.55 31.03 32.12 2.11 2.35 17.68 0.00 23.81 .580 .219 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	13	27	16.0	8.0	16.0	2	21.15	30.54	35.87	32.22	33.83	2.21	2.46	18.55	0.00	24.78	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	7.0	11.0	7.0	2	19.07	27.14	32.46	28.82	32.60	2.03	2.27	17.92	0.00	22.41	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	7.0	11.0	7.0	2	18.96	27.00	32.29	28.67	32.36	2.01	2.26	17.80	0.00	22.28	.580	.219	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	8.0	1.0	8.0	2	11.36	17.00	20.32	18.05	15.65	0.99	1.09	8.97	0.00	13.44	.556	.223	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	8.0	1.0	8.0	2	15.34	22.41	26.79	23.79	22.62	1.40	1.55	12.76	0.00	18.06	.556	.223	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	41.0	5.0	42.0	2	21.10	31.86	35.87	33.12	24.88	2.00	2.21	13.95	0.00	23.35	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	41.0	5.0	42.0	2	21.50	32.42	36.50	33.71	25.71	2.06	2.27	14.38	0.00	23.81	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	22.0	2.0	22.0	2	19.69	29.00	33.72	30.48	28.66	1.94	2.14	15.91	0.00	22.09	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	41.0	5.0	42.0	2	17.14	26.34	29.65	27.38	17.80	1.46	1.61	10.17	0.00	18.91	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	22.0	1.0	23.0	2	18.85	27.92	32.42	29.33	26.40	1.80	1.99	14.74	0.00	21.11	.652	.159	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	22.0	2.0	22.0	2	10.26	15.95	18.55	16.78	13.06	0.91	1.01	7.50	0.00	11.95	.629	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	24.0	2.0	24.0	2	14.51	21.97	25.47	23.07	17.35	1.23	1.36	9.92	0.00	17.11	.569	.231	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	4.0	40.0	2	16.91	25.94	29.30	27.00	17.80	1.43	1.58	10.17	0.00	19.33	.626	.195	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	81.0	7.0	83.0	2	29.96	46.28	49.68	47.36	19.75	2.30	2.51	11.22	0.00	33.15	.668	.176	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	69.0	7.0	71.0	2	26.78	41.20	44.75	42.32	20.80	2.17	2.38	11.79	0.00	29.82	.637	.186	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	4.0	40.0	2	13.08	20.49	23.14	21.33	14.19	1.15	1.27	8.15	0.00	15.11	.626	.195	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	44.0	4.0	46.0	2	20.49	31.18	34.92	32.36	21.81	1.81	2.00	12.33	0.00	23.16	.637	.186	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	28.0	2.0	28.0	2	8.97	14.32	16.49	15.00	11.42	0.83	0.92	6.52	0.00	10.94	.555	.239	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	19.0	2.0	19.0	2	12.68	19.23	22.49	20.26	15.95	1.09	1.21	9.14	0.00	15.14	.498	.247	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	3.0	39.0	2	13.85	21.56	24.40	22.46	15.02	1.20	1.32	8.62	0.00	16.40	.567	.232	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	77.0	8.0	77.0	2	24.97	38.89	41.97	39.86	17.35	1.95	2.13	9.92	0.00	28.13	.622	.199	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	73.0	7.0	73.0	2	23.54	36.69	39.77	37.66	17.26	1.85	2.03	9.87	0.00	27.76	.610	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	39.0	3.0	39.0	2	14.29	22.19	25.10	23.11	15.43	1.24	1.36	8.85	0.00	16.89	.567	.232	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	52.0	5.0	52.0	2	20.20	31.07	34.51	32.16	18.68	1.66	1.83	10.65	0.00	23.87	.610	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	36.0	1.0	35.0	2	5.13	9.07	10.33	9.47	10.06	0.69	0.76	5.12	0.00	6.97	.373	.227	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	8.0	0.0	8.0	2	6.56	10.41	12.45	11.05	10.44	0.65	0.71	5.91	0.00	8.16	.477	.230	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	13.0	1.0	13.0	2	7.26	11.51	13.62	12.17	10.79	0.70	0.77	6.13	0.00	8.98	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	13.0	1.0	13.0	2	6.06	9.85	11.65	10.42	9.91	0.63	0.70	5.54	0.00	7.64	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	57.0	2.0	57.0	2	12.85	20.73	22.91	21.42	12.26	1.13	1.23	7.03	0.00	15.43	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	13.0	1.0	13.0	2	8.83	13.69	16.20	14.48	12.30	0.80	0.89	7.05	0.00	10.77	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	27	57.0	2.0	57.0	2	19.06	29.68	32.80	30.67	17.08	1.56	1.71	9.77	0.00	22.43	.549	.243	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	46.0	12.0	59.0	2	14.61	21.27	24.03	22.14	15.55	1.54	1.72	9.36	0.00	16.15	.633	.178	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	46.0	12.0	59.0	2	17.36	24.92	28.15	25.94	18.28	1.80	2.01	10.93	0.00	19.08	.633	.178	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	45.0	8.0	56.0	2	17.93	25.64	29.07	26.72	21.68	2.03	2.26	12.84	0.00	19.89	.633	.178	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	45.0	8.0	56.0	2	22.33	31.44	35.65	32.77	30.81	2.81	3.13	17.80	0.00	24.88	.633	.178	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	8.0	7.0	12.0	2	5.33	8.11	9.69	8.61	9.70	0.66	0.73	5.74	0.00	6.64	.533	.246	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 8.0 7.0 12.0 2 6.56 9.72 11.62 10.32 10.90 0.75 0.84 6.54 0.00 8.00 .533 .246 .1

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 30.0 19.0 43.0 2 10.29 15.11 17.34 15.81 12.72 1.14 1.29 7.68 0.00 11.74 .614 .198 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 30.0 19.0 43.0 2 12.06 17.47 20.04 18.28 14.56 1.31 1.48 8.77 0.00 13.66 .614 .198 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 34.0 14.0 46.0 2 14.29 20.53 23.50 21.46 16.86 1.51 1.70 10.12 0.00 16.09 .614 .198 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 30.0 19.0 43.0 2 10.10 14.86 17.05 15.55 12.53 1.12 1.27 7.56 0.00 11.53 .614 .198 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 34.0 14.0 46.0 2 18.30 25.78 29.51 26.96 25.14 2.20 2.48 14.74 0.00 20.68 .614 .198 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 8.0 7.0 12.0 2 4.42 6.92 8.27 7.34 9.15 0.60 0.67 5.28 0.00 5.47 .603 .212 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 15.0 14.0 23.0 2 5.99 9.11 10.72 9.62 9.92 0.74 0.84 5.89 0.00 7.33 .573 .246 .1

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 19.0 17.0 30.0 2 7.53 11.23 13.09 11.82 11.10 0.89 1.01 6.67 0.00 8.86 .609 .212 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 39.0 37.0 60.0 2 12.30 18.03 20.24 18.73 11.79 1.33 1.54 7.10 0.00 14.04 .633 .212 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 24.0 24.0 38.0 2 11.79 16.96 19.55 17.78 14.56 1.28 1.46 8.77 0.00 13.30 .683 .185 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 19.0 17.0 30.0 2 7.43 11.10 12.94 11.68 11.00 0.88 1.00 6.61 0.00 8.75 .609 .212 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 19.0 19.0 31.0 2 14.68 20.60 23.97 21.66 20.77 1.67 1.89 12.33 0.00 16.50 .683 .185 .0

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 13.0 10.0 19.0 2 3.69 6.04 7.15 6.39 9.43 0.61 0.69 5.09 0.00 4.83 .562 .237 .1

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 14.0 23.0 22.0 2 5.22 8.05 9.46 8.49 9.37 0.71 0.81 5.48 0.00 6.72 .462 .287 .1

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 12.0 11.0 18.0 2 5.24 8.06 9.55 8.53 9.49 0.67 0.75 5.58 0.00 6.56 .544 .259 .1

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 52 25.0 24.0 37.0 2 6.79 10.36 11.96 10.86 9.85 0.85 0.97 5.84 0.00 8.17 .583 .234 .1

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	13	52	28.0	26.0	43.0	2	9.78	14.40	16.50	15.07	11.87	1.10	1.26	7.15	0.00	11.31	.633	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	12.0	11.0	18.0	2	6.72	10.00	11.85	10.59	10.81	0.78	0.88	6.49	0.00	8.22	.544	.259	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	18.0	29.0	2	13.17	18.65	21.76	19.63	17.79	1.42	1.61	10.65	0.00	15.09	.633	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	9.0	23.0	2	6.04	9.49	11.18	10.02	12.44	0.73	0.82	5.93	0.00	7.86	.404	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	3.0	2.0	5.0	2	3.37	5.48	6.62	5.84	9.22	0.54	0.60	5.07	0.00	4.67	.483	.266	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	13.0	24.0	2	4.20	6.77	7.96	7.15	9.07	0.65	0.73	5.12	0.00	5.28	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	13.0	24.0	2	4.46	7.12	8.36	7.51	9.08	0.66	0.74	5.18	0.00	5.56	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	23.0	13.0	34.0	2	6.79	10.34	12.00	10.86	10.27	0.83	0.93	6.13	0.00	8.13	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	13.0	24.0	2	5.55	8.55	10.04	9.02	9.56	0.71	0.80	5.63	0.00	6.74	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	23.0	13.0	34.0	2	12.35	17.72	20.56	18.62	16.43	1.33	1.50	9.87	0.00	14.32	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	46.0	12.0	59.0	2	19.44	27.65	31.24	28.78	22.94	2.23	2.49	13.54	0.00	21.46	.633	.178	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	46.0	12.0	59.0	2	21.00	29.71	33.56	30.92	26.18	2.52	2.82	15.31	0.00	23.23	.633	.178	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	45.0	8.0	56.0	2	20.32	28.78	32.64	30.00	26.91	2.48	2.76	15.71	0.00	22.62	.633	.178	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	45.0	8.0	56.0	2	22.33	31.44	35.65	32.77	30.81	2.81	3.13	17.80	0.00	24.88	.633	.178	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	8.0	7.0	12.0	2	7.59	11.07	13.23	11.75	12.12	0.83	0.93	7.31	0.00	9.16	.533	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	8.0	7.0	12.0	2	8.89	12.77	15.27	13.56	13.81	0.95	1.06	8.33	0.00	10.63	.533	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	30.0	19.0	43.0	2	15.33	21.77	24.98	22.78	17.98	1.60	1.81	10.76	0.00	17.19	.614	.198	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	30.0	19.0	43.0	2	16.08	22.75	26.10	23.80	19.92	1.76	2.00	11.85	0.00	18.07	.614	.198	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	34.0	14.0	46.0	2	16.20	23.03	26.36	24.08	20.04	1.78	2.00	11.92	0.00	18.23	.614	.198	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	30.0	19.0	43.0	2	12.59	18.16	20.83	19.00	15.11	1.35	1.53	9.10	0.00	14.23	.614	.198	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	34.0	14.0	46.0	2	18.30	25.78	29.51	26.96	25.14	2.20	2.48	14.74	0.00	20.68	.614	.198	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	8.0	7.0	12.0	2	6.53	9.68	11.57	10.28	10.87	0.75	0.83	6.52	0.00	7.77	.603	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	15.0	14.0	23.0	2	9.08	13.17	15.50	13.91	13.24	1.01	1.14	7.99	0.00	10.79	.573	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	17.0	30.0	2	10.31	14.90	17.37	15.68	14.24	1.14	1.29	8.58	0.00	11.92	.609	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	39.0	37.0	60.0	2	16.94	24.11	27.06	25.04	15.40	1.73	2.00	9.27	0.00	19.07	.633	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	24.0	24.0	38.0	2	13.59	19.33	22.28	20.26	16.52	1.45	1.65	9.92	0.00	15.25	.683	.185	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	17.0	30.0	2	8.81	12.93	15.06	13.60	12.48	1.00	1.14	7.53	0.00	10.27	.609	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	19.0	31.0	2	14.68	20.60	23.97	21.66	20.77	1.67	1.89	12.33	0.00	16.50	.683	.185	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	13.0	10.0	19.0	2	4.61	7.25	8.57	7.67	9.15	0.64	0.71	5.28	0.00	5.80	.562	.237	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	14.0	23.0	22.0	2	7.29	10.75	12.64	11.35	11.16	0.87	0.99	6.71	0.00	9.03	.462	.287	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	12.0	11.0	18.0	2	6.95	10.31	12.22	10.91	11.06	0.80	0.90	6.65	0.00	8.48	.544	.259	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	25.0	24.0	37.0	2	8.72	12.90	14.89	13.53	11.48	1.01	1.15	6.91	0.00	10.29	.583	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	28.0	26.0	43.0	2	11.15	16.21	18.58	16.96	13.19	1.22	1.40	7.96	0.00	12.82	.633	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	12.0	11.0	18.0	2	8.10	11.81	13.99	12.50	12.39	0.90	1.01	7.47	0.00	9.78	.544	.259	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	18.0	29.0	2	13.17	18.65	21.76	19.63	17.79	1.42	1.61	10.65	0.00	15.09	.633	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	9.0	23.0	2	4.99	7.97	9.39	8.42	11.24	0.69	0.77	5.57	0.00	6.72	.404	.246	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	3.0	2.0	5.0	2	3.81	6.05	7.31	6.45	9.07	0.55	0.61	5.14	0.00	5.12 .483 .266 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	16.0	13.0	24.0	2	4.92	7.72	9.07	8.15	9.21	0.68	0.76	5.34	0.00	6.06 .602 .226 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	16.0	13.0	24.0	2	4.59	7.29	8.56	7.69	9.10	0.66	0.74	5.22	0.00	5.70 .602 .226 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	23.0	13.0	34.0	2	7.11	10.76	12.48	11.30	10.56	0.85	0.96	6.32	0.00	8.48 .602 .226 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	16.0	13.0	24.0	2	6.05	9.20	10.81	9.71	9.94	0.75	0.84	5.91	0.00	7.29 .602 .226 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	23.0	13.0	34.0	2	12.35	17.72	20.56	18.62	16.43	1.33	1.50	9.87	0.00	14.32 .602 .226 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	46.0	12.0	59.0	2	22.98	32.31	36.50	33.63	29.93	2.85	3.19	17.33	0.00	25.45 .633 .178 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	46.0	12.0	59.0	2	25.74	35.94	40.60	37.41	34.48	3.25	3.64	19.74	0.00	28.49 .633 .178 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	45.0	8.0	56.0	2	23.40	32.84	37.24	34.23	32.70	2.97	3.31	18.80	0.00	26.06 .633 .178 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	45.0	8.0	56.0	2	22.33	31.44	35.65	32.77	30.81	2.81	3.13	17.80	0.00	24.88 .633 .178 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	8.0	7.0	12.0	2	10.08	14.33	17.12	15.21	15.40	1.06	1.18	9.27	0.00	11.97 .533 .246 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	8.0	7.0	12.0	2	12.04	16.88	20.17	17.92	18.08	1.23	1.38	10.81	0.00	14.18 .533 .246 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	30.0	19.0	43.0	2	17.54	24.65	28.28	25.79	23.54	2.06	2.34	13.87	0.00	19.77 .614 .198 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	30.0	19.0	43.0	2	18.60	26.03	29.86	27.24	26.00	2.26	2.57	15.22	0.00	21.00 .614 .198 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	34.0	14.0	46.0	2	18.30	25.78	29.51	26.96	25.14	2.20	2.48	14.74	0.00	20.68 .614 .198 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	30.0	19.0	43.0	2	15.37	21.82	25.04	22.84	18.08	1.61	1.82	10.81	0.00	17.24 .614 .198 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																
1	13	52	34.0	14.0	46.0	2	18.30	25.78	29.51	26.96	25.14	2.20	2.48	14.74	0.00	20.68 .614 .198 .:
0Emission factors are as of Jan. 1st of the indicated calendar year.																
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	13	52	8.0	7.0	12.0	2	8.80	12.66	15.13	13.44	13.69	0.94	1.06	8.26	0.00	10.29	.603	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	15.0	14.0	23.0	2	12.03	17.06	20.07	18.01	16.95	1.28	1.45	10.17	0.00	14.12	.573	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	17.0	30.0	2	13.51	19.11	22.27	20.11	18.18	1.45	1.64	10.87	0.00	15.46	.609	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	39.0	37.0	60.0	2	21.37	29.85	33.51	31.00	20.28	2.25	2.61	12.05	0.00	23.90	.633	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	24.0	24.0	38.0	2	15.42	21.70	25.01	22.74	19.13	1.66	1.90	11.41	0.00	17.25	.683	.185	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	17.0	30.0	2	10.00	14.49	16.89	15.25	13.87	1.11	1.26	8.36	0.00	11.58	.609	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	19.0	31.0	2	14.68	20.60	23.97	21.66	20.77	1.67	1.89	12.33	0.00	16.50	.683	.185	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	13.0	10.0	19.0	2	6.04	9.13	10.81	9.66	10.11	0.73	0.82	6.02	0.00	7.36	.562	.237	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	14.0	23.0	22.0	2	9.45	13.58	15.97	14.33	13.69	1.07	1.22	8.26	0.00	11.48	.462	.287	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	12.0	11.0	18.0	2	9.04	13.06	15.47	13.82	13.57	0.98	1.11	8.19	0.00	10.85	.544	.259	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	25.0	24.0	37.0	2	11.44	16.48	19.02	17.28	14.30	1.25	1.43	8.62	0.00	13.30	.583	.234	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	28.0	26.0	43.0	2	12.85	18.46	21.15	19.31	14.90	1.38	1.57	8.97	0.00	14.69	.633	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	12.0	11.0	18.0	2	9.04	13.06	15.47	13.82	13.57	0.98	1.11	8.19	0.00	10.85	.544	.259	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	19.0	18.0	29.0	2	13.17	18.65	21.76	19.63	17.79	1.42	1.61	10.65	0.00	15.09	.633	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	9.0	23.0	2	3.77	6.20	7.29	6.54	9.99	0.64	0.72	5.21	0.00	5.41	.404	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	3.0	2.0	5.0	2	4.65	7.15	8.64	7.62	9.38	0.59	0.65	5.49	0.00	6.03	.483	.266	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	13.0	24.0	2	5.66	8.69	10.21	9.17	9.64	0.72	0.81	5.69	0.00	6.86	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	13.0	24.0	2	5.09	7.94	9.33	8.38	9.29	0.68	0.77	5.41	0.00	6.24	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	23.0	13.0	34.0	2	7.44	11.20	13.00	11.77	10.87	0.88	0.99	6.52	0.00	8.85	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	16.0	13.0	24.0	2	6.69	10.06	11.82	10.61	10.53	0.80	0.90	6.30	0.00	8.00	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	52	23.0	13.0	34.0	2	12.35	17.72	20.56	18.62	16.43	1.33	1.50	9.87	0.00	14.32	.602	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	21.0	17.0	43.0	2	11.63	17.87	20.12	18.58	12.66	1.10	1.26	7.68	0.00	13.53	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	21.0	17.0	43.0	2	12.75	19.44	21.88	20.21	13.68	1.18	1.36	8.29	0.00	14.77	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	16.0	12.0	35.0	2	15.02	22.39	25.52	23.38	17.50	1.39	1.58	10.54	0.00	17.36	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	16.0	12.0	35.0	2	21.05	30.58	34.85	31.92	30.65	2.34	2.67	17.80	0.00	24.47	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	9.0	10.0	16.0	2	3.89	6.58	7.74	6.95	10.17	0.62	0.70	5.28	0.00	5.34	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	9.0	10.0	16.0	2	5.21	8.37	9.85	8.84	9.25	0.64	0.72	5.42	0.00	6.66	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	8.12	12.86	14.53	13.39	9.97	0.87	1.00	5.96	0.00	9.48	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	10.02	15.47	17.47	16.10	11.39	1.01	1.15	6.89	0.00	11.53	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	19.0	29.0	2	10.94	16.48	18.92	17.25	13.73	1.10	1.25	8.33	0.00	12.58	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	6.98	11.29	12.76	11.76	9.34	0.80	0.92	5.50	0.00	8.26	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	19.0	29.0	2	17.58	25.48	29.26	26.67	25.01	1.94	2.22	14.74	0.00	20.06	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	14.0	14.0	23.0	2	5.28	8.77	10.17	9.21	11.01	0.69	0.78	5.52	0.00	6.61	.603	.205	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	14.0	14.0	24.0	2	4.62	7.72	8.95	8.11	9.02	0.64	0.73	5.12	0.00	6.03	.533	.253	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	20.0	21.0	34.0	2	6.97	11.15	12.70	11.64	9.60	0.79	0.90	5.70	0.00	8.39	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	33.0	33.0	54.0	2	10.14	16.09	17.79	16.62	9.97	1.03	1.19	5.96	0.00	11.60	.643	.185	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 26.0 28.0 43.0 2 13.49 20.35 22.85 21.14 13.73 1.28 1.47 8.33 0.00 15.65 .643 .212 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 20.0 21.0 34.0 2 6.46 10.44 11.90 10.90 9.33 0.76 0.87 5.49 0.00 7.83 .615 .215 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 18.0 20.0 20.0 2 14.70 21.22 24.73 22.33 20.66 1.59 1.79 12.33 0.00 17.00 .643 .212 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 13.0 11.0 21.0 2 5.18 8.59 10.01 9.04 11.01 0.67 0.76 5.52 0.00 6.72 .534 .238 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 15.0 15.0 25.0 2 4.66 7.80 9.02 8.19 9.02 0.65 0.74 5.12 0.00 6.28 .463 .280 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 22.0 21.0 36.0 2 5.31 8.93 10.14 9.31 9.02 0.72 0.82 5.12 0.00 6.62 .593 .212 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 32.0 30.0 52.0 2 8.12 13.24 14.69 13.70 9.25 0.91 1.04 5.42 0.00 9.72 .594 .217 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 23.0 22.0 37.0 2 9.67 14.94 16.94 15.57 11.39 0.99 1.12 6.89 0.00 11.91 .553 .273 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 22.0 21.0 36.0 2 6.61 10.71 12.16 11.17 9.33 0.78 0.88 5.49 0.00 7.99 .593 .212 .(

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 19.0 19.0 32.0 2 15.24 22.46 25.66 23.47 17.79 1.45 1.65 10.70 0.00 18.33 .553 .273 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 15.0 9.0 25.0 2 7.29 11.87 13.74 12.46 13.12 0.76 0.86 6.16 0.00 9.18 .423 .226 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 4.0 2.0 6.0 2 3.55 5.96 7.16 6.34 9.22 0.55 0.61 5.07 0.00 4.98 .473 .246 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 18.0 12.0 29.0 2 4.34 7.45 8.56 7.80 9.14 0.66 0.74 5.07 0.00 6.03 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 18.0 12.0 29.0 2 4.99 8.34 9.59 8.74 9.02 0.67 0.75 5.16 0.00 6.72 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 23.0 13.0 48.0 2 8.54 13.75 15.39 14.27 9.97 0.86 0.98 5.96 0.00 10.77 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 18.0 12.0 29.0 2 5.96 9.69 11.14 10.14 9.32 0.71 0.80 5.48 0.00 7.80 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 23.0 13.0 48.0 2 16.90 25.43 28.47 26.39 16.95 1.48 1.69 10.22 0.00 20.28 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	13	36	21.0	17.0	43.0	2	12.08	18.50	20.83	19.24	13.06	1.13	1.30	7.92	0.00	14.03	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	21.0	17.0	43.0	2	13.28	20.17	22.71	20.97	14.16	1.23	1.40	8.58	0.00	15.36	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	16.0	12.0	35.0	2	15.56	23.11	26.34	24.13	18.19	1.44	1.64	10.93	0.00	17.96	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	16.0	12.0	35.0	2	21.05	30.58	34.85	31.92	30.65	2.34	2.67	17.80	0.00	24.47	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	9.0	10.0	16.0	2	3.89	6.58	7.74	6.95	9.49	0.60	0.68	5.11	0.00	5.30	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	9.0	10.0	16.0	2	5.49	8.76	10.30	9.24	9.40	0.65	0.73	5.55	0.00	6.97	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	8.46	13.32	15.05	13.87	10.20	0.89	1.03	6.11	0.00	9.84	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	10.52	16.16	18.26	16.82	11.81	1.05	1.20	7.15	0.00	12.07	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	19.0	29.0	2	11.28	16.95	19.46	17.73	14.10	1.13	1.29	8.55	0.00	12.95	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	7.75	12.34	13.95	12.85	9.74	0.85	0.97	5.80	0.00	9.07	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	19.0	29.0	2	17.58	25.48	29.26	26.67	25.01	1.94	2.22	14.74	0.00	20.06	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	14.0	14.0	23.0	2	4.14	7.04	8.18	7.40	10.11	0.66	0.75	5.26	0.00	5.33	.603	.205	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	14.0	14.0	24.0	2	4.91	8.11	9.40	8.52	9.04	0.65	0.74	5.19	0.00	6.34	.533	.253	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	20.0	21.0	34.0	2	7.16	11.41	13.00	11.91	9.72	0.80	0.92	5.79	0.00	8.60	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	33.0	33.0	54.0	2	10.43	16.48	18.23	17.03	10.13	1.04	1.21	6.07	0.00	11.91	.643	.185	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	26.0	28.0	43.0	2	13.63	20.54	23.06	21.34	13.85	1.29	1.48	8.40	0.00	15.81	.643	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	20.0	21.0	34.0	2	7.05	11.26	12.82	11.75	9.65	0.80	0.91	5.74	0.00	8.48	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	20.0	20.0	2	14.70	21.22	24.73	22.33	20.66	1.59	1.79	12.33	0.00	17.00	.643	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	13.0	11.0	21.0	2	4.80	8.03	9.36	8.45	10.70	0.66	0.74	5.43	0.00	6.29	.534	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	15.0	25.0	2	4.76	7.94	9.18	8.33	9.02	0.65	0.74	5.14	0.00	6.38	.463	.280	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	21.0	36.0	2	5.49	9.16	10.41	9.56	9.02	0.73	0.83	5.15	0.00	6.80	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	32.0	30.0	52.0	2	8.27	13.45	14.93	13.92	9.30	0.91	1.05	5.46	0.00	9.89	.594	.217	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	23.0	22.0	37.0	2	9.71	15.00	17.01	15.64	11.42	0.99	1.13	6.91	0.00	11.96	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	21.0	36.0	2	7.24	11.58	13.15	12.08	9.67	0.81	0.93	5.75	0.00	8.68	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	19.0	19.0	32.0	2	15.14	22.33	25.52	23.34	17.69	1.45	1.64	10.65	0.00	18.23	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	9.0	25.0	2	7.25	11.81	13.67	12.40	13.07	0.76	0.86	6.15	0.00	9.14	.423	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	4.0	2.0	6.0	2	3.55	5.96	7.16	6.34	9.22	0.55	0.61	5.07	0.00	4.98	.473	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	12.0	29.0	2	4.40	7.53	8.66	7.89	9.11	0.66	0.74	5.07	0.00	6.09	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	12.0	29.0	2	4.99	8.34	9.59	8.74	9.02	0.67	0.75	5.16	0.00	6.72	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	23.0	13.0	48.0	2	8.61	13.85	15.50	14.37	10.02	0.87	0.99	5.99	0.00	10.85	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	12.0	29.0	2	6.01	9.75	11.21	10.21	9.34	0.71	0.80	5.50	0.00	7.85	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	23.0	13.0	48.0	2	16.90	25.43	28.47	26.39	16.95	1.48	1.69	10.22	0.00	20.28	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	21.0	17.0	43.0	2	12.56	19.18	21.59	19.93	13.50	1.17	1.34	8.19	0.00	14.56	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	21.0	17.0	43.0	2	13.99	21.16	23.82	22.00	14.82	1.28	1.47	8.97	0.00	16.14	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	16.0	12.0	35.0	2	15.81	23.44	26.72	24.47	18.81	1.49	1.69	11.28	0.00	18.26	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	16.0	12.0	35.0	2	21.05	30.58	34.85	31.92	30.65	2.34	2.67	17.80	0.00	24.47	.575	.218	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	9.0	10.0	16.0	2	4.10	6.86	8.07	7.24	9.06	0.60	0.67	5.09	0.00	5.49	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	9.0	10.0	16.0	2	6.05	9.51	11.19	10.04	9.79	0.69	0.77	5.84	0.00	7.58	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	9.23	14.38	16.25	14.97	10.76	0.95	1.09	6.49	0.00	10.67	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	11.17	17.05	19.27	17.75	12.37	1.10	1.26	7.50	0.00	12.78	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	19.0	29.0	2	12.01	17.95	20.60	18.78	14.89	1.19	1.36	9.02	0.00	13.75	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	8.81	13.81	15.60	14.37	10.45	0.92	1.05	6.28	0.00	10.22	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	19.0	29.0	2	17.58	25.48	29.26	26.67	25.01	1.94	2.22	14.74	0.00	20.06	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	14.0	14.0	23.0	2	4.14	7.04	8.18	7.40	9.36	0.64	0.72	5.09	0.00	5.30	.603	.205	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	14.0	14.0	24.0	2	5.27	8.62	9.99	9.05	9.13	0.67	0.75	5.30	0.00	6.75	.533	.253	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	20.0	21.0	34.0	2	7.51	11.89	13.54	12.41	9.95	0.83	0.94	5.95	0.00	8.99	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	33.0	33.0	54.0	2	11.01	17.27	19.10	17.85	10.45	1.08	1.25	6.28	0.00	12.52	.643	.185	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	26.0	28.0	43.0	2	13.77	20.73	23.28	21.54	13.97	1.30	1.50	8.47	0.00	15.96	.643	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	20.0	21.0	34.0	2	7.51	11.89	13.54	12.41	9.95	0.83	0.94	5.95	0.00	8.99	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	20.0	20.0	2	14.70	21.22	24.73	22.33	20.66	1.59	1.79	12.33	0.00	17.00	.643	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	13.0	11.0	21.0	2	4.05	6.90	8.04	7.26	10.15	0.64	0.72	5.27	0.00	5.45	.534	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	15.0	25.0	2	4.97	8.22	9.51	8.63	9.04	0.66	0.75	5.19	0.00	6.61	.463	.280	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	21.0	36.0	2	5.83	9.64	10.95	10.05	9.07	0.74	0.84	5.24	0.00	7.16	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1	13	36	32.0	30.0	52.0	2	8.49	13.76	15.26	14.23	9.38	0.92	1.06	5.53	0.00	10.12	.594	.217	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	23.0	22.0	37.0	2	9.80	15.12	17.14	15.76	11.50	1.00	1.14	6.96	0.00	12.06	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	21.0	36.0	2	7.62	12.11	13.75	12.63	9.91	0.84	0.95	5.92	0.00	9.09	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	19.0	19.0	32.0	2	15.14	22.33	25.52	23.34	17.69	1.45	1.64	10.65	0.00	18.23	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	9.0	25.0	2	7.13	11.63	13.47	12.21	12.91	0.76	0.85	6.10	0.00	9.01	.423	.226	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	4.0	2.0	6.0	2	3.55	5.96	7.16	6.34	9.22	0.55	0.61	5.07	0.00	4.98	.473	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	12.0	29.0	2	4.46	7.61	8.76	7.97	9.09	0.66	0.74	5.08	0.00	6.16	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	12.0	29.0	2	5.00	8.37	9.62	8.76	9.03	0.67	0.75	5.16	0.00	6.74	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	23.0	13.0	48.0	2	8.64	13.89	15.56	14.42	10.04	0.87	0.99	6.01	0.00	10.88	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	12.0	29.0	2	6.05	9.81	11.28	10.27	9.37	0.71	0.81	5.52	0.00	7.90	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	23.0	13.0	48.0	2	16.80	25.29	28.32	26.25	16.86	1.47	1.68	10.17	0.00	20.17	.443	.293	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	21.0	17.0	43.0	2	13.21	20.08	22.60	20.87	14.10	1.22	1.40	8.55	0.00	15.28	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	21.0	17.0	43.0	2	15.10	22.69	25.55	23.59	15.86	1.37	1.57	9.58	0.00	17.36	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	16.0	12.0	35.0	2	16.07	23.80	27.12	24.84	19.47	1.54	1.75	11.66	0.00	18.57	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	16.0	12.0	35.0	2	21.05	30.58	34.85	31.92	30.65	2.34	2.67	17.80	0.00	24.47	.575	.218	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	9.0	10.0	16.0	2	4.77	7.78	9.15	8.21	9.08	0.62	0.69	5.25	0.00	6.19	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	9.0	10.0	16.0	2	6.86	10.61	12.48	11.20	10.50	0.74	0.84	6.32	0.00	8.47	.503	.246	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	10.20	15.71	17.75	16.35	11.53	1.02	1.17	6.98	0.00	11.72	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	12.30	18.60	21.01	19.36	13.39	1.19	1.36	8.12	0.00	14.00	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	19.0	29.0	2	12.54	18.67	21.44	19.54	15.47	1.23	1.41	9.36	0.00	14.33	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	25.0	39.0	2	10.06	15.53	17.54	16.16	11.42	1.01	1.16	6.91	0.00	11.58	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	19.0	29.0	2	17.58	25.48	29.26	26.67	25.01	1.94	2.22	14.74	0.00	20.06	.633	.192	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	14.0	14.0	23.0	2	4.46	7.49	8.69	7.87	9.04	0.64	0.72	5.10	0.00	5.63	.603	.205	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	14.0	14.0	24.0	2	5.90	9.47	10.97	9.94	9.42	0.70	0.79	5.56	0.00	7.43	.533	.253	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	20.0	21.0	34.0	2	8.08	12.67	14.43	13.23	10.37	0.87	0.99	6.23	0.00	9.61	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	33.0	33.0	54.0	2	11.88	18.47	20.42	19.08	10.97	1.14	1.32	6.63	0.00	13.44	.643	.185	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	26.0	28.0	43.0	2	13.91	20.93	23.50	21.74	14.10	1.31	1.51	8.55	0.00	16.12	.643	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	20.0	21.0	34.0	2	7.98	12.53	14.28	13.08	10.29	0.86	0.98	6.18	0.00	9.51	.615	.215	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	18.0	20.0	20.0	2	14.70	21.22	24.73	22.33	20.66	1.59	1.79	12.33	0.00	17.00	.643	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	13.0	11.0	21.0	2	4.05	6.90	8.04	7.26	9.69	0.63	0.71	5.15	0.00	5.42	.534	.238	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	15.0	15.0	25.0	2	5.31	8.68	10.04	9.11	9.12	0.67	0.76	5.30	0.00	6.97	.463	.280	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	21.0	36.0	2	6.25	10.21	11.60	10.65	9.19	0.76	0.86	5.36	0.00	7.61	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	32.0	30.0	52.0	2	8.96	14.40	15.98	14.90	9.57	0.95	1.09	5.68	0.00	10.63	.594	.217	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	23.0	22.0	37.0	2	9.93	15.30	17.35	15.95	11.61	1.01	1.15	7.03	0.00	12.21	.553	.273	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	22.0	21.0	36.0	2	8.17	12.85	14.59	13.40	10.29	0.87	1.00	6.18	0.00	9.68	.593	.212	..
0Emission factors are as of Jan. 1st of the indicated calendar year.																			
LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits																			
1	13	36	19.0	19.0	32.0	2	15.14	22.33	25.52	23.34	17.69	1.45	1.64	10.65	0.00	18.23	.553	.273	..

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 15.0 9.0 25.0 2 6.90 11.28 13.06 11.84 12.61 0.75 0.84 6.01 0.00 8.75 .423 .226 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 4.0 2.0 6.0 2 3.55 5.96 7.16 6.34 9.21 0.55 0.61 5.07 0.00 4.98 .473 .246 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 18.0 12.0 29.0 2 4.55 7.74 8.90 8.11 9.06 0.66 0.74 5.08 0.00 6.26 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 18.0 12.0 29.0 2 5.02 8.39 9.65 8.79 9.03 0.67 0.75 5.17 0.00 6.76 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 23.0 13.0 48.0 2 8.71 13.99 15.66 14.52 10.08 0.87 1.00 6.04 0.00 10.96 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 18.0 12.0 29.0 2 6.10 9.87 11.35 10.34 9.39 0.72 0.81 5.54 0.00 7.95 .443 .293 .:

0Emission factors are as of Jan. 1st of the indicated calendar year.
 LEV phase-in begins in 2001 without using (4/8/94) Guidance Memo Credits
 1 13 36 23.0 13.0 48.0 2 16.90 25.43 28.47 26.39 16.95 1.48 1.69 10.22 0.00 20.28 .443 .293 .:

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

```

        DIMENSION SPD(8,5,10),XHIALT(7),VMIX(7),XLOALT(2),XNLEV(2)
        CHARACTER*40 JUNK
C read speed and emission factor data
        OPEN(10,FILE='speeddb11-10.dat',TYPE='OLD')
        READ(10,*)((SPD(IFC,IAREA,IP),IFC=1,8),IAREA=1,5),IP=1,10)
C open the output file with all the I/M bells & whistles; plus mech train
        OPEN(1,FILE='work.hi',TYPE='OLD',FORM='FORMATTED')
C open the low altitude WITH NLEV
        OPEN(3,FILE='work.lo',TYPE='OLD',FORM='FORMATTED')
        OPEN(4,FILE='efact.hinlev')
5         FORMAT(40A)
4         format(8F5.1)
3         format(a20)
2         format(I3,',',F7.2)
6         format(I3,',',F5.1)
7         format(31x,2f6.2,51x,f6.2)
1         format(30x,3f7.2,7x,4f7.2,14x,7f5.3)
8         format(7f6.2/7f5.3)
C 1     FORMAT(1X,I1,1X,I2,1X,I3,1X,3F6.1,1X,A1,10F7.2,8F5.2)
C read top six lines of output files
        DO ILINE = 1,15
            READ(1,5)JUNK
            READ(3,5)JUNK
        END DO
c read mode data and total vmt
        DO IP = 1,10
        DO IAREA = 1,5
        DO IFC = 1,8
            IF (SPD(IFC,IAREA,IP).GT.0) THEN
                read(1,3) junk
                READ(3,3)JUNK
                READ(3,3)JUNK ! file has extra 'junk'
C Read all veh type emission factor AND veh mix from hi alt file
                READ(1,1)(XHIALT(i),i=1,7),(VMIX(i),i=1,7)
C Read only the ldgv and ldgtl factors from these file
                READ(3,1)(XNLEV(i),i=1,2)
C Calculate NLEV adjustment to the ldgv and t1 emission factors
                XHIALT(1)=XNLEV(1)
                XHIALT(2)=XNLEV(2)
C Calculate the composite factor for hi altitude
                efact = 0.0
                do i = 1,7
                    efact = efact + XHIALT(i) * VMIX(i)
                end do
C Calculate 'code' identifier for efactor
                ICODE = IFC * 100 + IAREA * 10 + (IP-1)
C make calculations to adjust for nlev
                WRITE(4,2)ICODE,EFACT
            END IF
        END DO
        END DO
        END DO
100     CONTINUE
END

```


Appendix C – Mobile Source Emissions Modeling: Emission Factors

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Emission Factors
(grams/mile)

Area	Road	AM1	AM2	AM3	PM1	PM2	PM3	OP1	OP2	OP3	OP4
Class	Type										
1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	18.28	21.15	25.64	17.14	22.91	27.32	14.34	14.86	15.43	16.18
1	4	19.02	22.38	26.70	20.24	24.88	30.64	15.65	16.26	17.08	18.37
1	5	19.48	21.48	24.26	21.25	24.30	28.10	18.48	19.12	19.45	19.81
1	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	8	24.13	24.13	24.13	26.80	26.80	26.80	26.39	26.39	26.39	26.39
2	1	8.64	11.01	14.52	7.25	9.93	12.95	6.13	6.04	6.22	6.93
2	2	10.97	14.96	19.60	8.70	11.51	15.33	7.41	7.74	8.38	9.34
2	3	15.50	21.04	25.01	12.47	18.22	21.11	9.99	10.36	11.22	12.31
2	4	17.78	22.30	25.52	14.50	19.21	22.47	12.11	12.68	13.41	14.69
2	5	18.79	21.20	23.99	17.06	19.38	22.10	13.28	13.67	14.51	15.12
2	6	13.68	16.49	20.10	12.25	15.10	18.27	8.73	9.57	10.76	12.16
2	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	22.87	22.87	22.87	22.10	22.10	22.10	21.33	21.33	21.33	21.33
3	1	7.86	9.77	12.63	5.93	8.32	10.99	7.19	5.88	5.82	6.13
3	2	10.58	13.57	18.04	7.71	11.30	14.77	6.54	6.85	7.26	7.97
3	3	12.89	15.99	20.25	9.38	12.60	16.31	8.79	9.00	9.40	10.04
3	4	21.31	27.66	33.99	14.42	19.57	24.56	12.11	12.42	13.05	14.01
3	5	24.39	27.75	30.90	13.68	15.69	17.75	16.01	16.17	16.33	16.49
3	6	12.05	13.79	15.84	9.27	10.86	12.24	8.21	8.88	9.40	9.93
3	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	8	24.30	24.30	24.30	17.04	17.04	17.04	17.54	17.54	17.54	17.54
4	1	7.23	8.77	11.56	5.32	6.28	7.90	7.43	6.98	6.11	6.06
4	2	9.80	12.71	16.44	7.37	9.81	12.44	6.94	7.05	7.28	7.66
4	3	10.45	13.35	17.21	6.98	8.98	11.46	7.12	7.31	7.67	8.13
4	4	17.09	22.15	29.00	8.58	10.78	13.91	10.20	10.37	10.61	11.13
4	5	20.43	24.03	28.20	11.69	13.24	15.17	12.21	12.26	12.36	12.52
4	6	13.57	15.66	17.73	8.70	10.34	11.46	8.53	9.23	9.66	10.27
4	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	8	24.35	24.35	24.35	15.66	15.66	15.66	18.80	18.69	18.69	18.69
5	1	11.56	9.74	8.65	9.48	8.21	6.76	10.96	10.91	10.76	10.47
5	2	6.88	7.87	9.30	5.35	5.79	6.73	5.86	5.86	5.86	5.86
5	3	7.24	8.20	9.57	5.62	6.41	7.23	6.70	6.77	6.83	6.92
5	4	7.11	7.41	8.18	5.90	6.04	6.59	7.39	7.39	7.41	7.43
5	5	14.40	15.21	16.10	8.53	8.89	9.27	11.53	11.61	11.65	11.73
5	6	9.04	10.35	11.44	7.11	7.67	8.41	8.50	8.55	8.60	8.66
5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	8	23.36	23.36	23.36	14.95	14.95	14.95	21.58	21.58	21.46	21.58

Road Class: 1=Freeway, 2=Major Regional, 3=Principal Arterial, 4=Minor Arterial
5=Collector, 6=Ramp, 7=Frontage, 8=Local

Area Types: 1=Central Business District, 2=Fringe, 3=Urban, 4=Suburban, 5=Rural

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Emission Factors
(grams/mile)

Area	Road	AM1	AM2	AM3	PM1	PM2	PM3	OP1	OP2	OP3	OP4
Class	Type										
1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	17.46	21.55	26.20	17.73	23.42	28.20	15.53	15.74	16.23	16.84
1	4	19.94	23.09	26.93	21.14	25.73	30.77	16.92	17.40	18.26	19.39
1	5	19.36	20.74	22.91	21.97	23.74	26.33	19.75	20.25	20.60	20.97
1	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	8	24.76	24.76	24.76	28.46	28.46	28.46	28.09	28.09	28.09	28.09
2	1	8.91	12.26	16.88	7.47	10.58	13.97	6.48	6.42	6.44	7.19
2	2	11.02	15.22	19.42	8.33	11.93	15.31	7.83	8.16	8.47	9.32
2	3	17.86	23.58	28.12	13.34	19.88	23.21	10.90	11.34	12.08	13.43
2	4	20.22	24.92	29.69	15.94	21.26	25.72	13.16	13.65	14.36	15.83
2	5	18.22	20.92	23.68	16.63	20.20	22.62	14.23	14.37	14.71	15.23
2	6	13.93	16.50	20.32	12.11	15.32	18.48	9.56	10.60	11.25	11.89
2	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	25.41	25.41	25.41	24.65	24.65	24.65	23.81	23.81	23.81	23.81
3	1	8.50	11.17	14.71	6.32	9.48	12.98	7.83	6.43	6.27	6.65
3	2	11.45	13.89	18.05	9.45	11.73	15.56	7.03	8.12	8.55	9.07
3	3	14.86	19.18	24.26	10.47	14.66	18.32	9.55	9.82	10.35	11.17
3	4	25.26	32.25	39.59	16.00	23.02	27.23	13.39	13.68	14.35	15.37
3	5	26.78	30.71	34.69	14.57	16.94	19.31	17.42	17.59	17.67	17.84
3	6	13.24	15.05	17.49	9.83	11.57	13.27	8.92	9.65	10.20	10.73
3	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	8	27.10	27.10	27.10	18.56	18.56	18.56	19.04	19.04	19.04	19.04
4	1	7.96	9.72	12.39	5.63	7.13	8.94	8.03	7.63	6.57	6.47
4	2	9.99	12.20	14.56	8.03	9.65	11.36	7.44	7.57	7.79	8.18
4	3	12.40	15.92	20.95	7.88	10.58	13.63	7.79	8.11	8.64	9.30
4	4	19.26	23.97	32.02	9.32	12.20	15.54	11.27	11.49	11.67	12.23
4	5	23.11	26.85	31.95	12.57	14.73	16.90	13.21	13.26	13.31	13.42
4	6	14.14	15.72	17.72	8.83	9.91	10.85	9.28	9.86	10.37	10.89
4	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	8	26.58	26.58	26.58	16.55	16.55	16.55	20.03	20.03	19.92	19.92
5	1	11.84	9.33	9.23	9.75	7.18	6.96	11.89	11.83	11.61	10.90
5	2	7.44	8.46	10.04	5.55	6.06	6.74	6.11	6.11	6.11	6.11
5	3	7.69	8.63	9.85	6.00	6.78	7.66	7.24	7.31	7.37	7.48
5	4	7.87	8.63	9.85	6.47	6.96	7.71	7.95	7.97	8.01	8.07
5	5	16.18	17.49	19.00	9.16	9.91	10.59	12.54	12.58	12.66	12.75
5	6	9.72	11.17	13.75	7.39	7.84	8.20	8.97	9.02	9.08	9.13
5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	8	24.95	24.95	24.95	15.50	15.50	15.50	22.53	22.65	22.65	22.65

Road Class: 1=Freeway, 2=Major Regional, 3=Principal Arterial, 4=Minor Arterial
5=Collector, 6=Ramp, 7=Frontage, 8=Local
Area Types: 1=Central Business District, 2=Fringe, 3=Urban, 4=Suburban, 5=Rural

Appendix D – Mobile Source Emissions Modeling: Emission Estimates

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Mobile Sources Emissions in Dispersion Modeling Domain

AM PERIOD Emissions					
ROAD CLASS	AREA TYPE	AMEM PD1	AMEM PD2	AMEM PD3	AMEM TOTAL
1	2	1,274,105.7	970,317.1	1,418,076.6	3,662,499.4
	3	3,284,237.7	2,396,270.4	3,359,820.9	9,040,329.0
	4	6,113,457.9	4,483,501.0	6,412,560.8	17,009,519.7
	5	3,324,579.6	1,605,511.1	1,806,291.1	6,736,381.8

		13,996,381.0	9,455,599.6	12,996,749.4	36,448,730.0

	2	143,248.0	117,499.1	164,431.2	425,178.3
	3	515,428.2	358,278.6	511,056.0	1,384,762.8
	4	1,293,394.8	950,822.2	1,284,486.3	3,528,703.3
2	5	276,294.2	194,165.4	264,644.0	735,103.7

		2,228,365.2	1,620,765.3	2,224,617.6	6,073,748.0

	1	388,425.6	303,050.3	423,157.2	1,114,633.1
	2	1,483,951.1	1,161,239.3	1,537,385.3	4,182,575.7
	3	7,189,977.2	5,566,701.9	7,899,231.3	20,655,910.4
	4	7,383,709.0	5,732,348.5	8,577,885.2	21,693,942.7
	5	861,565.8	636,609.3	872,088.4	2,370,263.4

3		17,307,628.7	13,399,949.2	19,309,747.4	50,017,325.3

	1	233,338.6	167,054.0	224,647.7	625,040.3
	2	701,436.1	546,911.1	759,095.9	2,007,443.2
	3	4,239,708.1	3,421,675.1	4,880,404.6	12,541,787.9
	4	5,246,295.0	4,317,829.7	6,944,742.6	16,508,867.2
	5	635,689.2	500,964.8	749,495.6	1,886,149.6

		11,056,467.0	8,954,434.7	13,558,386.5	33,569,288.2

4	1	62,968.2	48,850.5	70,751.2	182,569.8
	2	285,912.8	269,902.9	412,414.9	968,230.5
	3	2,225,519.0	2,338,585.8	3,910,151.6	8,474,256.4
	4	2,695,579.9	2,456,882.4	4,037,018.7	9,189,481.0
	5	785,756.0	581,001.0	878,760.9	2,245,517.9

		6,055,735.9	5,695,222.5	9,309,097.3	21,060,055.6

	2	89,378.5	62,331.3	87,588.0	239,297.8
	3	227,234.0	146,864.5	189,201.0	563,299.5
5	4	358,939.0	236,839.6	304,799.4	900,578.0
	5	29,239.5	21,363.3	30,356.8	80,959.6

		704,791.0	467,398.7	611,945.2	1,784,134.9

	1	64,957.0	39,508.2	45,018.8	149,484.0
	2	558,582.1	341,781.1	389,608.1	1,289,971.3
	3	2,977,004.0	1,814,989.6	2,062,634.5	6,854,628.1
	4	4,524,526.3	2,774,187.2	3,171,321.4	10,470,034.8
	5	1,706,682.1	1,047,048.3	1,194,036.7	3,947,767.0
8	-----				
		9,831,751.4	6,017,514.4	6,862,619.5	22,711,885.3
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		61,181,120.3	45,610,884.4	64,873,162.8	171,665,167.4
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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Mobile Sources Emissions in Dispersion Modeling Domain

PM PERIOD Emissions					
ROAD CLASS	AREA TYPE	PMEM PD1	PMEM PD2	PMEM PD3	PMEM TOTAL
	2	3,129,529.2	1,672,130.9	1,168,238.2	5,969,898.3
	3	7,478,633.1	4,273,428.1	3,111,320.9	14,863,382.1
	4	13,028,217.9	7,254,884.0	5,096,828.2	25,379,930.0
	5	7,975,377.8	2,696,040.2	1,494,002.6	12,165,420.6
		-----	-----	-----	-----
1		31,611,758.0	15,896,483.2	10,870,389.8	58,378,631.0
	2	333,688.3	199,495.4	140,915.6	674,099.3
	3	1,274,649.3	624,070.7	452,157.2	2,350,877.2
	4	3,137,647.1	1,613,530.8	1,077,044.1	5,828,222.1
	5	582,823.6	312,387.4	210,779.0	1,105,990.0
		-----	-----	-----	-----
2		5,328,808.3	2,749,484.3	1,880,895.9	9,959,188.5
	1	1,231,779.4	759,341.1	525,470.0	2,516,590.5
	2	3,415,748.3	2,175,040.4	1,409,205.9	6,999,994.5
	3	15,965,994.1	9,601,781.9	6,697,229.1	32,265,005.1
	4	14,529,815.5	8,522,233.3	6,211,096.9	29,263,145.7
	5	1,893,016.2	1,037,835.5	704,313.0	3,635,164.7
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3		37,036,353.5	22,096,232.2	15,547,314.9	74,679,900.5
	1	782,951.8	429,202.3	291,420.9	1,503,575.0
	2	1,771,999.2	1,089,560.1	765,386.5	3,626,945.8
	3	8,347,619.3	5,698,160.1	3,854,028.8	17,899,808.1
	4	8,009,732.2	5,239,966.3	3,976,522.6	17,226,221.0
	5	1,411,718.9	815,430.2	621,726.3	2,848,875.4
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4		20,324,021.4	13,272,318.9	9,509,085.1	43,105,425.4
	1	224,308.2	143,683.6	107,567.2	475,559.0
	2	741,723.3	618,918.6	471,764.8	1,832,406.7
	3	3,436,553.9	3,221,344.5	2,704,570.8	9,362,469.2
	4	3,966,008.5	3,091,421.7	2,515,909.8	9,573,340.0
	5	1,207,214.3	664,576.5	471,294.7	2,343,085.5
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5		9,575,808.2	7,739,944.8	6,271,107.3	23,586,860.4
	2	267,899.1	135,131.0	90,223.1	493,253.2
	3	527,808.9	245,802.1	155,803.7	929,414.7
	4	667,306.3	312,759.8	196,363.6	1,176,429.8
	5	59,666.6	30,610.5	18,789.8	109,066.8
		-----	-----	-----	-----
6		1,522,681.0	724,303.4	461,180.2	2,708,164.6
	1	253,458.7	112,169.0	64,019.9	429,647.7
	2	1,720,942.1	768,881.9	438,348.8	2,928,172.7
	3	6,991,160.4	3,105,331.6	1,770,449.9	11,866,941.9
	4	10,007,956.1	4,482,155.7	2,572,224.7	17,062,336.5
	5	3,228,010.1	1,441,841.6	827,265.2	5,497,116.8
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8		22,201,527.4	9,910,379.8	5,672,308.5	37,784,215.7
		=====	=====	=====	=====
		127,600,957.7	72,389,146.6	50,212,281.8	250,202,386.1

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Mobile Sources Emissions in Dispersion Modeling Domain

Off Peak Emissions						
FUN CLASS	AREA TYPE	OFF PD1	OFF PD2	OFF PD3	OFF PD4	TOTAL OFF
	2	1,647,797.0	1,848,716.4	3,773,379.2	944,491.8	8,214,384.5
	3	5,346,538.8	4,948,350.8	10,047,650.9	2,430,910.0	22,773,450.5
	4	9,043,853.3	10,149,394.6	18,999,867.5	4,542,516.9	42,735,632.4
	5	5,395,324.5	6,284,178.6	13,560,043.7	3,114,491.2	28,354,038.0
		-----	-----	-----	-----	-----
1		21,433,513.6	23,230,640.4	46,380,941.3	11,032,410.0	102,077,505.4
	2	160,410.9	191,401.6	436,625.5	113,019.4	901,457.5
	3	493,032.0	671,042.8	1,448,490.8	343,138.9	2,955,704.5
	4	1,389,717.4	1,650,939.0	3,735,865.6	958,939.7	7,735,461.7
	5	305,133.4	361,401.6	811,279.0	203,199.1	1,681,013.1
		-----	-----	-----	-----	-----
2		2,348,293.7	2,874,785.1	6,432,260.9	1,618,297.1	13,273,636.8
	1	399,733.5	481,582.4	1,145,891.8	314,620.4	2,341,828.0
	2	1,245,869.6	1,563,860.8	3,743,608.0	1,020,066.1	7,573,404.5
	3	6,267,967.6	7,737,653.9	18,336,628.3	4,913,287.9	37,255,537.7
	4	7,164,972.5	8,619,478.1	19,731,332.6	5,084,626.8	40,600,409.9
	5	1,028,060.9	1,217,590.9	2,731,410.6	707,187.0	5,684,249.4
		-----	-----	-----	-----	-----
3		16,106,604.0	19,620,166.1	45,688,871.3	12,039,788.3	93,455,429.6
	1	260,804.8	315,936.0	753,340.2	199,771.3	1,529,852.3
	2	595,893.3	725,443.3	1,725,666.0	478,063.4	3,525,066.0
	3	2,653,253.2	3,238,186.1	8,030,937.8	2,216,565.7	16,138,942.7
	4	3,764,242.0	4,526,399.2	10,521,326.8	2,889,927.8	21,701,895.8
	5	722,630.9	858,863.9	1,908,492.3	482,721.3	3,972,708.4
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4		7,996,824.1	9,664,828.5	22,939,763.0	6,267,049.5	46,868,465.2
	1	74,640.7	89,275.6	202,012.7	51,626.3	417,555.2
	2	177,836.6	220,066.8	529,489.9	150,365.9	1,077,759.3
	3	994,743.2	1,168,643.4	2,815,141.4	817,856.6	5,796,384.5
	4	1,231,371.1	1,466,615.7	3,464,250.6	949,028.3	7,111,265.8
	5	727,560.7	851,674.5	1,870,560.8	461,327.7	3,911,123.7
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5		3,206,152.3	3,796,276.0	8,881,455.4	2,430,204.8	18,314,088.5
	2	107,705.8	139,002.7	313,460.6	76,420.8	636,589.9
	3	262,087.5	314,148.6	703,146.3	169,960.7	1,449,343.1
	4	349,649.0	429,212.1	949,789.5	238,257.1	1,966,907.7
	5	32,051.0	37,764.5	82,877.2	20,852.6	173,545.2
		-----	-----	-----	-----	-----
6		751,493.3	920,127.9	2,049,273.6	505,491.1	4,226,385.9
	1	120,207.4	139,808.2	304,719.3	74,408.9	639,143.8
	2	781,490.8	911,406.5	1,993,209.9	484,302.9	4,170,410.1
	3	3,441,469.6	3,989,439.7	8,716,647.9	2,118,718.8	18,266,276.0
	4	5,810,883.5	6,768,430.2	14,767,447.7	3,596,022.1	30,942,783.5
	5	2,294,204.0	2,652,138.2	5,798,795.9	1,414,072.5	12,159,210.6
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8		12,448,255.4	14,461,222.7	31,580,820.7	7,687,525.3	66,177,824.0
		=====	=====	=====	=====	=====
		64,291,136.6	74,568,046.7	163,953,386.2	41,580,766.0	344,393,335.5

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Mobile Sources Emissions in Nonattainment Area

AMEM PERIOD Emissions					
ROAD CLASS	AREA TYPE	AMEM PD1	AMEM PD2	AMEM PD3	AMEM TOTAL
	2	1,274,105.7	970,317.1	1,418,076.6	3,662,499.4
	3	3,284,237.7	2,396,270.4	3,359,820.9	9,040,329.0
	4	5,971,397.0	4,383,993.3	6,274,333.1	16,629,723.5
	5	2,330,447.5	1,138,344.9	1,295,657.4	4,764,449.8
		-----	-----	-----	-----
1		12,860,187.9	8,888,925.7	12,347,888.0	34,097,001.7
	2	143,248.0	117,499.1	164,431.2	425,178.3
	3	515,428.2	358,278.6	511,056.0	1,384,762.8
	4	1,097,820.0	784,582.3	1,033,530.4	2,915,932.8
	5	87,872.1	65,693.9	90,557.9	244,123.9
		-----	-----	-----	-----
2		1,844,368.4	1,326,053.9	1,799,575.6	4,969,997.8
	1	388,425.6	303,050.3	423,157.2	1,114,633.1
	2	1,483,951.1	1,161,239.3	1,537,385.3	4,182,575.7
	3	7,157,211.9	5,542,859.0	7,863,226.2	20,563,297.1
	4	7,064,082.5	5,486,802.6	8,207,900.5	20,758,785.7
	5	560,112.2	414,539.6	566,189.5	1,540,841.2
		-----	-----	-----	-----
3		16,653,783.3	12,908,490.8	18,597,858.6	48,160,132.7
	1	233,338.6	167,054.0	224,647.7	625,040.3
	2	701,436.1	546,911.1	759,095.9	2,007,443.2
	3	4,209,378.2	3,397,213.6	4,844,543.7	12,451,135.5
	4	5,039,665.4	4,152,720.0	6,683,886.4	15,876,271.8
	5	412,766.3	325,067.7	487,534.6	1,225,368.6
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4		10,596,584.6	8,588,966.4	12,999,708.4	32,185,259.3
	1	62,968.2	48,850.5	70,751.2	182,569.8
	2	285,912.8	269,902.9	412,414.9	968,230.5
	3	2,220,940.6	2,335,203.9	3,905,490.4	8,461,635.0
	4	2,615,931.3	2,400,994.3	3,963,342.1	8,980,267.7
	5	643,161.1	484,343.9	747,148.3	1,874,653.2
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5		5,828,913.9	5,539,295.4	9,099,146.9	20,467,356.2
	2	89,378.5	62,331.3	87,588.0	239,297.8
	3	227,234.0	146,864.5	189,201.0	563,299.5
	4	353,079.5	233,076.4	299,740.9	885,896.8
	5	23,417.5	17,190.7	24,969.8	65,577.9
		-----	-----	-----	-----
6		693,109.5	459,462.9	601,499.7	1,754,072.0
	1	64,957.0	39,508.2	45,018.8	149,484.0
	2	558,582.1	341,781.1	389,608.1	1,289,971.3
	3	2,957,326.0	1,803,025.1	2,048,972.7	6,809,323.8
	4	4,390,654.1	2,691,588.1	3,076,944.0	10,159,186.2
	5	706,899.2	436,557.4	496,439.3	1,639,895.9
		-----	-----	-----	-----
8		8,678,418.4	5,312,459.9	6,056,982.9	20,047,861.2
		=====	=====	=====	=====
		57,155,365.9	43,023,655.0	61,502,660.0	161,681,681.0

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Mobile Sources Emissions in Nonattainment Area

PM PERIOD Emissions					
ROAD CLASS	AREA TYPE	PMEM PD1	PMEM PD2	PMEM PD3	PMEM TOTAL
	2	3,129,529.2	1,672,130.9	1,168,238.2	5,969,898.3
	3	7,478,633.1	4,273,428.1	3,111,320.9	14,863,382.1
	4	12,721,716.4	7,098,000.9	4,992,338.1	24,812,055.4
	5	5,459,489.7	1,909,421.2	1,081,438.2	8,450,349.1
		-----	-----	-----	-----
1		28,789,368.4	14,952,981.1	10,353,335.4	54,095,684.9
	2	333,688.3	199,495.4	140,915.6	674,099.3
	3	1,274,649.3	624,070.7	452,157.2	2,350,877.2
	4	2,689,232.6	1,334,912.4	863,029.3	4,887,174.2
	5	158,971.6	100,468.5	66,928.9	326,369.0
		-----	-----	-----	-----
2		4,456,541.7	2,258,947.0	1,523,031.0	8,238,519.7
	1	1,231,779.4	759,341.1	525,470.0	2,516,590.5
	2	3,415,748.3	2,175,040.4	1,409,205.9	6,999,994.5
	3	15,884,224.7	9,554,368.7	6,663,853.8	32,102,447.2
	4	13,903,197.4	8,137,186.7	5,931,204.2	27,971,588.3
	5	1,198,095.1	663,482.5	452,438.1	2,314,015.6
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3		35,633,044.9	21,289,419.3	14,982,172.0	71,904,636.2
	1	782,951.8	429,202.3	291,420.9	1,503,575.0
	2	1,771,999.2	1,089,560.1	765,386.5	3,626,945.8
	3	8,283,445.9	5,650,507.7	3,820,769.6	17,754,723.3
	4	7,661,310.3	5,034,368.9	3,822,405.5	16,518,084.7
	5	892,987.3	536,218.1	400,233.4	1,829,438.7
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4		19,392,694.5	12,739,857.1	9,100,216.0	41,232,767.6
	1	224,308.2	143,683.6	107,567.2	475,559.0
	2	741,723.3	618,918.6	471,764.8	1,832,406.7
	3	3,430,432.1	3,216,866.8	2,701,132.0	9,348,430.8
	4	3,818,984.2	3,014,890.8	2,465,199.4	9,299,074.3
	5	971,684.3	542,732.9	391,113.2	1,905,530.4
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5		9,187,132.1	7,537,092.6	6,136,776.5	22,861,001.2
	2	267,899.1	135,131.0	90,223.1	493,253.2
	3	527,808.9	245,802.1	155,803.7	929,414.7
	4	657,835.0	308,292.2	193,483.8	1,159,611.1
	5	45,293.1	24,053.2	15,133.2	84,479.5
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6		1,498,836.2	713,278.5	454,643.8	2,666,758.6
	1	253,458.7	112,169.0	64,019.9	429,647.7
	2	1,720,942.1	768,881.9	438,348.8	2,928,172.7
	3	6,946,935.2	3,085,669.0	1,759,183.7	11,791,787.9
	4	9,715,305.2	4,349,207.0	2,495,514.9	16,560,027.1
	5	1,330,954.1	593,344.7	340,622.2	2,264,921.0
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8		19,967,595.3	8,909,271.6	5,097,689.4	33,974,556.4
		=====	=====	=====	=====
		118,925,213.1	68,400,847.3	47,647,864.1	234,973,924.6

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2006 Mobile Sources Emissions in Nonattainment Area

Off Peak Emissions						
FUN CLASS	AREA TYPE	OFF PD1	OFF PD2	OFF PD3	OFF PD4	TOTAL OFF
	2	1,647,797.0	1,848,716.4	3,773,379.2	944,491.8	8,214,384.5
	3	5,346,538.8	4,948,350.8	10,047,650.9	2,430,910.0	22,773,450.5
	4	8,798,191.2	9,877,792.6	18,485,832.5	4,421,424.3	41,583,240.7
	5	3,542,355.2	4,161,351.3	9,001,097.3	2,078,139.8	18,782,943.7
		-----	-----	-----	-----	-----
1		19,334,882.2	20,836,211.2	41,307,960.0	9,874,966.0	91,354,019.3
	2	160,410.9	191,401.6	436,625.5	113,019.4	901,457.5
	3	493,032.0	671,042.8	1,448,490.8	343,138.9	2,955,704.5
	4	1,178,211.2	1,403,325.4	3,173,723.4	810,302.8	6,565,562.8
	5	61,516.6	72,188.6	174,723.2	46,284.7	354,713.1
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2		1,893,170.7	2,337,958.5	5,233,562.9	1,312,745.8	10,777,437.9
	1	399,733.5	481,582.4	1,145,891.8	314,620.4	2,341,828.0
	2	1,245,869.6	1,563,860.8	3,743,608.0	1,020,066.1	7,573,404.5
	3	6,230,581.9	7,692,252.1	18,231,658.9	4,884,671.1	37,039,164.0
	4	6,876,686.5	8,254,961.9	18,871,381.9	4,858,528.1	38,861,558.4
	5	591,415.2	697,133.0	1,574,078.9	411,088.7	3,273,715.7
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3		15,344,286.7	18,689,790.1	43,566,619.4	11,488,974.5	89,089,670.7
	1	260,804.8	315,936.0	753,340.2	199,771.3	1,529,852.3
	2	595,893.3	725,443.3	1,725,666.0	478,063.4	3,525,066.0
	3	2,633,235.1	3,212,249.3	7,969,966.6	2,198,146.5	16,013,615.0
	4	3,557,065.5	4,282,799.7	9,996,017.6	2,753,062.0	20,588,944.8
	5	438,728.5	516,376.5	1,148,671.8	297,337.4	2,401,114.2
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4		7,485,744.8	9,052,804.8	21,593,662.1	5,926,380.6	44,058,592.4
	1	74,640.7	89,275.6	202,012.7	51,626.3	417,555.2
	2	177,836.6	220,066.8	529,489.9	150,365.9	1,077,759.3
	3	992,235.1	1,165,810.4	2,808,890.1	816,197.4	5,783,133.1
	4	1,159,152.5	1,378,948.5	3,268,273.8	901,162.9	6,707,537.8
	5	570,615.6	670,771.6	1,477,378.4	364,791.4	3,083,556.9
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5		2,974,480.5	3,524,872.9	8,286,044.9	2,284,144.0	17,069,542.3
	2	107,705.8	139,002.7	313,460.6	76,420.8	636,589.9
	3	262,087.5	314,148.6	703,146.3	169,960.7	1,449,343.1
	4	344,606.0	422,831.7	934,916.3	234,483.7	1,936,837.7
	5	24,219.1	28,589.6	62,600.0	16,004.8	131,413.5
		-----	-----	-----	-----	-----
6		738,618.3	904,572.6	2,014,123.2	496,870.0	4,154,184.2
	1	120,207.4	139,808.2	304,719.3	74,408.9	639,143.8
	2	781,490.8	911,406.5	1,993,209.9	484,302.9	4,170,410.1
	3	3,420,577.1	3,964,669.5	8,662,820.7	2,105,605.0	18,153,672.4
	4	5,636,929.2	6,566,882.5	14,330,604.4	3,489,843.4	30,024,259.5
	5	905,006.0	1,039,312.8	2,271,097.3	554,616.4	4,770,032.6
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8		10,864,210.6	12,622,079.5	27,562,451.7	6,708,776.6	57,757,518.4
		=====	=====	=====	=====	=====
		58,635,393.8	67,968,289.6	149,564,424.3	38,092,857.5	314,260,965.2

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Mobile Sources Emissions in Dispersion Modeling Domain

AM PERIOD Emissions					
ROAD CLASS	AREA TYPE	AMEM PD1	AMEM PD2	AMEM PD3	AMEM TOTAL
	2	1,306,252.3	908,511.4	1,269,359.6	3,484,123.2
	3	3,334,771.3	2,287,663.8	3,148,270.4	8,770,705.6
	4	6,376,551.5	4,685,758.4	6,922,311.1	17,984,621.0
	5	3,626,305.5	1,895,709.3	1,937,528.4	7,459,543.2
		-----	-----	-----	-----
1		14,643,880.6	9,777,642.9	13,277,469.6	37,698,993.0
	2	199,487.6	156,904.1	227,093.1	583,484.8
	3	1,953,007.2	1,424,581.4	2,040,831.9	5,418,420.5
	4	4,279,258.5	3,318,464.7	4,801,067.0	12,398,790.2
	5	530,218.2	397,747.7	546,873.4	1,474,839.4
		-----	-----	-----	-----
2		6,961,971.6	5,297,697.9	7,615,865.4	19,875,534.9
	1	462,011.5	330,640.7	454,566.9	1,247,219.1
	2	1,551,847.7	1,248,309.3	1,650,676.7	4,450,833.7
	3	6,136,348.8	4,660,733.3	6,689,908.2	17,486,990.4
	4	6,021,138.4	4,697,573.5	6,913,294.7	17,632,006.6
	5	918,647.6	673,857.5	949,336.4	2,541,841.5
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3		15,089,994.0	11,611,114.3	16,657,782.9	43,358,891.2
	1	248,496.9	177,464.9	237,649.6	663,611.5
	2	525,395.4	416,918.8	549,376.1	1,491,690.3
	3	2,825,726.6	2,367,286.2	3,358,794.9	8,551,807.7
	4	3,413,536.2	3,031,577.2	4,863,666.7	11,308,780.1
	5	375,330.8	284,563.1	407,093.1	1,066,987.0
		-----	-----	-----	-----
4		7,388,485.8	6,277,810.2	9,416,580.5	23,082,876.5
	1	85,488.8	68,517.7	100,666.7	254,673.2
	2	316,260.5	297,311.9	451,344.9	1,064,917.4
	3	1,882,456.7	2,025,348.3	3,422,334.0	7,330,139.0
	4	2,461,006.6	2,296,043.8	3,729,419.0	8,486,469.3
	5	747,744.8	560,262.2	832,283.7	2,140,290.6
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5		5,492,957.5	5,247,483.8	8,536,048.3	19,276,489.6
	2	97,236.5	66,881.5	90,987.5	255,105.4
	3	222,977.5	146,072.7	186,747.6	555,797.7
	4	385,505.0	263,447.9	335,533.2	984,486.1
	5	28,678.6	20,886.5	27,350.3	76,915.4
		-----	-----	-----	-----
6		734,397.5	497,288.6	640,618.5	1,872,304.6
	1	83,791.5	50,966.1	57,720.4	192,478.0
	2	548,592.0	335,123.9	381,008.2	1,264,724.1
	3	2,902,193.9	1,772,970.7	2,011,916.5	6,687,081.1
	4	4,773,188.1	2,925,971.9	3,334,620.4	11,033,780.3
	5	1,758,207.9	1,075,700.7	1,226,333.8	4,060,242.5
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8		10,065,973.4	6,160,733.3	7,011,599.3	23,238,306.0
		=====	=====	=====	=====
		60,377,660.4	44,869,771.1	63,155,964.5	168,403,396.0

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Mobile Sources Emissions in Dispersion Modeling Domain

PM PERIOD Emissions					
ROAD CLASS	AREA TYPE	PMEM PD1	PMEM PD2	PMEM PD3	PMEM TOTAL
	2	3,229,492.2	1,665,224.8	1,148,454.6	6,043,171.5
	3	7,668,418.5	4,073,235.0	2,856,572.3	14,598,225.9
	4	14,281,460.2	7,509,652.8	5,290,215.9	27,081,328.9
	5	8,773,738.2	3,569,098.8	1,689,623.7	14,032,460.7
		-----	-----	-----	-----
1		33,953,109.1	16,817,211.4	10,984,866.5	61,755,187.0
	2	495,305.8	263,265.3	191,636.2	950,207.3
	3	4,435,403.8	2,590,638.3	1,815,247.5	8,841,289.7
	4	9,900,033.9	5,695,276.2	4,032,822.6	19,628,132.7
	5	1,161,017.8	622,139.8	427,615.6	2,210,773.1
		-----	-----	-----	-----
2		15,991,761.3	9,171,319.6	6,467,321.8	31,630,402.8
	1	1,322,349.9	823,280.4	556,508.8	2,702,139.1
	2	3,882,997.8	2,416,007.3	1,559,588.6	7,858,593.6
	3	13,887,098.1	8,301,160.6	6,076,181.4	28,264,440.1
	4	12,566,737.1	7,143,701.4	5,231,250.3	24,941,688.8
	5	2,016,183.1	1,091,931.3	734,626.4	3,842,740.7
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3		33,675,365.9	19,776,080.9	14,158,155.4	67,609,602.3
	1	839,499.2	442,552.3	306,173.2	1,588,224.7
	2	1,375,727.4	839,292.8	572,606.4	2,787,626.7
	3	5,839,007.1	3,896,802.5	2,841,840.6	12,577,650.1
	4	5,354,023.6	3,482,748.2	2,747,997.1	11,584,768.9
	5	828,113.0	445,030.2	337,944.3	1,611,087.6
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4		14,236,370.3	9,106,426.1	6,806,561.6	30,149,358.0
	1	279,755.9	199,738.1	153,492.4	632,986.5
	2	828,700.6	661,709.8	515,702.3	2,006,112.7
	3	3,010,636.6	2,897,782.2	2,484,160.4	8,392,579.3
	4	3,773,168.7	2,870,408.4	2,311,246.0	8,954,823.1
	5	1,209,071.5	630,526.0	431,892.7	2,271,490.3
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5		9,101,333.4	7,260,164.6	5,896,493.9	22,257,991.8
	2	300,521.8	147,554.7	97,933.3	546,009.8
	3	534,803.4	249,592.6	156,303.5	940,699.6
	4	739,823.4	369,563.5	228,553.3	1,337,940.1
	5	63,515.4	31,754.1	21,090.0	116,359.5
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6		1,638,663.9	798,464.9	503,880.1	2,941,009.0
	1	317,933.8	140,698.8	80,284.9	538,917.5
	2	1,673,892.1	743,562.2	424,296.8	2,841,751.1
	3	7,019,272.3	3,114,769.0	1,775,602.6	11,909,644.0
	4	10,832,865.4	4,849,858.7	2,780,475.0	18,463,199.1
	5	3,426,382.5	1,531,569.5	877,015.0	5,834,967.0
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8		23,270,346.2	10,380,458.3	5,937,674.2	39,588,478.8
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		131,866,950.1	73,310,125.9	50,754,953.6	255,932,029.6

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Mobile Sources Emissions in Dispersion Modeling Domain

Off Peak Emissions						
FUN CLASS	AREA TYPE	OFF PD1	OFF PD2	OFF PD3	OFF PD4	TOTAL OFF
	2	1,820,064.5	1,929,752.1	3,954,902.1	972,455.2	8,677,173.9
	3	5,671,049.7	5,127,401.0	10,438,443.9	2,482,097.7	23,718,992.2
	4	10,022,356.4	10,976,259.1	20,936,264.1	4,962,724.2	46,897,603.9
	5	5,705,055.1	6,682,805.8	14,574,467.6	3,464,924.0	30,427,252.5
		-----	-----	-----	-----	-----
1		23,218,525.7	24,716,218.0	49,904,077.8	11,882,201.0	109,721,022.5
	2	212,897.4	252,545.8	589,503.0	156,206.4	1,211,152.6
	3	1,903,357.9	2,345,168.7	5,397,850.1	1,389,951.8	11,036,328.4
	4	4,318,240.0	5,257,320.0	12,102,926.5	3,126,595.8	24,805,082.4
	5	562,108.9	688,021.5	1,575,207.4	412,819.1	3,238,156.9
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2		6,996,604.2	8,543,055.9	19,665,487.1	5,085,573.1	40,290,720.3
	1	427,111.1	544,513.7	1,303,704.0	354,760.2	2,630,089.0
	2	1,392,267.2	1,794,716.9	4,325,347.3	1,134,470.6	8,646,802.1
	3	5,507,654.7	6,837,609.6	16,152,861.0	4,294,085.9	32,792,211.2
	4	6,279,179.4	7,494,372.1	16,958,427.8	4,345,210.7	35,077,189.9
	5	1,125,452.6	1,310,460.9	2,949,516.1	735,686.5	6,121,116.1
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3		14,731,664.9	17,981,673.3	41,689,856.3	10,864,213.9	85,267,408.3
	1	278,924.2	343,417.6	821,404.4	217,465.6	1,661,211.8
	2	477,177.3	608,649.9	1,425,971.2	389,377.1	2,901,175.5
	3	1,779,653.0	2,231,846.4	5,603,404.7	1,562,784.9	11,177,689.0
	4	2,529,000.3	3,027,737.7	7,167,473.3	1,930,587.4	14,654,798.7
	5	446,424.5	535,730.3	1,200,310.7	294,111.4	2,476,576.9
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4		5,511,179.2	6,747,381.9	16,218,564.3	4,394,326.4	32,871,451.8
	1	94,053.0	111,734.4	250,715.0	66,314.5	522,816.8
	2	183,903.3	231,680.2	598,931.1	170,726.7	1,185,241.3
	3	978,209.0	1,161,251.3	2,767,272.1	769,719.5	5,676,451.7
	4	1,308,680.6	1,576,771.0	3,696,140.2	975,306.0	7,556,897.9
	5	737,787.6	894,812.3	1,980,533.1	474,308.0	4,087,441.0
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5		3,302,633.5	3,976,249.1	9,293,591.4	2,456,374.7	19,028,848.7
	2	105,966.2	137,167.7	331,962.2	88,206.6	663,302.6
	3	272,141.4	317,733.6	704,166.2	171,199.8	1,465,241.1
	4	378,488.8	466,358.5	1,030,325.0	258,640.3	2,133,812.6
	5	34,650.2	40,498.0	90,775.4	22,340.5	188,264.2
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6		791,246.7	961,757.8	2,157,228.7	540,387.2	4,450,620.5
	1	153,035.0	177,009.5	387,946.4	93,284.5	811,275.4
	2	775,220.6	902,590.5	1,974,485.7	475,666.2	4,127,963.1
	3	3,529,989.7	4,096,057.3	8,972,552.8	2,165,020.0	18,763,619.7
	4	6,385,141.8	7,381,663.3	16,163,817.5	3,907,453.2	33,838,075.8
	5	2,489,319.4	2,885,085.1	6,295,789.0	1,524,154.2	13,194,347.8
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8		13,332,706.6	15,442,405.6	33,794,591.4	8,165,578.1	70,735,281.8
		=====	=====	=====	=====	=====
		67,884,560.8	78,368,741.7	172,723,396.9	43,388,654.4	362,365,353.8

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Mobile Sources Emissions in Nonattainment Area

AM PERIOD Emissions					
ROAD CLASS	AREA TYPE	AMEM PD1	AMEM PD2	AMEM PD3	AMEM TOTAL
	2	1,306,252.3	908,511.4	1,269,359.6	3,484,123.2
	3	3,334,771.3	2,287,663.8	3,148,270.4	8,770,705.6
	4	6,224,175.1	4,574,199.1	6,758,414.5	17,556,788.7
	5	2,488,182.0	1,313,692.8	1,346,380.1	5,148,254.8
		-----	-----	-----	-----
1		13,353,380.6	9,084,067.1	12,522,424.7	34,959,872.4
	2	199,487.6	156,904.1	227,093.1	583,484.8
	3	1,953,007.2	1,424,581.4	2,040,831.9	5,418,420.5
	4	3,944,456.6	3,049,463.1	4,379,343.5	11,373,263.2
	5	353,145.2	270,137.6	375,798.7	999,081.4
		-----	-----	-----	-----
2		6,450,096.6	4,901,086.2	7,023,067.2	18,374,250.0
	1	462,011.5	330,640.7	454,566.9	1,247,219.1
	2	1,551,847.7	1,248,309.3	1,650,676.7	4,450,833.7
	3	6,100,046.2	4,634,062.1	6,650,845.1	17,384,953.5
	4	5,649,194.2	4,415,558.4	6,504,243.1	16,568,995.7
	5	617,684.5	449,095.2	625,365.7	1,692,145.4
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3		14,380,784.1	11,077,665.7	15,885,697.5	41,344,147.2
	1	248,496.9	177,464.9	237,649.6	663,611.5
	2	525,395.4	416,918.8	549,376.1	1,491,690.3
	3	2,802,695.8	2,347,460.3	3,331,471.6	8,481,627.8
	4	3,264,950.8	2,909,701.4	4,680,743.2	10,855,395.4
	5	210,771.5	161,489.6	234,961.0	607,222.1
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4		7,052,310.4	6,013,035.0	9,034,201.5	22,099,546.9
	1	85,488.8	68,517.7	100,666.7	254,673.2
	2	316,260.5	297,311.9	451,344.9	1,064,917.4
	3	1,879,353.1	2,022,583.5	3,417,555.0	7,319,491.6
	4	2,374,006.5	2,232,635.5	3,641,161.0	8,247,802.9
	5	608,824.0	466,953.2	714,044.8	1,789,822.0
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5		5,263,932.9	5,088,001.8	8,324,772.4	18,676,707.1
	2	97,236.5	66,881.5	90,987.5	255,105.4
	3	222,977.5	146,072.7	186,747.6	555,797.7
	4	378,898.3	258,829.3	329,521.8	967,249.3
	5	22,761.5	16,778.2	21,895.9	61,435.6
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6		721,873.7	488,561.6	629,152.7	1,839,588.0
	1	83,791.5	50,966.1	57,720.4	192,478.0
	2	548,592.0	335,123.9	381,008.2	1,264,724.1
	3	2,883,520.3	1,761,512.3	1,998,944.7	6,643,977.3
	4	4,597,683.9	2,817,999.1	3,211,807.8	10,627,490.8
	5	769,895.3	472,394.4	536,825.9	1,779,115.6
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8		8,883,483.0	5,437,995.9	6,186,307.0	20,507,785.9
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		56,105,861.4	42,090,413.2	59,605,623.1	157,801,897.6

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Mobile Sources Emissions in Nonattainment Area

PM PERIOD Emissions					
ROAD CLASS	AREA TYPE	PMEM PD1	PMEM PD2	PMEM PD3	PMEM TOTAL
	2	3,229,492.2	1,665,224.8	1,148,454.6	6,043,171.5
	3	7,668,418.5	4,073,235.0	2,856,572.3	14,598,225.9
	4	13,940,746.0	7,333,824.8	5,167,986.3	26,442,557.1
	5	5,909,031.5	2,461,891.8	1,169,890.8	9,540,814.0
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1		30,747,688.1	15,534,176.3	10,342,904.0	56,624,768.5
	2	495,305.8	263,265.3	191,636.2	950,207.3
	3	4,435,403.8	2,590,638.3	1,815,247.5	8,841,289.7
	4	9,146,166.7	5,234,331.8	3,672,228.8	18,052,727.4
	5	734,495.8	409,179.5	283,268.3	1,426,943.7
		-----	-----	-----	-----
2		14,811,372.1	8,497,415.0	5,962,380.9	29,271,167.9
	1	1,322,349.9	823,280.4	556,508.8	2,702,139.1
	2	3,882,997.8	2,416,007.3	1,559,588.6	7,858,593.6
	3	13,791,482.0	8,249,024.9	6,037,791.0	28,078,297.8
	4	11,787,273.5	6,697,869.2	4,908,256.4	23,393,399.2
	5	1,334,212.3	717,265.7	480,105.9	2,531,583.8
		-----	-----	-----	-----
3		32,118,315.4	18,903,447.5	13,542,250.7	64,564,013.5
	1	839,499.2	442,552.3	306,173.2	1,588,224.7
	2	1,375,727.4	839,292.8	572,606.4	2,787,626.7
	3	5,790,622.3	3,861,188.2	2,815,565.1	12,467,375.6
	4	5,091,903.9	3,334,076.3	2,635,406.0	11,061,386.3
	5	443,083.9	255,119.8	202,783.8	900,987.6
		-----	-----	-----	-----
4		13,540,836.7	8,732,229.5	6,532,534.6	28,805,600.8
	1	279,755.9	199,738.1	153,492.4	632,986.5
	2	828,700.6	661,709.8	515,702.3	2,006,112.7
	3	3,005,947.1	2,893,799.6	2,481,110.6	8,380,857.4
	4	3,600,705.5	2,781,658.0	2,251,734.9	8,634,098.4
	5	971,997.2	517,595.8	360,084.9	1,849,677.8
		-----	-----	-----	-----
5		8,687,106.4	7,054,501.3	5,762,125.1	21,503,732.8
	2	300,521.8	147,554.7	97,933.3	546,009.8
	3	534,803.4	249,592.6	156,303.5	940,699.6
	4	729,698.5	364,207.5	224,656.7	1,318,562.7
	5	47,927.6	24,074.3	16,202.5	88,204.3
		-----	-----	-----	-----
6		1,612,951.2	785,429.1	495,096.1	2,893,476.4
	1	317,933.8	140,698.8	80,284.9	538,917.5
	2	1,673,892.1	743,562.2	424,296.8	2,841,751.1
	3	6,976,108.1	3,095,431.6	1,764,573.0	11,836,112.6
	4	10,435,002.1	4,671,351.6	2,677,765.7	17,784,119.3
	5	1,494,852.0	667,928.8	381,873.7	2,544,654.6
		-----	-----	-----	-----
8		20,897,788.1	9,318,973.0	5,328,794.1	35,545,555.1
		=====	=====	=====	=====
		122,416,058.0	68,826,171.8	47,966,085.3	239,208,315.1

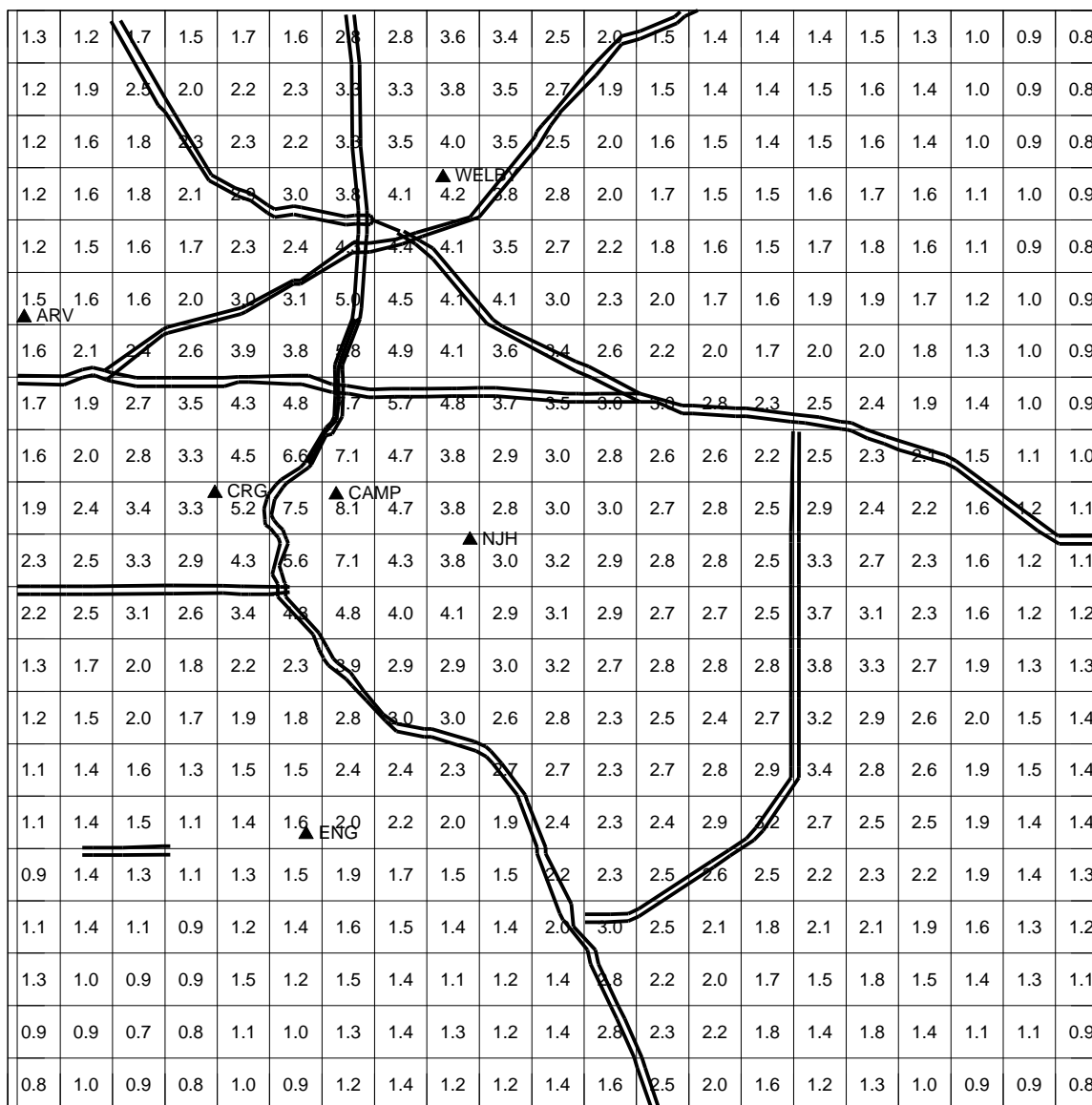
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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

2013 Mobile Sources Emissions in Nonattainment Area

Off Peak Emissions						
FUN CLASS	AREA TYPE	OFF PD1	OFF PD2	OFF PD3	OFF PD4	TOTAL OFF
	2	1,820,064.5	1,929,752.1	3,954,902.1	972,455.2	8,677,173.9
	3	5,671,049.7	5,127,401.0	10,438,443.9	2,482,097.7	23,718,992.2
	4	9,763,022.3	10,682,783.9	20,364,791.5	4,824,058.0	45,634,655.6
	5	3,729,599.1	4,340,016.1	9,445,543.0	2,247,519.8	19,762,678.1
		-----	-----	-----	-----	-----
1		20,983,735.5	22,079,953.1	44,203,680.5	10,526,130.6	97,793,499.8
	2	212,897.4	252,545.8	589,503.0	156,206.4	1,211,152.6
	3	1,903,357.9	2,345,168.7	5,397,850.1	1,389,951.8	11,036,328.4
	4	3,953,074.9	4,815,322.7	11,097,619.1	2,871,008.2	22,737,024.9
	5	284,044.7	357,775.8	846,274.4	236,314.9	1,724,409.7
		-----	-----	-----	-----	-----
2		6,353,374.9	7,770,812.9	17,931,246.6	4,653,481.3	36,708,915.7
	1	427,111.1	544,513.7	1,303,704.0	354,760.2	2,630,089.0
	2	1,392,267.2	1,794,716.9	4,325,347.3	1,134,470.6	8,646,802.1
	3	5,460,466.8	6,780,858.5	16,022,361.4	4,259,506.4	32,523,193.0
	4	5,867,667.1	7,005,134.9	15,865,484.8	4,063,011.5	32,801,298.3
	5	722,061.3	834,369.9	1,865,753.2	463,077.2	3,885,261.6
		-----	-----	-----	-----	-----
3		13,869,573.4	16,959,593.8	39,382,650.8	10,274,825.9	80,486,644.0
	1	278,924.2	343,417.6	821,404.4	217,465.6	1,661,211.8
	2	477,177.3	608,649.9	1,425,971.2	389,377.1	2,901,175.5
	3	1,762,558.3	2,210,944.3	5,554,460.5	1,548,887.5	11,076,850.6
	4	2,370,757.0	2,841,624.6	6,734,036.5	1,823,843.9	13,770,262.1
	5	216,615.6	269,063.4	605,414.4	151,694.6	1,242,788.0
		-----	-----	-----	-----	-----
4		5,106,032.4	6,273,699.9	15,141,287.1	4,131,268.8	30,652,288.1
	1	94,053.0	111,734.4	250,715.0	66,314.5	522,816.8
	2	183,903.3	231,680.2	598,931.1	170,726.7	1,185,241.3
	3	976,655.2	1,159,375.5	2,762,941.9	768,569.2	5,667,541.8
	4	1,220,477.9	1,474,465.3	3,464,070.0	918,639.8	7,077,653.1
	5	583,746.2	717,862.9	1,578,246.5	378,126.9	3,257,982.5
		-----	-----	-----	-----	-----
5		3,058,835.7	3,695,118.4	8,654,904.4	2,302,377.0	17,711,235.5
	2	105,966.2	137,167.7	331,962.2	88,206.6	663,302.6
	3	272,141.4	317,733.6	704,166.2	171,199.8	1,465,241.1
	4	373,192.6	459,623.4	1,014,758.9	254,712.5	2,102,287.4
	5	26,893.3	30,927.7	68,661.0	16,923.9	143,405.8
		-----	-----	-----	-----	-----
6		778,193.5	945,452.3	2,119,548.3	531,042.8	4,374,236.9
	1	153,035.0	177,009.5	387,946.4	93,284.5	811,275.4
	2	775,220.6	902,590.5	1,974,485.7	475,666.2	4,127,963.1
	3	3,508,794.1	4,071,061.6	8,917,838.7	2,151,934.3	18,649,628.7
	4	6,147,814.6	7,107,935.4	15,565,673.3	3,763,127.2	32,584,550.5
	5	1,045,053.4	1,199,079.7	2,612,222.5	629,111.6	5,485,467.2
		-----	-----	-----	-----	-----
8		11,629,917.7	13,457,676.6	29,458,166.7	7,113,123.8	61,658,884.8
		=====	=====	=====	=====	=====
		61,779,663.0	71,182,307.1	156,891,484.5	39,532,250.2	329,385,704.8

Appendix E – Urban Airshed Modeling: High Episode 2006 Results (Run H)

Maximum 8-hr Average Carbon Monoxide Concentration Estimates (ppm)
from the Urban Airshed Model for Denver Colorado
2006 Projection for the "High" Episode (05DEC88)
Control Strategy: 1.5%oxyFuels; 80%RemoteSensing;4yrExempt I/M240
On-Road Mobile Emission Inventory Total = 845 tons/day



One Grid is One Square Mile

The value in each grid cell shows the maximum CO 8-hr running average for the entire simulation

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

URBAN AIRHSED MODEL OUTPUT - RUNNING 8-HOUR AVERAGES FOR ENTIRE DOMAIN

```
\ FILENAME: c:\den_co\graphix\h\emap8_h.max
\ UAM Level 1
\ CO SIP for Denver, Colorado
\ Episode code processed: h
\ Base episode code:      a (05DEC88)
\ H: 2006 mobile=844.7 tpd 27aug99 06aoxyl5.prn
\ 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;27aug99PTS
\ MET A7: DWMZ=12,UAMZ=5,DB=40-225,SimDrainJet,ModEC, 11-01-93
\ QA Check - select files used in 2nd day of simulation:
\   c:\den_co\inputs\h\ar_h2.b??, 08-27-99 (EI year: 2006)
\   c:\den_co\inputs\h\pt_h2.bin, 01-11-94
\   c:\den_co\inputs\h\uw_a2.bin, 11-01-93
\   c:\den_co\outputs\h\avg_h2.out, 08-27-99
\
\ TMAP run dated: 08:52:45 08-31-99
\ 8-Hr Averaging Period
\ Time, magnitude, and location of max/min predicted concentration
\
Ending time 600.
UAM Maximum 8-hr average: 2.12 cell (21,47)
UAM Minimum 8-hr average: 0.16 cell ( 9,44)
```

```
-----

Ending time 700.
UAM Maximum 8-hr average: 2.02 cell (21,47)
UAM Minimum 8-hr average: 0.17 cell ( 9,44)
```

```
-----

Ending time 800.
UAM Maximum 8-hr average: 1.95 cell (21,47)
UAM Minimum 8-hr average: 0.16 cell ( 9,44)
```

```
-----

Ending time 900.
UAM Maximum 8-hr average: 1.72 cell (21,47)
UAM Minimum 8-hr average: 0.16 cell ( 9,44)
```

```
-----

Ending time 1000.
UAM Maximum 8-hr average: 1.46 cell (21,47)
UAM Minimum 8-hr average: 0.18 cell ( 9,44)
```

```
-----

Ending time 1100.
UAM Maximum 8-hr average: 1.35 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

```
-----

Ending time 1200.
UAM Maximum 8-hr average: 1.37 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

```
-----

Ending time 1300.
UAM Maximum 8-hr average: 1.41 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Ending time 1400.
UAM Maximum 8-hr average: 1.49 cell (23,43)
UAM Minimum 8-hr average: 0.19 cell (3,37)

Ending time 1500.
UAM Maximum 8-hr average: 1.61 cell (23,43)
UAM Minimum 8-hr average: 0.19 cell (3,37)

Ending time 1600.
UAM Maximum 8-hr average: 1.63 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (3,37)

Ending time 1700.
UAM Maximum 8-hr average: 2.66 cell (23,42)
UAM Minimum 8-hr average: 0.18 cell (3,37)

Ending time 1800.
UAM Maximum 8-hr average: 4.74 cell (23,42)
UAM Minimum 8-hr average: 0.18 cell (28,15)

Ending time 1900.
UAM Maximum 8-hr average: 6.62 cell (23,42)
UAM Minimum 8-hr average: 0.18 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	6.618
23	43	6.162

Ending time 2000.
UAM Maximum 8-hr average: 7.42 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.094
22	43	6.886
23	43	7.418

Ending time 2100.
UAM Maximum 8-hr average: 7.70 cell (23,43)
UAM Minimum 8-hr average: 0.17 cell (28,15)

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.114
22	43	7.177
23	43	7.704
23	44	6.149
23	45	6.594

Ending time 2200.

UAM Maximum 8-hr average: 7.90 cell (23,43)
UAM Minimum 8-hr average: 0.17 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.091
22	43	7.362
23	43	7.904
22	44	6.036
23	44	6.544
23	45	7.103

Ending time 2300.

UAM Maximum 8-hr average: 8.08 cell (23,43)
UAM Minimum 8-hr average: 0.17 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.023
22	43	7.498
23	43	8.078
22	44	6.362
23	44	6.874
23	45	7.460

Ending time 0.

UAM Maximum 8-hr average: 8.06 cell (23,43)
UAM Minimum 8-hr average: 0.16 cell (28,16)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	6.771
22	43	7.489
23	43	8.058
22	44	6.595
23	44	7.079
23	45	7.712

Ending time 100.

UAM Maximum 8-hr average: 7.32 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
22	43	6.654
23	43	7.129
22	44	6.321
23	44	6.699
23	45	7.317

Ending time 200.
UAM Maximum 8-hr average: 6.33 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	45	6.333

Ending time 300.
UAM Maximum 8-hr average: 5.27 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 400.
UAM Maximum 8-hr average: 4.09 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 500.
UAM Maximum 8-hr average: 3.25 cell (25,49)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 600.
UAM Maximum 8-hr average: 2.69 cell (25,50)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 700.
UAM Maximum 8-hr average: 2.25 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 800.
UAM Maximum 8-hr average: 2.27 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 900.
UAM Maximum 8-hr average: 2.05 cell (23,45)

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 1000.

UAM Maximum 8-hr average: 2.00 cell (23,43)

UAM Minimum 8-hr average: 0.18 cell (28,28)

Ending time 1100.

UAM Maximum 8-hr average: 2.17 cell (23,43)

UAM Minimum 8-hr average: 0.18 cell (16,28)

Ending time 1200.

UAM Maximum 8-hr average: 2.28 cell (23,43)

UAM Minimum 8-hr average: 0.18 cell (16,28)

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

File: ar_h_tot.qa0

Daily emissions for each source category as input to the Urban Airshed Model

CO: TOTAL EMISSIONS FOR CATEGORY	AMP	BEFORE HRLY SCALARS APPLIED	=	189.222419	TON:
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	189.222424	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	189.222419	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	PMP	BEFORE HRLY SCALARS APPLIED	=	243.444664	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	243.444664	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	432.667083	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	OFD	BEFORE HRLY SCALARS APPLIED	=	411.966074	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	411.883685	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	844.633157	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	RR	BEFORE HRLY SCALARS APPLIED	=	0.333074	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	0.333074	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	844.966232	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	HLI	BEFORE HRLY SCALARS APPLIED	=	0.370857	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	0.370857	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	845.337089	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	AC	BEFORE HRLY SCALARS APPLIED	=	22.300800	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	22.456905	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	867.637889	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	ACS	BEFORE HRLY SCALARS APPLIED	=	7.140000	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	7.189980	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	874.777889	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	AG	BEFORE HRLY SCALARS APPLIED	=	0.260928	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	0.260928	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	875.038817	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	CST	BEFORE HRLY SCALARS APPLIED	=	7.869200	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	7.869200	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	882.908017	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	IND	BEFORE HRLY SCALARS APPLIED	=	22.800000	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	22.800000	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	905.708017	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	LTC	BEFORE HRLY SCALARS APPLIED	=	125.993000	TOI

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	125.993002	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1031.701017	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	FP	BEFORE HRLY SCALARS APPLIED	=	14.681125	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	14.681125	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1046.382142	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	STV	BEFORE HRLY SCALARS APPLIED	=	18.066721	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	18.066721	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1064.448863	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	SFR	BEFORE HRLY SCALARS APPLIED	=	5.000257	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	5.000657	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1069.449120	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	NG	BEFORE HRLY SCALARS APPLIED	=	9.107856	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	9.107856	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1078.556976	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	MIN	BEFORE HRLY SCALARS APPLIED	=	21.075900	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	21.077585	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1099.632876	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	MJA	BEFORE HRLY SCALARS APPLIED	=	0.000000	TOI
INVENTORY CODE: H		AFTER HRLY SCALARS APPLIED	=	0.000000	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1099.632876	TOI

QA check of	CO EMISSIONS total in UAM binary file (NOTES: 1. hourly scalars applied; 2. MJE e				
INVENTORY CODE: H				=	1099.758664 TOI
				=	35631581.4 GRAM-MOL

CO: TOTAL EMISSIONS FROM ALL CATEGORIES INCLUDING ELEVATED POINTS					
INVENTORY CODE: H					
		BEFORE HRLY SCALARS APPLIED	=	1125.197776	TOI
		AFTER HRLY SCALARS APPLIED	=	1125.323564	TOI

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

File: ar_omax.qa0

Maximum emission rate and corresponding UAM grid cell for each source category

CATEGORY=	AMP: MAXIMUM VALUE=	0.991000	TPD @GRID CELL (X,Y): (23, 45)
CATEGORY=	PMP: MAXIMUM VALUE=	1.970000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	OFP: MAXIMUM VALUE=	2.650000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	RR: MAXIMUM VALUE=	0.029800	TPD @GRID CELL (X,Y): (22, 47)
CATEGORY=	HLI: MAXIMUM VALUE=	0.008990	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	AC: MAXIMUM VALUE=	2.820000	TPD @GRID CELL (X,Y): (39, 50)
CATEGORY=	ACS: MAXIMUM VALUE=	1.020000	TPD @GRID CELL (X,Y): (28, 44)
CATEGORY=	AG: MAXIMUM VALUE=	0.000151	TPD @GRID CELL (X,Y): (7, 69)
CATEGORY=	CST: MAXIMUM VALUE=	0.020600	TPD @GRID CELL (X,Y): (3, 26)
CATEGORY=	IND: MAXIMUM VALUE=	0.400000	TPD @GRID CELL (X,Y): (8, 61)
CATEGORY=	LTC: MAXIMUM VALUE=	0.574000	TPD @GRID CELL (X,Y): (8, 61)
CATEGORY=	FP: MAXIMUM VALUE=	0.083000	TPD @GRID CELL (X,Y): (24, 42)
CATEGORY=	STV: MAXIMUM VALUE=	0.151000	TPD @GRID CELL (X,Y): (17, 35)
CATEGORY=	SFR: MAXIMUM VALUE=	0.031800	TPD @GRID CELL (X,Y): (23, 42)
CATEGORY=	NG: MAXIMUM VALUE=	0.205000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	MIN: MAXIMUM VALUE=	2.560000	TPD @GRID CELL (X,Y): (28, 67)
CATEGORY=	MJA: MAXIMUM VALUE=	0.000000	TPD @GRID CELL (X,Y): (28, 67)
CATEGORY=	MJE: MAXIMUM VALUE=	5.950000	TPD @GRID CELL (X,Y): (24, 47)
CATEGORY=	TOT: MAXIMUM VALUE=	7.360000	TPD @GRID CELL (X,Y): (24, 47)
CATEGORY=	SUM: MAXIMUM VALUE=	7.355687	TPD @GRID CELL (X,Y): (24, 47)

Air Quality Modeling Results for the Denver Carbon Monoxide Maintenance Plan UAM and CAL3QHC Estimates at Monitoring Sites and Roadway Intersections

The attached report is one of several files generated by the Colorado Department of Public Health and Environment's postprocessing batch program "DPLLOT.BTM." This particular report, which presents 1-hour and 8-hour average UAM and CAL3QHC estimates for each monitoring site and roadway intersection, was generated by the FORTRAN program "P_STATS." Strings of text at the beginning of the report uniquely identify the modeling scenario. These ID's (see example on page 2) are auto-built by DPLLOT.BTM. Automated title generation for each modeling run streamlines postprocessing while enhancing QA procedures.

P_STATS reads SAI's DPLLOT format data files which contain hourly concentration estimates from the Urban Airshed Model and observed concentrations from various monitoring sites. In addition, P_STATS reads another set of DPLLOT format files containing hourly concentration estimates from the CAL3QHC model. While there are UAM estimates for every monitoring site and roadway intersection, CAL3QHC estimates are available only at intersections where refined modeling was performed. Please note that all "observed" values are from the historic episode on which the modeling is based. The "DATE" column indicates the year of the MODELED estimates; all observed estimates are for the base year (e.g., 1988 for the "high" and "2nd-high" episodes).

A "-9.00" entry indicates that values were not generated. "NA" is used for all 8-hour CAL3QHC entries because 8-hour average values are not computed; instead, hourly CAL3QHC and UAM estimates are summed before 8-hour average UAM/CAL3QHC values are computed. A key to site abbreviations follows:

Monitoring Sites

CMP
WBY
CRG
TIV
FED
NJH
PLM
ARV
ENG
BOU
GRDS
HLD
AUR
AURS
BTN

Description

CAMP
Welby
Carriage
Tivoli
Roof of Federal Bldg (downtown) - inlet 72 meters above ground
NJH-E
Palmer School (inlet on top of 2 story bldg)
Arvada
Englewood
Boulder (Marine St)
Boulder Grandy's Special Study Site
Highland
Aurora
Aurora Special Study Site
Brighton

Intersections

ICMP
U_1
F_A
H_U
U_A
P_I

Broadway & Champa (CAMP intersection)
University & 1st
Foothills & Arapahoe (Boulder)
Hampden & University
University & Arapahoe
Parker & Iliff

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Denver Carbon Monoxide CO SIP Modeling

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;
 MET A7, 08-27-99 EI, 01-11-94 PT, 09-09-99 CAL, 08-27-99 UAM

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;								
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2006 PREDICTED (UAM)	2006 PREDICTED (CAL3QHC)	2006 PREDICTED (UAM+CAL3)	1988 OBSERVED
CMP	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	2.50
CMP	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	1.80
CMP	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	1.50
CMP	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	2.70
CMP	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	3.00
CMP	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	1.80
CMP	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	1.50
CMP	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	1.50
CMP	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	1.40
CMP	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	1.30
CMP	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	1.30
CMP	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	1.80
CMP	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	2.10
CMP	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	1.60
CMP	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	1.60
CMP	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	2.80
CMP	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	6.40
CMP	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	7.60
CMP	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	6.80
CMP	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	3.60
CMP	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	1.30
CMP	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	1.20
CMP	1	Episode Day 1, 2006	22	CO (PPM)	1.28	-9.00	1.28	1.00
CMP	1	Episode Day 1, 2006	23	CO (PPM)	1.77	-9.00	1.77	1.60
CMP	1	Episode Day 2, 2006	0	CO (PPM)	2.13	-9.00	2.13	1.50
CMP	1	Episode Day 2, 2006	1	CO (PPM)	1.74	-9.00	1.74	0.80
CMP	1	Episode Day 2, 2006	2	CO (PPM)	0.88	-9.00	0.88	0.00
CMP	1	Episode Day 2, 2006	3	CO (PPM)	0.76	-9.00	0.76	0.00
CMP	1	Episode Day 2, 2006	4	CO (PPM)	0.78	-9.00	0.78	0.00
CMP	1	Episode Day 2, 2006	5	CO (PPM)	0.72	-9.00	0.72	0.30
CMP	1	Episode Day 2, 2006	6	CO (PPM)	0.92	-9.00	0.92	0.80
CMP	1	Episode Day 2, 2006	7	CO (PPM)	2.81	-9.00	2.81	4.10
CMP	1	Episode Day 2, 2006	8	CO (PPM)	1.62	-9.00	1.62	5.40
CMP	1	Episode Day 2, 2006	9	CO (PPM)	1.15	-9.00	1.15	2.90
CMP	1	Episode Day 2, 2006	10	CO (PPM)	0.97	-9.00	0.97	2.90
CMP	1	Episode Day 2, 2006	11	CO (PPM)	1.22	-9.00	1.22	4.50
CMP	1	Episode Day 2, 2006	12	CO (PPM)	1.30	-9.00	1.30	4.00
CMP	1	Episode Day 2, 2006	13	CO (PPM)	1.40	-9.00	1.40	4.30
CMP	1	Episode Day 2, 2006	14	CO (PPM)	1.81	-9.00	1.81	4.50
CMP	1	Episode Day 2, 2006	15	CO (PPM)	2.88	-9.00	2.88	7.00
CMP	1	Episode Day 2, 2006	16	CO (PPM)	8.23	-9.00	8.23	45.00
CMP	1	Episode Day 2, 2006	17	CO (PPM)	12.99	-9.00	12.99	50.50
CMP	1	Episode Day 2, 2006	18	CO (PPM)	14.02	-9.00	14.02	30.00
CMP	1	Episode Day 2, 2006	19	CO (PPM)	11.02	-9.00	11.02	3.90
CMP	1	Episode Day 2, 2006	20	CO (PPM)	4.59	-9.00	4.59	2.10
CMP	1	Episode Day 2, 2006	21	CO (PPM)	3.44	-9.00	3.44	2.30
CMP	1	Episode Day 2, 2006	22	CO (PPM)	3.53	-9.00	3.53	3.80
CMP	1	Episode Day 2, 2006	23	CO (PPM)	3.29	-9.00	3.29	4.00
CMP	1	Episode Day 3, 2006	0	CO (PPM)	2.30	-9.00	2.30	4.50
CMP	1	Episode Day 3, 2006	1	CO (PPM)	1.61	-9.00	1.61	2.60
CMP	1	Episode Day 3, 2006	2	CO (PPM)	1.04	-9.00	1.04	1.10
CMP	1	Episode Day 3, 2006	3	CO (PPM)	0.58	-9.00	0.58	0.80
CMP	1	Episode Day 3, 2006	4	CO (PPM)	0.61	-9.00	0.61	1.10
CMP	1	Episode Day 3, 2006	5	CO (PPM)	1.15	-9.00	1.15	2.40
CMP	1	Episode Day 3, 2006	6	CO (PPM)	2.07	-9.00	2.07	5.10
CMP	1	Episode Day 3, 2006	7	CO (PPM)	4.49	-9.00	4.49	9.30
CMP	1	Episode Day 3, 2006	8	CO (PPM)	2.47	-9.00	2.47	10.70
CMP	1	Episode Day 3, 2006	9	CO (PPM)	2.39	-9.00	2.39	7.20
CMP	1	Episode Day 3, 2006	10	CO (PPM)	2.21	-9.00	2.21	5.10
CMP	1	Episode Day 3, 2006	11	CO (PPM)	1.49	-9.00	1.49	3.60
CMP	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	2.50

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2006 PREDICTED (UAM)	2006 PREDICTED (CAL3QHC)	2006 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CMP	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	2.00	
CMP	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	2.40	
CMP	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	3.60	
CMP	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	10.10	
CMP	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	12.90	
CMP	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	5.30	
CMP	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	3.90	
CMP	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	5.30	
CMP	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
CMP	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	2.90	
CMP	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	4.50	
WBY	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	4.00	
WBY	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	4.50	
WBY	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	0.70	
WBY	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	1.70	
WBY	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	1.60	
WBY	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	1.20	
WBY	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	1.00	
WBY	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	1.00	
WBY	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.50	
WBY	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.40	
WBY	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	4.30	
WBY	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	5.40	
WBY	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	4.60	
WBY	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	2.10	
WBY	1	Episode Day 1, 2006	22	CO (PPM)	1.13	-9.00	1.13	1.50	
WBY	1	Episode Day 1, 2006	23	CO (PPM)	1.35	-9.00	1.35	1.90	
WBY	1	Episode Day 2, 2006	0	CO (PPM)	1.50	-9.00	1.50	4.30	
WBY	1	Episode Day 2, 2006	1	CO (PPM)	1.41	-9.00	1.41	3.40	
WBY	1	Episode Day 2, 2006	2	CO (PPM)	1.32	-9.00	1.32	2.20	
WBY	1	Episode Day 2, 2006	3	CO (PPM)	1.13	-9.00	1.13	1.60	
WBY	1	Episode Day 2, 2006	4	CO (PPM)	0.90	-9.00	0.90	1.40	
WBY	1	Episode Day 2, 2006	5	CO (PPM)	0.83	-9.00	0.83	1.40	
WBY	1	Episode Day 2, 2006	6	CO (PPM)	0.95	-9.00	0.95	1.70	
WBY	1	Episode Day 2, 2006	7	CO (PPM)	1.48	-9.00	1.48	5.70	
WBY	1	Episode Day 2, 2006	8	CO (PPM)	0.99	-9.00	0.99	6.90	
WBY	1	Episode Day 2, 2006	9	CO (PPM)	0.94	-9.00	0.94	4.90	
WBY	1	Episode Day 2, 2006	10	CO (PPM)	1.08	-9.00	1.08	2.50	
WBY	1	Episode Day 2, 2006	11	CO (PPM)	0.90	-9.00	0.90	1.40	
WBY	1	Episode Day 2, 2006	12	CO (PPM)	0.75	-9.00	0.75	0.90	
WBY	1	Episode Day 2, 2006	13	CO (PPM)	0.61	-9.00	0.61	0.90	
WBY	1	Episode Day 2, 2006	14	CO (PPM)	0.60	-9.00	0.60	1.00	
WBY	1	Episode Day 2, 2006	15	CO (PPM)	0.81	-9.00	0.81	1.20	
WBY	1	Episode Day 2, 2006	16	CO (PPM)	1.52	-9.00	1.52	2.60	
WBY	1	Episode Day 2, 2006	17	CO (PPM)	2.59	-9.00	2.59	9.50	
WBY	1	Episode Day 2, 2006	18	CO (PPM)	3.64	-9.00	3.64	13.40	
WBY	1	Episode Day 2, 2006	19	CO (PPM)	2.77	-9.00	2.77	9.40	
WBY	1	Episode Day 2, 2006	20	CO (PPM)	3.69	-9.00	3.69	7.70	
WBY	1	Episode Day 2, 2006	21	CO (PPM)	5.02	-9.00	5.02	6.30	
WBY	1	Episode Day 2, 2006	22	CO (PPM)	5.08	-9.00	5.08	7.30	
WBY	1	Episode Day 2, 2006	23	CO (PPM)	5.14	-9.00	5.14	8.50	
WBY	1	Episode Day 3, 2006	0	CO (PPM)	4.45	-9.00	4.45	9.40	
WBY	1	Episode Day 3, 2006	1	CO (PPM)	2.63	-9.00	2.63	7.30	
WBY	1	Episode Day 3, 2006	2	CO (PPM)	1.34	-9.00	1.34	3.00	
WBY	1	Episode Day 3, 2006	3	CO (PPM)	0.81	-9.00	0.81	1.70	
WBY	1	Episode Day 3, 2006	4	CO (PPM)	0.64	-9.00	0.64	1.60	
WBY	1	Episode Day 3, 2006	5	CO (PPM)	0.70	-9.00	0.70	1.70	
WBY	1	Episode Day 3, 2006	6	CO (PPM)	0.78	-9.00	0.78	2.80	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
WBY	1	Episode Day 3, 2006	7	CO (PPM)	1.05	-9.00	1.05	2.80	
WBY	1	Episode Day 3, 2006	8	CO (PPM)	1.03	-9.00	1.03	-9.00	
WBY	1	Episode Day 3, 2006	9	CO (PPM)	1.16	-9.00	1.16	3.60	
WBY	1	Episode Day 3, 2006	10	CO (PPM)	1.18	-9.00	1.18	2.70	
WBY	1	Episode Day 3, 2006	11	CO (PPM)	0.93	-9.00	0.93	0.60	
WBY	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.40	
WBY	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	1.60	
WBY	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	3.10	
WBY	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	6.10	
WBY	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	6.00	
WBY	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	5.40	
WBY	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	4.40	
CRG	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	4.80	
CRG	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	4.50	
CRG	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	3.90	
CRG	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	3.50	
CRG	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CRG	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	0.90	
CRG	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	1.70	
CRG	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	2.70	
CRG	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	1.80	
CRG	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CRG	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	1.60	
CRG	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	1.10	
CRG	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
CRG	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.40	
CRG	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.50	
CRG	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
CRG	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	2.40	
CRG	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	6.00	
CRG	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	8.00	
CRG	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	10.80	
CRG	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	3.50	
CRG	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	3.40	
CRG	1	Episode Day 1, 2006	22	CO (PPM)	1.68	-9.00	1.68	3.50	
CRG	1	Episode Day 1, 2006	23	CO (PPM)	1.94	-9.00	1.94	3.30	
CRG	1	Episode Day 2, 2006	0	CO (PPM)	2.29	-9.00	2.29	3.70	
CRG	1	Episode Day 2, 2006	1	CO (PPM)	2.29	-9.00	2.29	4.90	
CRG	1	Episode Day 2, 2006	2	CO (PPM)	1.44	-9.00	1.44	3.50	
CRG	1	Episode Day 2, 2006	3	CO (PPM)	0.75	-9.00	0.75	2.50	
CRG	1	Episode Day 2, 2006	4	CO (PPM)	0.58	-9.00	0.58	2.60	
CRG	1	Episode Day 2, 2006	5	CO (PPM)	0.62	-9.00	0.62	2.70	
CRG	1	Episode Day 2, 2006	6	CO (PPM)	0.80	-9.00	0.80	5.80	
CRG	1	Episode Day 2, 2006	7	CO (PPM)	1.83	-9.00	1.83	10.10	
CRG	1	Episode Day 2, 2006	8	CO (PPM)	1.10	-9.00	1.10	10.50	
CRG	1	Episode Day 2, 2006	9	CO (PPM)	0.93	-9.00	0.93	4.00	
CRG	1	Episode Day 2, 2006	10	CO (PPM)	0.80	-9.00	0.80	1.90	
CRG	1	Episode Day 2, 2006	11	CO (PPM)	0.81	-9.00	0.81	1.20	
CRG	1	Episode Day 2, 2006	12	CO (PPM)	1.05	-9.00	1.05	1.50	
CRG	1	Episode Day 2, 2006	13	CO (PPM)	1.17	-9.00	1.17	1.30	
CRG	1	Episode Day 2, 2006	14	CO (PPM)	1.35	-9.00	1.35	1.60	
CRG	1	Episode Day 2, 2006	15	CO (PPM)	1.79	-9.00	1.79	0.80	
CRG	1	Episode Day 2, 2006	16	CO (PPM)	4.01	-9.00	4.01	6.40	
CRG	1	Episode Day 2, 2006	17	CO (PPM)	5.17	-9.00	5.17	9.50	
CRG	1	Episode Day 2, 2006	18	CO (PPM)	5.47	-9.00	5.47	13.70	
CRG	1	Episode Day 2, 2006	19	CO (PPM)	5.22	-9.00	5.22	16.30	
CRG	1	Episode Day 2, 2006	20	CO (PPM)	4.39	-9.00	4.39	12.80	
CRG	1	Episode Day 2, 2006	21	CO (PPM)	3.42	-9.00	3.42	7.10	
CRG	1	Episode Day 2, 2006	22	CO (PPM)	2.69	-9.00	2.69	4.90	
CRG	1	Episode Day 2, 2006	23	CO (PPM)	2.05	-9.00	2.05	8.60	
CRG	1	Episode Day 3, 2006	0	CO (PPM)	1.67	-9.00	1.67	10.10	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2006 PREDICTED (UAM)	2006 PREDICTED (CAL3QHC)	2006 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CRG	1	Episode Day 3, 2006	1	CO (PPM)	1.48	-9.00	1.48	4.30	
CRG	1	Episode Day 3, 2006	2	CO (PPM)	1.14	-9.00	1.14	5.40	
CRG	1	Episode Day 3, 2006	3	CO (PPM)	0.72	-9.00	0.72	3.90	
CRG	1	Episode Day 3, 2006	4	CO (PPM)	0.55	-9.00	0.55	1.90	
CRG	1	Episode Day 3, 2006	5	CO (PPM)	0.71	-9.00	0.71	3.00	
CRG	1	Episode Day 3, 2006	6	CO (PPM)	1.35	-9.00	1.35	3.10	
CRG	1	Episode Day 3, 2006	7	CO (PPM)	2.82	-9.00	2.82	6.10	
CRG	1	Episode Day 3, 2006	8	CO (PPM)	1.39	-9.00	1.39	5.10	
CRG	1	Episode Day 3, 2006	9	CO (PPM)	1.28	-9.00	1.28	4.10	
CRG	1	Episode Day 3, 2006	10	CO (PPM)	0.98	-9.00	0.98	1.50	
CRG	1	Episode Day 3, 2006	11	CO (PPM)	0.85	-9.00	0.85	-9.00	
CRG	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
CRG	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.40	
CRG	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
CRG	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.10	
CRG	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	2.00	
CRG	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	7.00	
CRG	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	9.50	
CRG	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	12.40	
CRG	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	10.10	
CRG	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	7.90	
CRG	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	7.40	
CRG	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	7.70	
NJH	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	2.30	
NJH	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	1.50	
NJH	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	1.40	
NJH	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	1.30	
NJH	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	2.20	
NJH	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	2.00	
NJH	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	2.80	
NJH	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	3.10	
NJH	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	2.00	
NJH	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	2.20	
NJH	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	2.10	
NJH	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	1.60	
NJH	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
NJH	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
NJH	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.90	
NJH	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	1.10	
NJH	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	2.90	
NJH	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	8.80	
NJH	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	4.00	
NJH	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	3.10	
NJH	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	2.80	
NJH	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	2.60	
NJH	1	Episode Day 1, 2006	22	CO (PPM)	1.18	-9.00	1.18	2.40	
NJH	1	Episode Day 1, 2006	23	CO (PPM)	1.33	-9.00	1.33	2.00	
NJH	1	Episode Day 2, 2006	0	CO (PPM)	1.18	-9.00	1.18	2.30	
NJH	1	Episode Day 2, 2006	1	CO (PPM)	0.71	-9.00	0.71	1.30	
NJH	1	Episode Day 2, 2006	2	CO (PPM)	0.48	-9.00	0.48	1.20	
NJH	1	Episode Day 2, 2006	3	CO (PPM)	0.47	-9.00	0.47	1.10	
NJH	1	Episode Day 2, 2006	4	CO (PPM)	0.50	-9.00	0.50	0.90	
NJH	1	Episode Day 2, 2006	5	CO (PPM)	0.51	-9.00	0.51	1.60	
NJH	1	Episode Day 2, 2006	6	CO (PPM)	0.75	-9.00	0.75	3.30	
NJH	1	Episode Day 2, 2006	7	CO (PPM)	2.02	-9.00	2.02	6.40	
NJH	1	Episode Day 2, 2006	8	CO (PPM)	1.39	-9.00	1.39	6.10	
NJH	1	Episode Day 2, 2006	9	CO (PPM)	1.01	-9.00	1.01	3.20	
NJH	1	Episode Day 2, 2006	10	CO (PPM)	0.63	-9.00	0.63	2.80	
NJH	1	Episode Day 2, 2006	11	CO (PPM)	0.65	-9.00	0.65	2.00	
NJH	1	Episode Day 2, 2006	12	CO (PPM)	0.71	-9.00	0.71	2.00	
NJH	1	Episode Day 2, 2006	13	CO (PPM)	0.76	-9.00	0.76	2.70	
NJH	1	Episode Day 2, 2006	14	CO (PPM)	1.13	-9.00	1.13	3.20	
NJH	1	Episode Day 2, 2006	15	CO (PPM)	1.72	-9.00	1.72	4.60	
NJH	1	Episode Day 2, 2006	16	CO (PPM)	3.59	-9.00	3.59	19.70	
NJH	1	Episode Day 2, 2006	17	CO (PPM)	4.71	-9.00	4.71	22.90	
NJH	1	Episode Day 2, 2006	18	CO (PPM)	5.47	-9.00	5.47	19.70	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
NJH	1	Episode Day 2, 2006	19	CO (PPM)	6.66	-9.00	6.66	8.60	
NJH	1	Episode Day 2, 2006	20	CO (PPM)	2.82	-9.00	2.82	6.20	
NJH	1	Episode Day 2, 2006	21	CO (PPM)	1.41	-9.00	1.41	4.40	
NJH	1	Episode Day 2, 2006	22	CO (PPM)	1.43	-9.00	1.43	4.10	
NJH	1	Episode Day 2, 2006	23	CO (PPM)	1.17	-9.00	1.17	3.20	
NJH	1	Episode Day 3, 2006	0	CO (PPM)	0.81	-9.00	0.81	2.30	
NJH	1	Episode Day 3, 2006	1	CO (PPM)	0.64	-9.00	0.64	1.20	
NJH	1	Episode Day 3, 2006	2	CO (PPM)	0.48	-9.00	0.48	1.30	
NJH	1	Episode Day 3, 2006	3	CO (PPM)	0.34	-9.00	0.34	0.80	
NJH	1	Episode Day 3, 2006	4	CO (PPM)	0.36	-9.00	0.36	0.70	
NJH	1	Episode Day 3, 2006	5	CO (PPM)	0.49	-9.00	0.49	1.60	
NJH	1	Episode Day 3, 2006	6	CO (PPM)	0.80	-9.00	0.80	2.90	
NJH	1	Episode Day 3, 2006	7	CO (PPM)	2.16	-9.00	2.16	7.00	
NJH	1	Episode Day 3, 2006	8	CO (PPM)	1.37	-9.00	1.37	5.70	
NJH	1	Episode Day 3, 2006	9	CO (PPM)	1.08	-9.00	1.08	4.90	
NJH	1	Episode Day 3, 2006	10	CO (PPM)	0.90	-9.00	0.90	3.60	
NJH	1	Episode Day 3, 2006	11	CO (PPM)	0.86	-9.00	0.86	1.30	
NJH	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	1.10	
NJH	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
NJH	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.60	
NJH	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.80	
NJH	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	4.40	
NJH	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	6.60	
NJH	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	5.10	
NJH	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	6.90	
NJH	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	5.50	
NJH	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
NJH	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	3.60	
NJH	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	2.40	
TIV	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2006	22	CO (PPM)	1.39	-9.00	1.39	-9.00	
TIV	1	Episode Day 1, 2006	23	CO (PPM)	1.69	-9.00	1.69	-9.00	
TIV	1	Episode Day 2, 2006	0	CO (PPM)	2.05	-9.00	2.05	-9.00	
TIV	1	Episode Day 2, 2006	1	CO (PPM)	1.75	-9.00	1.75	-9.00	
TIV	1	Episode Day 2, 2006	2	CO (PPM)	0.88	-9.00	0.88	-9.00	
TIV	1	Episode Day 2, 2006	3	CO (PPM)	0.63	-9.00	0.63	-9.00	
TIV	1	Episode Day 2, 2006	4	CO (PPM)	0.62	-9.00	0.62	-9.00	
TIV	1	Episode Day 2, 2006	5	CO (PPM)	0.67	-9.00	0.67	-9.00	
TIV	1	Episode Day 2, 2006	6	CO (PPM)	0.87	-9.00	0.87	-9.00	
TIV	1	Episode Day 2, 2006	7	CO (PPM)	2.52	-9.00	2.52	-9.00	
TIV	1	Episode Day 2, 2006	8	CO (PPM)	1.42	-9.00	1.42	-9.00	
TIV	1	Episode Day 2, 2006	9	CO (PPM)	1.03	-9.00	1.03	-9.00	
TIV	1	Episode Day 2, 2006	10	CO (PPM)	0.87	-9.00	0.87	-9.00	
TIV	1	Episode Day 2, 2006	11	CO (PPM)	1.10	-9.00	1.10	-9.00	
TIV	1	Episode Day 2, 2006	12	CO (PPM)	1.44	-9.00	1.44	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
TIV	1	Episode Day 2, 2006	13	CO (PPM)	1.55	-9.00	1.55	-9.00	
TIV	1	Episode Day 2, 2006	14	CO (PPM)	1.76	-9.00	1.76	-9.00	
TIV	1	Episode Day 2, 2006	15	CO (PPM)	2.69	-9.00	2.69	-9.00	
TIV	1	Episode Day 2, 2006	16	CO (PPM)	8.25	-9.00	8.25	-9.00	
TIV	1	Episode Day 2, 2006	17	CO (PPM)	13.36	-9.00	13.36	-9.00	
TIV	1	Episode Day 2, 2006	18	CO (PPM)	13.75	-9.00	13.75	-9.00	
TIV	1	Episode Day 2, 2006	19	CO (PPM)	8.31	-9.00	8.31	-9.00	
TIV	1	Episode Day 2, 2006	20	CO (PPM)	3.90	-9.00	3.90	-9.00	
TIV	1	Episode Day 2, 2006	21	CO (PPM)	3.06	-9.00	3.06	-9.00	
TIV	1	Episode Day 2, 2006	22	CO (PPM)	2.81	-9.00	2.81	-9.00	
TIV	1	Episode Day 2, 2006	23	CO (PPM)	2.63	-9.00	2.63	-9.00	
TIV	1	Episode Day 3, 2006	0	CO (PPM)	1.99	-9.00	1.99	-9.00	
TIV	1	Episode Day 3, 2006	1	CO (PPM)	1.49	-9.00	1.49	-9.00	
TIV	1	Episode Day 3, 2006	2	CO (PPM)	1.04	-9.00	1.04	-9.00	
TIV	1	Episode Day 3, 2006	3	CO (PPM)	0.58	-9.00	0.58	-9.00	
TIV	1	Episode Day 3, 2006	4	CO (PPM)	0.57	-9.00	0.57	-9.00	
TIV	1	Episode Day 3, 2006	5	CO (PPM)	1.13	-9.00	1.13	-9.00	
TIV	1	Episode Day 3, 2006	6	CO (PPM)	2.16	-9.00	2.16	-9.00	
TIV	1	Episode Day 3, 2006	7	CO (PPM)	4.69	-9.00	4.69	-9.00	
TIV	1	Episode Day 3, 2006	8	CO (PPM)	2.54	-9.00	2.54	-9.00	
TIV	1	Episode Day 3, 2006	9	CO (PPM)	2.23	-9.00	2.23	-9.00	
TIV	1	Episode Day 3, 2006	10	CO (PPM)	1.55	-9.00	1.55	-9.00	
TIV	1	Episode Day 3, 2006	11	CO (PPM)	1.13	-9.00	1.13	-9.00	
TIV	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2006	22	CO (PPM)	1.28	-9.00	1.28	-9.00	
ICMP	1	Episode Day 1, 2006	23	CO (PPM)	1.77	-9.00	1.77	-9.00	
ICMP	1	Episode Day 2, 2006	0	CO (PPM)	2.13	-9.00	2.13	-9.00	
ICMP	1	Episode Day 2, 2006	1	CO (PPM)	1.74	-9.00	1.74	-9.00	
ICMP	1	Episode Day 2, 2006	2	CO (PPM)	0.88	-9.00	0.88	-9.00	
ICMP	1	Episode Day 2, 2006	3	CO (PPM)	0.76	-9.00	0.76	-9.00	
ICMP	1	Episode Day 2, 2006	4	CO (PPM)	0.78	-9.00	0.78	-9.00	
ICMP	1	Episode Day 2, 2006	5	CO (PPM)	0.72	-9.00	0.72	-9.00	
ICMP	1	Episode Day 2, 2006	6	CO (PPM)	0.92	-9.00	0.92	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
ICMP	1	Episode Day 2, 2006	7	CO (PPM)	2.81	-9.00	2.81	-9.00	
ICMP	1	Episode Day 2, 2006	8	CO (PPM)	1.62	-9.00	1.62	-9.00	
ICMP	1	Episode Day 2, 2006	9	CO (PPM)	1.15	-9.00	1.15	-9.00	
ICMP	1	Episode Day 2, 2006	10	CO (PPM)	0.97	-9.00	0.97	-9.00	
ICMP	1	Episode Day 2, 2006	11	CO (PPM)	1.22	-9.00	1.22	-9.00	
ICMP	1	Episode Day 2, 2006	12	CO (PPM)	1.30	-9.00	1.30	-9.00	
ICMP	1	Episode Day 2, 2006	13	CO (PPM)	1.40	-9.00	1.40	-9.00	
ICMP	1	Episode Day 2, 2006	14	CO (PPM)	1.81	1.61	3.42	-9.00	
ICMP	1	Episode Day 2, 2006	15	CO (PPM)	2.88	1.38	4.26	-9.00	
ICMP	1	Episode Day 2, 2006	16	CO (PPM)	8.23	2.76	10.99	-9.00	
ICMP	1	Episode Day 2, 2006	17	CO (PPM)	12.99	2.65	15.64	-9.00	
ICMP	1	Episode Day 2, 2006	18	CO (PPM)	14.02	1.04	15.06	-9.00	
ICMP	1	Episode Day 2, 2006	19	CO (PPM)	11.02	0.35	11.37	-9.00	
ICMP	1	Episode Day 2, 2006	20	CO (PPM)	4.59	0.35	4.94	-9.00	
ICMP	1	Episode Day 2, 2006	21	CO (PPM)	3.44	0.00	3.44	-9.00	
ICMP	1	Episode Day 2, 2006	22	CO (PPM)	3.53	0.46	3.99	-9.00	
ICMP	1	Episode Day 2, 2006	23	CO (PPM)	3.29	0.12	3.41	-9.00	
ICMP	1	Episode Day 3, 2006	0	CO (PPM)	2.30	-9.00	2.30	-9.00	
ICMP	1	Episode Day 3, 2006	1	CO (PPM)	1.61	-9.00	1.61	-9.00	
ICMP	1	Episode Day 3, 2006	2	CO (PPM)	1.04	-9.00	1.04	-9.00	
ICMP	1	Episode Day 3, 2006	3	CO (PPM)	0.58	-9.00	0.58	-9.00	
ICMP	1	Episode Day 3, 2006	4	CO (PPM)	0.61	-9.00	0.61	-9.00	
ICMP	1	Episode Day 3, 2006	5	CO (PPM)	1.15	-9.00	1.15	-9.00	
ICMP	1	Episode Day 3, 2006	6	CO (PPM)	2.07	-9.00	2.07	-9.00	
ICMP	1	Episode Day 3, 2006	7	CO (PPM)	4.49	-9.00	4.49	-9.00	
ICMP	1	Episode Day 3, 2006	8	CO (PPM)	2.47	-9.00	2.47	-9.00	
ICMP	1	Episode Day 3, 2006	9	CO (PPM)	2.39	-9.00	2.39	-9.00	
ICMP	1	Episode Day 3, 2006	10	CO (PPM)	2.21	-9.00	2.21	-9.00	
ICMP	1	Episode Day 3, 2006	11	CO (PPM)	1.49	-9.00	1.49	-9.00	
ICMP	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ENG	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ENG	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ENG	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ENG	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	1.90	
ENG	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	1.80	
ENG	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	0.50	
ENG	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	1.50	
ENG	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	4.40	
ENG	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	2.40	
ENG	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	1.20	
ENG	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	1.20	
ENG	1	Episode Day 1, 2006	22	CO (PPM)	0.75	-9.00	0.75	1.70	
ENG	1	Episode Day 1, 2006	23	CO (PPM)	0.47	-9.00	0.47	1.20	
ENG	1	Episode Day 2, 2006	0	CO (PPM)	0.34	-9.00	0.34	0.70	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
PERIOD									
ENG	1	Episode Day 2, 2006	1	CO (PPM)	0.32	-9.00	0.32	0.70	
ENG	1	Episode Day 2, 2006	2	CO (PPM)	0.29	-9.00	0.29	0.50	
ENG	1	Episode Day 2, 2006	3	CO (PPM)	0.28	-9.00	0.28	0.50	
ENG	1	Episode Day 2, 2006	4	CO (PPM)	0.30	-9.00	0.30	0.50	
ENG	1	Episode Day 2, 2006	5	CO (PPM)	0.33	-9.00	0.33	1.20	
ENG	1	Episode Day 2, 2006	6	CO (PPM)	0.45	-9.00	0.45	2.40	
ENG	1	Episode Day 2, 2006	7	CO (PPM)	1.03	-9.00	1.03	4.70	
ENG	1	Episode Day 2, 2006	8	CO (PPM)	0.61	-9.00	0.61	4.10	
ENG	1	Episode Day 2, 2006	9	CO (PPM)	0.38	-9.00	0.38	1.20	
ENG	1	Episode Day 2, 2006	10	CO (PPM)	0.32	-9.00	0.32	0.70	
ENG	1	Episode Day 2, 2006	11	CO (PPM)	0.37	-9.00	0.37	0.70	
ENG	1	Episode Day 2, 2006	12	CO (PPM)	0.51	-9.00	0.51	0.80	
ENG	1	Episode Day 2, 2006	13	CO (PPM)	0.66	-9.00	0.66	1.10	
ENG	1	Episode Day 2, 2006	14	CO (PPM)	0.82	-9.00	0.82	1.50	
ENG	1	Episode Day 2, 2006	15	CO (PPM)	1.54	-9.00	1.54	2.90	
ENG	1	Episode Day 2, 2006	16	CO (PPM)	3.90	-9.00	3.90	6.20	
ENG	1	Episode Day 2, 2006	17	CO (PPM)	3.83	-9.00	3.83	9.40	
ENG	1	Episode Day 2, 2006	18	CO (PPM)	1.40	-9.00	1.40	3.20	
ENG	1	Episode Day 2, 2006	19	CO (PPM)	0.70	-9.00	0.70	1.90	
ENG	1	Episode Day 2, 2006	20	CO (PPM)	0.45	-9.00	0.45	1.60	
ENG	1	Episode Day 2, 2006	21	CO (PPM)	0.45	-9.00	0.45	1.80	
ENG	1	Episode Day 2, 2006	22	CO (PPM)	0.45	-9.00	0.45	2.30	
ENG	1	Episode Day 2, 2006	23	CO (PPM)	0.43	-9.00	0.43	1.60	
ENG	1	Episode Day 3, 2006	0	CO (PPM)	0.39	-9.00	0.39	1.50	
ENG	1	Episode Day 3, 2006	1	CO (PPM)	0.35	-9.00	0.35	1.00	
ENG	1	Episode Day 3, 2006	2	CO (PPM)	0.28	-9.00	0.28	0.60	
ENG	1	Episode Day 3, 2006	3	CO (PPM)	0.26	-9.00	0.26	0.50	
ENG	1	Episode Day 3, 2006	4	CO (PPM)	0.26	-9.00	0.26	0.50	
ENG	1	Episode Day 3, 2006	5	CO (PPM)	0.28	-9.00	0.28	0.70	
ENG	1	Episode Day 3, 2006	6	CO (PPM)	0.43	-9.00	0.43	1.80	
ENG	1	Episode Day 3, 2006	7	CO (PPM)	1.28	-9.00	1.28	3.50	
ENG	1	Episode Day 3, 2006	8	CO (PPM)	0.59	-9.00	0.59	-9.00	
ENG	1	Episode Day 3, 2006	9	CO (PPM)	0.62	-9.00	0.62	2.80	
ENG	1	Episode Day 3, 2006	10	CO (PPM)	0.63	-9.00	0.63	2.00	
ENG	1	Episode Day 3, 2006	11	CO (PPM)	0.68	-9.00	0.68	0.60	
ENG	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ENG	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	3.80	
ENG	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	4.30	
ENG	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	3.00	
ENG	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	2.10	
ENG	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	1.40	
ENG	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	1.10	
ENG	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	1.50	
BOU	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	0.40	
BOU	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	0.00	
BOU	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	0.30	
BOU	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	0.50	
BOU	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	1.00	
BOU	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	1.40	
BOU	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	1.80	
BOU	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	2.70	
BOU	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	1.60	
BOU	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	1.10	
BOU	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
BOU	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
BOU	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	1.50	
BOU	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	1.20	
BOU	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	0.40	
BOU	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	0.30	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
BOU	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	0.10	
BOU	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	0.00	
BOU	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	0.00	
BOU	1	Episode Day 1, 2006	22	CO (PPM)	0.99	-9.00	0.99	0.20	
BOU	1	Episode Day 1, 2006	23	CO (PPM)	0.42	-9.00	0.42	0.50	
BOU	1	Episode Day 2, 2006	0	CO (PPM)	0.25	-9.00	0.25	0.20	
BOU	1	Episode Day 2, 2006	1	CO (PPM)	0.23	-9.00	0.23	0.20	
BOU	1	Episode Day 2, 2006	2	CO (PPM)	0.23	-9.00	0.23	0.10	
BOU	1	Episode Day 2, 2006	3	CO (PPM)	0.23	-9.00	0.23	0.10	
BOU	1	Episode Day 2, 2006	4	CO (PPM)	0.24	-9.00	0.24	0.30	
BOU	1	Episode Day 2, 2006	5	CO (PPM)	0.30	-9.00	0.30	0.60	
BOU	1	Episode Day 2, 2006	6	CO (PPM)	0.52	-9.00	0.52	1.20	
BOU	1	Episode Day 2, 2006	7	CO (PPM)	0.87	-9.00	0.87	2.60	
BOU	1	Episode Day 2, 2006	8	CO (PPM)	0.42	-9.00	0.42	2.20	
BOU	1	Episode Day 2, 2006	9	CO (PPM)	0.50	-9.00	0.50	4.20	
BOU	1	Episode Day 2, 2006	10	CO (PPM)	0.65	-9.00	0.65	2.90	
BOU	1	Episode Day 2, 2006	11	CO (PPM)	0.65	-9.00	0.65	1.30	
BOU	1	Episode Day 2, 2006	12	CO (PPM)	0.62	-9.00	0.62	1.40	
BOU	1	Episode Day 2, 2006	13	CO (PPM)	0.57	-9.00	0.57	1.20	
BOU	1	Episode Day 2, 2006	14	CO (PPM)	0.78	-9.00	0.78	1.20	
BOU	1	Episode Day 2, 2006	15	CO (PPM)	1.46	-9.00	1.46	1.90	
BOU	1	Episode Day 2, 2006	16	CO (PPM)	1.17	-9.00	1.17	2.00	
BOU	1	Episode Day 2, 2006	17	CO (PPM)	0.65	-9.00	0.65	1.30	
BOU	1	Episode Day 2, 2006	18	CO (PPM)	0.50	-9.00	0.50	1.10	
BOU	1	Episode Day 2, 2006	19	CO (PPM)	0.53	-9.00	0.53	6.50	
BOU	1	Episode Day 2, 2006	20	CO (PPM)	0.42	-9.00	0.42	1.60	
BOU	1	Episode Day 2, 2006	21	CO (PPM)	0.36	-9.00	0.36	1.30	
BOU	1	Episode Day 2, 2006	22	CO (PPM)	0.28	-9.00	0.28	0.80	
BOU	1	Episode Day 2, 2006	23	CO (PPM)	0.26	-9.00	0.26	0.40	
BOU	1	Episode Day 3, 2006	0	CO (PPM)	0.25	-9.00	0.25	0.00	
BOU	1	Episode Day 3, 2006	1	CO (PPM)	0.24	-9.00	0.24	0.00	
BOU	1	Episode Day 3, 2006	2	CO (PPM)	0.24	-9.00	0.24	0.00	
BOU	1	Episode Day 3, 2006	3	CO (PPM)	0.25	-9.00	0.25	0.00	
BOU	1	Episode Day 3, 2006	4	CO (PPM)	0.25	-9.00	0.25	0.10	
BOU	1	Episode Day 3, 2006	5	CO (PPM)	0.24	-9.00	0.24	0.40	
BOU	1	Episode Day 3, 2006	6	CO (PPM)	0.46	-9.00	0.46	0.80	
BOU	1	Episode Day 3, 2006	7	CO (PPM)	0.92	-9.00	0.92	4.00	
BOU	1	Episode Day 3, 2006	8	CO (PPM)	0.47	-9.00	0.47	2.30	
BOU	1	Episode Day 3, 2006	9	CO (PPM)	0.40	-9.00	0.40	2.90	
BOU	1	Episode Day 3, 2006	10	CO (PPM)	0.31	-9.00	0.31	0.70	
BOU	1	Episode Day 3, 2006	11	CO (PPM)	0.36	-9.00	0.36	0.90	
BOU	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	1.30	
BOU	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
BOU	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.70	
BOU	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	3.50	
BOU	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	1.60	
BOU	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	0.70	
GRDS	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	2.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
GRDS	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2006	22	CO (PPM)	1.28	-9.00	1.28	4.00	
GRDS	1	Episode Day 1, 2006	23	CO (PPM)	0.51	-9.00	0.51	3.00	
GRDS	1	Episode Day 2, 2006	0	CO (PPM)	0.27	-9.00	0.27	0.80	
GRDS	1	Episode Day 2, 2006	1	CO (PPM)	0.24	-9.00	0.24	0.50	
GRDS	1	Episode Day 2, 2006	2	CO (PPM)	0.24	-9.00	0.24	0.70	
GRDS	1	Episode Day 2, 2006	3	CO (PPM)	0.24	-9.00	0.24	0.90	
GRDS	1	Episode Day 2, 2006	4	CO (PPM)	0.25	-9.00	0.25	1.10	
GRDS	1	Episode Day 2, 2006	5	CO (PPM)	0.30	-9.00	0.30	1.50	
GRDS	1	Episode Day 2, 2006	6	CO (PPM)	0.57	-9.00	0.57	5.30	
GRDS	1	Episode Day 2, 2006	7	CO (PPM)	1.17	-9.00	1.17	16.30	
GRDS	1	Episode Day 2, 2006	8	CO (PPM)	0.55	-9.00	0.55	16.60	
GRDS	1	Episode Day 2, 2006	9	CO (PPM)	0.58	-9.00	0.58	6.10	
GRDS	1	Episode Day 2, 2006	10	CO (PPM)	0.75	-9.00	0.75	2.00	
GRDS	1	Episode Day 2, 2006	11	CO (PPM)	0.73	-9.00	0.73	1.80	
GRDS	1	Episode Day 2, 2006	12	CO (PPM)	0.62	-9.00	0.62	1.80	
GRDS	1	Episode Day 2, 2006	13	CO (PPM)	0.56	-9.00	0.56	-9.00	
GRDS	1	Episode Day 2, 2006	14	CO (PPM)	0.79	-9.00	0.79	2.40	
GRDS	1	Episode Day 2, 2006	15	CO (PPM)	1.55	-9.00	1.55	3.50	
GRDS	1	Episode Day 2, 2006	16	CO (PPM)	1.59	-9.00	1.59	4.70	
GRDS	1	Episode Day 2, 2006	17	CO (PPM)	0.83	-9.00	0.83	10.00	
GRDS	1	Episode Day 2, 2006	18	CO (PPM)	0.63	-9.00	0.63	13.20	
GRDS	1	Episode Day 2, 2006	19	CO (PPM)	0.63	-9.00	0.63	14.00	
GRDS	1	Episode Day 2, 2006	20	CO (PPM)	0.49	-9.00	0.49	10.60	
GRDS	1	Episode Day 2, 2006	21	CO (PPM)	0.40	-9.00	0.40	7.30	
GRDS	1	Episode Day 2, 2006	22	CO (PPM)	0.31	-9.00	0.31	3.30	
GRDS	1	Episode Day 2, 2006	23	CO (PPM)	0.27	-9.00	0.27	2.30	
GRDS	1	Episode Day 3, 2006	0	CO (PPM)	0.26	-9.00	0.26	1.00	
GRDS	1	Episode Day 3, 2006	1	CO (PPM)	0.24	-9.00	0.24	0.00	
GRDS	1	Episode Day 3, 2006	2	CO (PPM)	0.24	-9.00	0.24	0.00	
GRDS	1	Episode Day 3, 2006	3	CO (PPM)	0.25	-9.00	0.25	0.00	
GRDS	1	Episode Day 3, 2006	4	CO (PPM)	0.26	-9.00	0.26	0.00	
GRDS	1	Episode Day 3, 2006	5	CO (PPM)	0.24	-9.00	0.24	1.00	
GRDS	1	Episode Day 3, 2006	6	CO (PPM)	0.43	-9.00	0.43	2.00	
GRDS	1	Episode Day 3, 2006	7	CO (PPM)	1.04	-9.00	1.04	9.00	
GRDS	1	Episode Day 3, 2006	8	CO (PPM)	0.55	-9.00	0.55	8.00	
GRDS	1	Episode Day 3, 2006	9	CO (PPM)	0.49	-9.00	0.49	4.00	
GRDS	1	Episode Day 3, 2006	10	CO (PPM)	0.32	-9.00	0.32	1.00	
GRDS	1	Episode Day 3, 2006	11	CO (PPM)	0.38	-9.00	0.38	1.00	
GRDS	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	6.00	
GRDS	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	9.00	
GRDS	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	7.00	
GRDS	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	4.00	
ARV	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	2.70	
ARV	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	3.30	
ARV	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	2.50	
ARV	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ARV	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	0.90	
ARV	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	1.60	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
ARV	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	2.50	
ARV	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	4.20	
ARV	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	2.00	
ARV	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ARV	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	1.90	
ARV	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	1.50	
ARV	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ARV	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	2.20	
ARV	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	3.80	
ARV	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	3.70	
ARV	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	3.90	
ARV	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	4.50	
ARV	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	6.50	
ARV	1	Episode Day 1, 2006	22	CO (PPM)	2.71	-9.00	2.71	5.40	
ARV	1	Episode Day 1, 2006	23	CO (PPM)	2.43	-9.00	2.43	2.40	
ARV	1	Episode Day 2, 2006	0	CO (PPM)	1.20	-9.00	1.20	1.70	
ARV	1	Episode Day 2, 2006	1	CO (PPM)	0.69	-9.00	0.69	1.30	
ARV	1	Episode Day 2, 2006	2	CO (PPM)	0.91	-9.00	0.91	1.50	
ARV	1	Episode Day 2, 2006	3	CO (PPM)	0.62	-9.00	0.62	1.40	
ARV	1	Episode Day 2, 2006	4	CO (PPM)	0.37	-9.00	0.37	1.20	
ARV	1	Episode Day 2, 2006	5	CO (PPM)	0.37	-9.00	0.37	1.80	
ARV	1	Episode Day 2, 2006	6	CO (PPM)	0.45	-9.00	0.45	3.80	
ARV	1	Episode Day 2, 2006	7	CO (PPM)	0.81	-9.00	0.81	9.60	
ARV	1	Episode Day 2, 2006	8	CO (PPM)	0.66	-9.00	0.66	11.00	
ARV	1	Episode Day 2, 2006	9	CO (PPM)	0.77	-9.00	0.77	6.60	
ARV	1	Episode Day 2, 2006	10	CO (PPM)	0.77	-9.00	0.77	4.40	
ARV	1	Episode Day 2, 2006	11	CO (PPM)	0.83	-9.00	0.83	2.20	
ARV	1	Episode Day 2, 2006	12	CO (PPM)	0.96	-9.00	0.96	1.70	
ARV	1	Episode Day 2, 2006	13	CO (PPM)	1.04	-9.00	1.04	1.60	
ARV	1	Episode Day 2, 2006	14	CO (PPM)	1.20	-9.00	1.20	1.70	
ARV	1	Episode Day 2, 2006	15	CO (PPM)	1.54	-9.00	1.54	2.60	
ARV	1	Episode Day 2, 2006	16	CO (PPM)	3.03	-9.00	3.03	5.20	
ARV	1	Episode Day 2, 2006	17	CO (PPM)	2.33	-9.00	2.33	6.30	
ARV	1	Episode Day 2, 2006	18	CO (PPM)	1.03	-9.00	1.03	6.20	
ARV	1	Episode Day 2, 2006	19	CO (PPM)	0.57	-9.00	0.57	6.00	
ARV	1	Episode Day 2, 2006	20	CO (PPM)	0.47	-9.00	0.47	5.10	
ARV	1	Episode Day 2, 2006	21	CO (PPM)	0.48	-9.00	0.48	4.10	
ARV	1	Episode Day 2, 2006	22	CO (PPM)	0.45	-9.00	0.45	3.20	
ARV	1	Episode Day 2, 2006	23	CO (PPM)	0.39	-9.00	0.39	2.30	
ARV	1	Episode Day 3, 2006	0	CO (PPM)	0.34	-9.00	0.34	1.50	
ARV	1	Episode Day 3, 2006	1	CO (PPM)	0.31	-9.00	0.31	1.20	
ARV	1	Episode Day 3, 2006	2	CO (PPM)	0.31	-9.00	0.31	1.10	
ARV	1	Episode Day 3, 2006	3	CO (PPM)	0.28	-9.00	0.28	0.90	
ARV	1	Episode Day 3, 2006	4	CO (PPM)	0.25	-9.00	0.25	0.60	
ARV	1	Episode Day 3, 2006	5	CO (PPM)	0.28	-9.00	0.28	1.10	
ARV	1	Episode Day 3, 2006	6	CO (PPM)	0.58	-9.00	0.58	2.90	
ARV	1	Episode Day 3, 2006	7	CO (PPM)	1.39	-9.00	1.39	8.20	
ARV	1	Episode Day 3, 2006	8	CO (PPM)	0.77	-9.00	0.77	7.30	
ARV	1	Episode Day 3, 2006	9	CO (PPM)	0.75	-9.00	0.75	4.50	
ARV	1	Episode Day 3, 2006	10	CO (PPM)	0.73	-9.00	0.73	-9.00	
ARV	1	Episode Day 3, 2006	11	CO (PPM)	0.76	-9.00	0.76	1.00	
ARV	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.90	
ARV	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	2.40	
ARV	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	5.50	
ARV	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	5.20	
ARV	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	4.80	
ARV	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	3.90	
ARV	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
ARV	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	4.30	
ARV	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	2.00	
HLD	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	0.60	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	0.60	
HLD	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	0.50	
HLD	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	0.50	
HLD	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	1.20	
HLD	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	1.50	
HLD	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	0.10	
HLD	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.10	
HLD	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	0.50	
HLD	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2006	22	CO (PPM)	0.25	-9.00	0.25	0.30	
HLD	1	Episode Day 1, 2006	23	CO (PPM)	0.24	-9.00	0.24	0.20	
HLD	1	Episode Day 2, 2006	0	CO (PPM)	0.23	-9.00	0.23	0.20	
HLD	1	Episode Day 2, 2006	1	CO (PPM)	0.22	-9.00	0.22	0.20	
HLD	1	Episode Day 2, 2006	2	CO (PPM)	0.21	-9.00	0.21	0.10	
HLD	1	Episode Day 2, 2006	3	CO (PPM)	0.21	-9.00	0.21	0.20	
HLD	1	Episode Day 2, 2006	4	CO (PPM)	0.22	-9.00	0.22	0.10	
HLD	1	Episode Day 2, 2006	5	CO (PPM)	0.23	-9.00	0.23	0.10	
HLD	1	Episode Day 2, 2006	6	CO (PPM)	0.28	-9.00	0.28	0.10	
HLD	1	Episode Day 2, 2006	7	CO (PPM)	0.39	-9.00	0.39	0.10	
HLD	1	Episode Day 2, 2006	8	CO (PPM)	0.27	-9.00	0.27	0.00	
HLD	1	Episode Day 2, 2006	9	CO (PPM)	0.23	-9.00	0.23	0.00	
HLD	1	Episode Day 2, 2006	10	CO (PPM)	0.23	-9.00	0.23	0.00	
HLD	1	Episode Day 2, 2006	11	CO (PPM)	0.24	-9.00	0.24	0.00	
HLD	1	Episode Day 2, 2006	12	CO (PPM)	0.40	-9.00	0.40	0.00	
HLD	1	Episode Day 2, 2006	13	CO (PPM)	0.47	-9.00	0.47	0.00	
HLD	1	Episode Day 2, 2006	14	CO (PPM)	0.62	-9.00	0.62	0.00	
HLD	1	Episode Day 2, 2006	15	CO (PPM)	1.05	-9.00	1.05	0.70	
HLD	1	Episode Day 2, 2006	16	CO (PPM)	2.55	-9.00	2.55	4.00	
HLD	1	Episode Day 2, 2006	17	CO (PPM)	3.18	-9.00	3.18	4.40	
HLD	1	Episode Day 2, 2006	18	CO (PPM)	1.06	-9.00	1.06	1.60	
HLD	1	Episode Day 2, 2006	19	CO (PPM)	0.38	-9.00	0.38	0.70	
HLD	1	Episode Day 2, 2006	20	CO (PPM)	0.30	-9.00	0.30	0.50	
HLD	1	Episode Day 2, 2006	21	CO (PPM)	0.29	-9.00	0.29	0.30	
HLD	1	Episode Day 2, 2006	22	CO (PPM)	0.26	-9.00	0.26	0.30	
HLD	1	Episode Day 2, 2006	23	CO (PPM)	0.24	-9.00	0.24	0.40	
HLD	1	Episode Day 3, 2006	0	CO (PPM)	0.25	-9.00	0.25	0.40	
HLD	1	Episode Day 3, 2006	1	CO (PPM)	0.24	-9.00	0.24	0.40	
HLD	1	Episode Day 3, 2006	2	CO (PPM)	0.22	-9.00	0.22	0.50	
HLD	1	Episode Day 3, 2006	3	CO (PPM)	0.22	-9.00	0.22	0.50	
HLD	1	Episode Day 3, 2006	4	CO (PPM)	0.22	-9.00	0.22	0.40	
HLD	1	Episode Day 3, 2006	5	CO (PPM)	0.24	-9.00	0.24	0.30	
HLD	1	Episode Day 3, 2006	6	CO (PPM)	0.31	-9.00	0.31	0.30	
HLD	1	Episode Day 3, 2006	7	CO (PPM)	0.91	-9.00	0.91	1.90	
HLD	1	Episode Day 3, 2006	8	CO (PPM)	0.72	-9.00	0.72	2.00	
HLD	1	Episode Day 3, 2006	9	CO (PPM)	0.68	-9.00	0.68	1.10	
HLD	1	Episode Day 3, 2006	10	CO (PPM)	0.46	-9.00	0.46	0.00	
HLD	1	Episode Day 3, 2006	11	CO (PPM)	0.38	-9.00	0.38	0.00	
HLD	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	0.20	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2006 PREDICTED (UAM)	2006 PREDICTED (CAL3QHC)	2006 PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	0.80	
HLD	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	1.80	
AUR	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2006	22	CO (PPM)	0.79	-9.00	0.79	-9.00	
AUR	1	Episode Day 1, 2006	23	CO (PPM)	0.81	-9.00	0.81	-9.00	
AUR	1	Episode Day 2, 2006	0	CO (PPM)	0.70	-9.00	0.70	-9.00	
AUR	1	Episode Day 2, 2006	1	CO (PPM)	0.44	-9.00	0.44	-9.00	
AUR	1	Episode Day 2, 2006	2	CO (PPM)	0.34	-9.00	0.34	-9.00	
AUR	1	Episode Day 2, 2006	3	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 2, 2006	4	CO (PPM)	0.33	-9.00	0.33	-9.00	
AUR	1	Episode Day 2, 2006	5	CO (PPM)	0.37	-9.00	0.37	-9.00	
AUR	1	Episode Day 2, 2006	6	CO (PPM)	0.55	-9.00	0.55	-9.00	
AUR	1	Episode Day 2, 2006	7	CO (PPM)	1.25	-9.00	1.25	-9.00	
AUR	1	Episode Day 2, 2006	8	CO (PPM)	0.96	-9.00	0.96	-9.00	
AUR	1	Episode Day 2, 2006	9	CO (PPM)	0.66	-9.00	0.66	-9.00	
AUR	1	Episode Day 2, 2006	10	CO (PPM)	0.41	-9.00	0.41	-9.00	
AUR	1	Episode Day 2, 2006	11	CO (PPM)	0.41	-9.00	0.41	-9.00	
AUR	1	Episode Day 2, 2006	12	CO (PPM)	0.46	-9.00	0.46	-9.00	
AUR	1	Episode Day 2, 2006	13	CO (PPM)	0.54	-9.00	0.54	-9.00	
AUR	1	Episode Day 2, 2006	14	CO (PPM)	0.77	-9.00	0.77	-9.00	
AUR	1	Episode Day 2, 2006	15	CO (PPM)	1.24	-9.00	1.24	-9.00	
AUR	1	Episode Day 2, 2006	16	CO (PPM)	2.44	-9.00	2.44	-9.00	
AUR	1	Episode Day 2, 2006	17	CO (PPM)	3.09	-9.00	3.09	-9.00	
AUR	1	Episode Day 2, 2006	18	CO (PPM)	3.36	-9.00	3.36	-9.00	
AUR	1	Episode Day 2, 2006	19	CO (PPM)	4.23	-9.00	4.23	-9.00	
AUR	1	Episode Day 2, 2006	20	CO (PPM)	4.10	-9.00	4.10	-9.00	
AUR	1	Episode Day 2, 2006	21	CO (PPM)	1.29	-9.00	1.29	-9.00	
AUR	1	Episode Day 2, 2006	22	CO (PPM)	0.95	-9.00	0.95	-9.00	
AUR	1	Episode Day 2, 2006	23	CO (PPM)	0.72	-9.00	0.72	-9.00	
AUR	1	Episode Day 3, 2006	0	CO (PPM)	0.51	-9.00	0.51	-9.00	
AUR	1	Episode Day 3, 2006	1	CO (PPM)	0.38	-9.00	0.38	-9.00	
AUR	1	Episode Day 3, 2006	2	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 3, 2006	3	CO (PPM)	0.27	-9.00	0.27	-9.00	
AUR	1	Episode Day 3, 2006	4	CO (PPM)	0.28	-9.00	0.28	-9.00	
AUR	1	Episode Day 3, 2006	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 3, 2006	6	CO (PPM)	0.48	-9.00	0.48	-9.00	
AUR	1	Episode Day 3, 2006	7	CO (PPM)	1.15	-9.00	1.15	-9.00	
AUR	1	Episode Day 3, 2006	8	CO (PPM)	0.70	-9.00	0.70	-9.00	
AUR	1	Episode Day 3, 2006	9	CO (PPM)	0.60	-9.00	0.60	-9.00	
AUR	1	Episode Day 3, 2006	10	CO (PPM)	0.56	-9.00	0.56	-9.00	
AUR	1	Episode Day 3, 2006	11	CO (PPM)	0.52	-9.00	0.52	-9.00	
AUR	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2006 PREDICTED (UAM)	2006 PREDICTED (CAL3QHC)	2006 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AUR	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AURS	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	0.60	
AURS	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	0.50	
AURS	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	0.40	
AURS	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	0.40	
AURS	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	2.50	
AURS	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	2.20	
AURS	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	1.40	
AURS	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	1.60	
AURS	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	1.40	
AURS	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	1.50	
AURS	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.90	
AURS	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.50	
AURS	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	1.20	
AURS	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	3.70	
AURS	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	1.60	
AURS	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	1.30	
AURS	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	0.90	
AURS	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 1, 2006	22	CO (PPM)	0.56	-9.00	0.56	1.00	
AURS	1	Episode Day 1, 2006	23	CO (PPM)	0.53	-9.00	0.53	0.90	
AURS	1	Episode Day 2, 2006	0	CO (PPM)	0.40	-9.00	0.40	0.80	
AURS	1	Episode Day 2, 2006	1	CO (PPM)	0.31	-9.00	0.31	0.50	
AURS	1	Episode Day 2, 2006	2	CO (PPM)	0.27	-9.00	0.27	0.30	
AURS	1	Episode Day 2, 2006	3	CO (PPM)	0.26	-9.00	0.26	0.30	
AURS	1	Episode Day 2, 2006	4	CO (PPM)	0.28	-9.00	0.28	0.30	
AURS	1	Episode Day 2, 2006	5	CO (PPM)	0.33	-9.00	0.33	0.90	
AURS	1	Episode Day 2, 2006	6	CO (PPM)	0.54	-9.00	0.54	2.80	
AURS	1	Episode Day 2, 2006	7	CO (PPM)	1.14	-9.00	1.14	3.90	
AURS	1	Episode Day 2, 2006	8	CO (PPM)	0.68	-9.00	0.68	2.70	
AURS	1	Episode Day 2, 2006	9	CO (PPM)	0.38	-9.00	0.38	2.30	
AURS	1	Episode Day 2, 2006	10	CO (PPM)	0.31	-9.00	0.31	2.10	
AURS	1	Episode Day 2, 2006	11	CO (PPM)	0.36	-9.00	0.36	2.70	
AURS	1	Episode Day 2, 2006	12	CO (PPM)	0.49	-9.00	0.49	2.30	
AURS	1	Episode Day 2, 2006	13	CO (PPM)	0.62	-9.00	0.62	2.50	
AURS	1	Episode Day 2, 2006	14	CO (PPM)	0.83	-9.00	0.83	1.70	
AURS	1	Episode Day 2, 2006	15	CO (PPM)	1.36	-9.00	1.36	2.60	
AURS	1	Episode Day 2, 2006	16	CO (PPM)	3.65	-9.00	3.65	5.30	
AURS	1	Episode Day 2, 2006	17	CO (PPM)	5.89	-9.00	5.89	11.20	
AURS	1	Episode Day 2, 2006	18	CO (PPM)	6.44	-9.00	6.44	5.60	
AURS	1	Episode Day 2, 2006	19	CO (PPM)	3.91	-9.00	3.91	3.00	
AURS	1	Episode Day 2, 2006	20	CO (PPM)	0.92	-9.00	0.92	2.20	
AURS	1	Episode Day 2, 2006	21	CO (PPM)	0.62	-9.00	0.62	1.80	
AURS	1	Episode Day 2, 2006	22	CO (PPM)	0.55	-9.00	0.55	1.70	
AURS	1	Episode Day 2, 2006	23	CO (PPM)	0.42	-9.00	0.42	1.30	
AURS	1	Episode Day 3, 2006	0	CO (PPM)	0.37	-9.00	0.37	0.80	
AURS	1	Episode Day 3, 2006	1	CO (PPM)	0.35	-9.00	0.35	0.50	
AURS	1	Episode Day 3, 2006	2	CO (PPM)	0.27	-9.00	0.27	0.50	
AURS	1	Episode Day 3, 2006	3	CO (PPM)	0.25	-9.00	0.25	0.50	
AURS	1	Episode Day 3, 2006	4	CO (PPM)	0.26	-9.00	0.26	0.70	
AURS	1	Episode Day 3, 2006	5	CO (PPM)	0.30	-9.00	0.30	1.20	
AURS	1	Episode Day 3, 2006	6	CO (PPM)	0.48	-9.00	0.48	5.40	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
AURS	1	Episode Day 3, 2006	7	CO (PPM)	1.10	-9.00	1.10	6.90	
AURS	1	Episode Day 3, 2006	8	CO (PPM)	0.55	-9.00	0.55	5.00	
AURS	1	Episode Day 3, 2006	9	CO (PPM)	0.55	-9.00	0.55	3.30	
AURS	1	Episode Day 3, 2006	10	CO (PPM)	0.48	-9.00	0.48	0.90	
AURS	1	Episode Day 3, 2006	11	CO (PPM)	0.43	-9.00	0.43	0.90	
AURS	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	1.80	
AURS	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	3.40	
AURS	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	3.90	
AURS	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	2.70	
AURS	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	3.00	
AURS	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	2.50	
AURS	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	1.50	
AURS	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	1.10	
PLM	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2006	22	CO (PPM)	1.11	-9.00	1.11	-9.00	
PLM	1	Episode Day 1, 2006	23	CO (PPM)	1.16	-9.00	1.16	-9.00	
PLM	1	Episode Day 2, 2006	0	CO (PPM)	0.88	-9.00	0.88	-9.00	
PLM	1	Episode Day 2, 2006	1	CO (PPM)	0.50	-9.00	0.50	-9.00	
PLM	1	Episode Day 2, 2006	2	CO (PPM)	0.41	-9.00	0.41	-9.00	
PLM	1	Episode Day 2, 2006	3	CO (PPM)	0.38	-9.00	0.38	-9.00	
PLM	1	Episode Day 2, 2006	4	CO (PPM)	0.40	-9.00	0.40	-9.00	
PLM	1	Episode Day 2, 2006	5	CO (PPM)	0.43	-9.00	0.43	-9.00	
PLM	1	Episode Day 2, 2006	6	CO (PPM)	0.66	-9.00	0.66	-9.00	
PLM	1	Episode Day 2, 2006	7	CO (PPM)	1.71	-9.00	1.71	-9.00	
PLM	1	Episode Day 2, 2006	8	CO (PPM)	1.15	-9.00	1.15	-9.00	
PLM	1	Episode Day 2, 2006	9	CO (PPM)	0.87	-9.00	0.87	-9.00	
PLM	1	Episode Day 2, 2006	10	CO (PPM)	0.53	-9.00	0.53	-9.00	
PLM	1	Episode Day 2, 2006	11	CO (PPM)	0.51	-9.00	0.51	-9.00	
PLM	1	Episode Day 2, 2006	12	CO (PPM)	0.60	-9.00	0.60	-9.00	
PLM	1	Episode Day 2, 2006	13	CO (PPM)	0.67	-9.00	0.67	-9.00	
PLM	1	Episode Day 2, 2006	14	CO (PPM)	0.96	-9.00	0.96	-9.00	
PLM	1	Episode Day 2, 2006	15	CO (PPM)	1.55	-9.00	1.55	-9.00	
PLM	1	Episode Day 2, 2006	16	CO (PPM)	3.27	-9.00	3.27	-9.00	
PLM	1	Episode Day 2, 2006	17	CO (PPM)	4.26	-9.00	4.26	-9.00	
PLM	1	Episode Day 2, 2006	18	CO (PPM)	4.91	-9.00	4.91	-9.00	
PLM	1	Episode Day 2, 2006	19	CO (PPM)	6.25	-9.00	6.25	-9.00	
PLM	1	Episode Day 2, 2006	20	CO (PPM)	2.05	-9.00	2.05	-9.00	
PLM	1	Episode Day 2, 2006	21	CO (PPM)	1.07	-9.00	1.07	-9.00	
PLM	1	Episode Day 2, 2006	22	CO (PPM)	1.12	-9.00	1.12	-9.00	
PLM	1	Episode Day 2, 2006	23	CO (PPM)	0.85	-9.00	0.85	-9.00	
PLM	1	Episode Day 3, 2006	0	CO (PPM)	0.58	-9.00	0.58	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
PLM	1	Episode Day 3, 2006	1	CO (PPM)	0.48	-9.00	0.48	-9.00	
PLM	1	Episode Day 3, 2006	2	CO (PPM)	0.39	-9.00	0.39	-9.00	
PLM	1	Episode Day 3, 2006	3	CO (PPM)	0.31	-9.00	0.31	-9.00	
PLM	1	Episode Day 3, 2006	4	CO (PPM)	0.31	-9.00	0.31	-9.00	
PLM	1	Episode Day 3, 2006	5	CO (PPM)	0.37	-9.00	0.37	-9.00	
PLM	1	Episode Day 3, 2006	6	CO (PPM)	0.57	-9.00	0.57	-9.00	
PLM	1	Episode Day 3, 2006	7	CO (PPM)	1.60	-9.00	1.60	-9.00	
PLM	1	Episode Day 3, 2006	8	CO (PPM)	0.98	-9.00	0.98	-9.00	
PLM	1	Episode Day 3, 2006	9	CO (PPM)	0.77	-9.00	0.77	-9.00	
PLM	1	Episode Day 3, 2006	10	CO (PPM)	0.72	-9.00	0.72	-9.00	
PLM	1	Episode Day 3, 2006	11	CO (PPM)	0.80	-9.00	0.80	-9.00	
PLM	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2006	22	CO (PPM)	0.25	-9.00	0.25	-9.00	
BTN	1	Episode Day 1, 2006	23	CO (PPM)	0.28	-9.00	0.28	-9.00	
BTN	1	Episode Day 2, 2006	0	CO (PPM)	0.40	-9.00	0.40	-9.00	
BTN	1	Episode Day 2, 2006	1	CO (PPM)	0.50	-9.00	0.50	-9.00	
BTN	1	Episode Day 2, 2006	2	CO (PPM)	0.48	-9.00	0.48	-9.00	
BTN	1	Episode Day 2, 2006	3	CO (PPM)	0.43	-9.00	0.43	-9.00	
BTN	1	Episode Day 2, 2006	4	CO (PPM)	0.35	-9.00	0.35	-9.00	
BTN	1	Episode Day 2, 2006	5	CO (PPM)	0.29	-9.00	0.29	-9.00	
BTN	1	Episode Day 2, 2006	6	CO (PPM)	0.30	-9.00	0.30	-9.00	
BTN	1	Episode Day 2, 2006	7	CO (PPM)	0.44	-9.00	0.44	-9.00	
BTN	1	Episode Day 2, 2006	8	CO (PPM)	0.44	-9.00	0.44	-9.00	
BTN	1	Episode Day 2, 2006	9	CO (PPM)	0.53	-9.00	0.53	-9.00	
BTN	1	Episode Day 2, 2006	10	CO (PPM)	0.65	-9.00	0.65	-9.00	
BTN	1	Episode Day 2, 2006	11	CO (PPM)	0.77	-9.00	0.77	-9.00	
BTN	1	Episode Day 2, 2006	12	CO (PPM)	0.76	-9.00	0.76	-9.00	
BTN	1	Episode Day 2, 2006	13	CO (PPM)	0.73	-9.00	0.73	-9.00	
BTN	1	Episode Day 2, 2006	14	CO (PPM)	0.75	-9.00	0.75	-9.00	
BTN	1	Episode Day 2, 2006	15	CO (PPM)	0.82	-9.00	0.82	-9.00	
BTN	1	Episode Day 2, 2006	16	CO (PPM)	1.04	-9.00	1.04	-9.00	
BTN	1	Episode Day 2, 2006	17	CO (PPM)	1.18	-9.00	1.18	-9.00	
BTN	1	Episode Day 2, 2006	18	CO (PPM)	1.26	-9.00	1.26	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
BTN	1	Episode Day 2, 2006	19	CO (PPM)	1.01	-9.00	1.01	-9.00	
BTN	1	Episode Day 2, 2006	20	CO (PPM)	0.66	-9.00	0.66	-9.00	
BTN	1	Episode Day 2, 2006	21	CO (PPM)	0.80	-9.00	0.80	-9.00	
BTN	1	Episode Day 2, 2006	22	CO (PPM)	1.38	-9.00	1.38	-9.00	
BTN	1	Episode Day 2, 2006	23	CO (PPM)	1.61	-9.00	1.61	-9.00	
BTN	1	Episode Day 3, 2006	0	CO (PPM)	0.98	-9.00	0.98	-9.00	
BTN	1	Episode Day 3, 2006	1	CO (PPM)	0.73	-9.00	0.73	-9.00	
BTN	1	Episode Day 3, 2006	2	CO (PPM)	0.60	-9.00	0.60	-9.00	
BTN	1	Episode Day 3, 2006	3	CO (PPM)	0.40	-9.00	0.40	-9.00	
BTN	1	Episode Day 3, 2006	4	CO (PPM)	0.33	-9.00	0.33	-9.00	
BTN	1	Episode Day 3, 2006	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
BTN	1	Episode Day 3, 2006	6	CO (PPM)	0.34	-9.00	0.34	-9.00	
BTN	1	Episode Day 3, 2006	7	CO (PPM)	0.37	-9.00	0.37	-9.00	
BTN	1	Episode Day 3, 2006	8	CO (PPM)	0.33	-9.00	0.33	-9.00	
BTN	1	Episode Day 3, 2006	9	CO (PPM)	0.36	-9.00	0.36	-9.00	
BTN	1	Episode Day 3, 2006	10	CO (PPM)	0.32	-9.00	0.32	-9.00	
BTN	1	Episode Day 3, 2006	11	CO (PPM)	0.25	-9.00	0.25	-9.00	
BTN	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2006	22	CO (PPM)	1.11	-9.00	1.11	-9.00	
U_1	1	Episode Day 1, 2006	23	CO (PPM)	1.16	-9.00	1.16	-9.00	
U_1	1	Episode Day 2, 2006	0	CO (PPM)	0.85	-9.00	0.85	-9.00	
U_1	1	Episode Day 2, 2006	1	CO (PPM)	0.54	-9.00	0.54	-9.00	
U_1	1	Episode Day 2, 2006	2	CO (PPM)	0.44	-9.00	0.44	-9.00	
U_1	1	Episode Day 2, 2006	3	CO (PPM)	0.42	-9.00	0.42	-9.00	
U_1	1	Episode Day 2, 2006	4	CO (PPM)	0.44	-9.00	0.44	-9.00	
U_1	1	Episode Day 2, 2006	5	CO (PPM)	0.49	-9.00	0.49	-9.00	
U_1	1	Episode Day 2, 2006	6	CO (PPM)	0.72	-9.00	0.72	-9.00	
U_1	1	Episode Day 2, 2006	7	CO (PPM)	2.03	-9.00	2.03	-9.00	
U_1	1	Episode Day 2, 2006	8	CO (PPM)	1.32	-9.00	1.32	-9.00	
U_1	1	Episode Day 2, 2006	9	CO (PPM)	0.78	-9.00	0.78	-9.00	
U_1	1	Episode Day 2, 2006	10	CO (PPM)	0.50	-9.00	0.50	-9.00	
U_1	1	Episode Day 2, 2006	11	CO (PPM)	0.57	-9.00	0.57	-9.00	
U_1	1	Episode Day 2, 2006	12	CO (PPM)	0.76	-9.00	0.76	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
PERIOD									
U_1	1	Episode Day 2, 2006	13	CO (PPM)	0.96	-9.00	0.96	-9.00	
U_1	1	Episode Day 2, 2006	14	CO (PPM)	1.51	-9.00	1.51	-9.00	
U_1	1	Episode Day 2, 2006	15	CO (PPM)	2.14	-9.00	2.14	-9.00	
U_1	1	Episode Day 2, 2006	16	CO (PPM)	5.23	-9.00	5.23	-9.00	
U_1	1	Episode Day 2, 2006	17	CO (PPM)	9.05	-9.00	9.05	-9.00	
U_1	1	Episode Day 2, 2006	18	CO (PPM)	9.06	-9.00	9.06	-9.00	
U_1	1	Episode Day 2, 2006	19	CO (PPM)	2.83	-9.00	2.83	-9.00	
U_1	1	Episode Day 2, 2006	20	CO (PPM)	1.16	-9.00	1.16	-9.00	
U_1	1	Episode Day 2, 2006	21	CO (PPM)	1.05	-9.00	1.05	-9.00	
U_1	1	Episode Day 2, 2006	22	CO (PPM)	1.02	-9.00	1.02	-9.00	
U_1	1	Episode Day 2, 2006	23	CO (PPM)	0.89	-9.00	0.89	-9.00	
U_1	1	Episode Day 3, 2006	0	CO (PPM)	0.68	-9.00	0.68	-9.00	
U_1	1	Episode Day 3, 2006	1	CO (PPM)	0.58	-9.00	0.58	-9.00	
U_1	1	Episode Day 3, 2006	2	CO (PPM)	0.41	-9.00	0.41	-9.00	
U_1	1	Episode Day 3, 2006	3	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_1	1	Episode Day 3, 2006	4	CO (PPM)	0.34	-9.00	0.34	-9.00	
U_1	1	Episode Day 3, 2006	5	CO (PPM)	0.47	-9.00	0.47	-9.00	
U_1	1	Episode Day 3, 2006	6	CO (PPM)	0.88	-9.00	0.88	-9.00	
U_1	1	Episode Day 3, 2006	7	CO (PPM)	2.54	-9.00	2.54	-9.00	
U_1	1	Episode Day 3, 2006	8	CO (PPM)	1.61	-9.00	1.61	-9.00	
U_1	1	Episode Day 3, 2006	9	CO (PPM)	1.10	-9.00	1.10	-9.00	
U_1	1	Episode Day 3, 2006	10	CO (PPM)	0.93	-9.00	0.93	-9.00	
U_1	1	Episode Day 3, 2006	11	CO (PPM)	0.88	-9.00	0.88	-9.00	
U_1	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2006	22	CO (PPM)	1.35	-9.00	1.35	-9.00	
F_A	1	Episode Day 1, 2006	23	CO (PPM)	0.66	-9.00	0.66	-9.00	
F_A	1	Episode Day 2, 2006	0	CO (PPM)	0.29	-9.00	0.29	-9.00	
F_A	1	Episode Day 2, 2006	1	CO (PPM)	0.25	-9.00	0.25	-9.00	
F_A	1	Episode Day 2, 2006	2	CO (PPM)	0.25	-9.00	0.25	-9.00	
F_A	1	Episode Day 2, 2006	3	CO (PPM)	0.25	-9.00	0.25	-9.00	
F_A	1	Episode Day 2, 2006	4	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 2, 2006	5	CO (PPM)	0.34	-9.00	0.34	-9.00	
F_A	1	Episode Day 2, 2006	6	CO (PPM)	0.61	-9.00	0.61	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
F_A	1	Episode Day 2, 2006	7	CO (PPM)	1.31	-9.00	1.31	-9.00	
F_A	1	Episode Day 2, 2006	8	CO (PPM)	0.66	-9.00	0.66	-9.00	
F_A	1	Episode Day 2, 2006	9	CO (PPM)	0.59	-9.00	0.59	-9.00	
F_A	1	Episode Day 2, 2006	10	CO (PPM)	0.58	-9.00	0.58	-9.00	
F_A	1	Episode Day 2, 2006	11	CO (PPM)	0.54	-9.00	0.54	-9.00	
F_A	1	Episode Day 2, 2006	12	CO (PPM)	0.50	-9.00	0.50	-9.00	
F_A	1	Episode Day 2, 2006	13	CO (PPM)	0.47	-9.00	0.47	-9.00	
F_A	1	Episode Day 2, 2006	14	CO (PPM)	0.65	-9.00	0.65	-9.00	
F_A	1	Episode Day 2, 2006	15	CO (PPM)	1.17	-9.00	1.17	-9.00	
F_A	1	Episode Day 2, 2006	16	CO (PPM)	1.78	-9.00	1.78	-9.00	
F_A	1	Episode Day 2, 2006	17	CO (PPM)	0.98	-9.00	0.98	-9.00	
F_A	1	Episode Day 2, 2006	18	CO (PPM)	0.75	-9.00	0.75	-9.00	
F_A	1	Episode Day 2, 2006	19	CO (PPM)	0.78	-9.00	0.78	-9.00	
F_A	1	Episode Day 2, 2006	20	CO (PPM)	0.68	-9.00	0.68	-9.00	
F_A	1	Episode Day 2, 2006	21	CO (PPM)	0.49	-9.00	0.49	-9.00	
F_A	1	Episode Day 2, 2006	22	CO (PPM)	0.36	-9.00	0.36	-9.00	
F_A	1	Episode Day 2, 2006	23	CO (PPM)	0.30	-9.00	0.30	-9.00	
F_A	1	Episode Day 3, 2006	0	CO (PPM)	0.29	-9.00	0.29	-9.00	
F_A	1	Episode Day 3, 2006	1	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2006	2	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2006	3	CO (PPM)	0.27	-9.00	0.27	-9.00	
F_A	1	Episode Day 3, 2006	4	CO (PPM)	0.28	-9.00	0.28	-9.00	
F_A	1	Episode Day 3, 2006	5	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2006	6	CO (PPM)	0.44	-9.00	0.44	-9.00	
F_A	1	Episode Day 3, 2006	7	CO (PPM)	1.15	-9.00	1.15	-9.00	
F_A	1	Episode Day 3, 2006	8	CO (PPM)	0.64	-9.00	0.64	-9.00	
F_A	1	Episode Day 3, 2006	9	CO (PPM)	0.44	-9.00	0.44	-9.00	
F_A	1	Episode Day 3, 2006	10	CO (PPM)	0.30	-9.00	0.30	-9.00	
F_A	1	Episode Day 3, 2006	11	CO (PPM)	0.38	-9.00	0.38	-9.00	
F_A	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2006	22	CO (PPM)	0.60	-9.00	0.60	-9.00	
H_U	1	Episode Day 1, 2006	23	CO (PPM)	0.40	-9.00	0.40	-9.00	
H_U	1	Episode Day 2, 2006	0	CO (PPM)	0.34	-9.00	0.34	-9.00	

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High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
H_U	1	Episode Day 2, 2006	1	CO (PPM)	0.31	-9.00	0.31	-9.00	
H_U	1	Episode Day 2, 2006	2	CO (PPM)	0.28	-9.00	0.28	-9.00	
H_U	1	Episode Day 2, 2006	3	CO (PPM)	0.27	-9.00	0.27	-9.00	
H_U	1	Episode Day 2, 2006	4	CO (PPM)	0.29	-9.00	0.29	-9.00	
H_U	1	Episode Day 2, 2006	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
H_U	1	Episode Day 2, 2006	6	CO (PPM)	0.40	-9.00	0.40	-9.00	
H_U	1	Episode Day 2, 2006	7	CO (PPM)	0.80	-9.00	0.80	-9.00	
H_U	1	Episode Day 2, 2006	8	CO (PPM)	0.56	-9.00	0.56	-9.00	
H_U	1	Episode Day 2, 2006	9	CO (PPM)	0.33	-9.00	0.33	-9.00	
H_U	1	Episode Day 2, 2006	10	CO (PPM)	0.28	-9.00	0.28	-9.00	
H_U	1	Episode Day 2, 2006	11	CO (PPM)	0.32	-9.00	0.32	-9.00	
H_U	1	Episode Day 2, 2006	12	CO (PPM)	0.40	-9.00	0.40	-9.00	
H_U	1	Episode Day 2, 2006	13	CO (PPM)	0.58	-9.00	0.58	-9.00	
H_U	1	Episode Day 2, 2006	14	CO (PPM)	1.01	-9.00	1.01	-9.00	
H_U	1	Episode Day 2, 2006	15	CO (PPM)	1.87	-9.00	1.87	-9.00	
H_U	1	Episode Day 2, 2006	16	CO (PPM)	4.21	-9.00	4.21	-9.00	
H_U	1	Episode Day 2, 2006	17	CO (PPM)	4.47	-9.00	4.47	-9.00	
H_U	1	Episode Day 2, 2006	18	CO (PPM)	1.78	-9.00	1.78	-9.00	
H_U	1	Episode Day 2, 2006	19	CO (PPM)	0.78	-9.00	0.78	-9.00	
H_U	1	Episode Day 2, 2006	20	CO (PPM)	0.43	-9.00	0.43	-9.00	
H_U	1	Episode Day 2, 2006	21	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2006	22	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2006	23	CO (PPM)	0.37	-9.00	0.37	-9.00	
H_U	1	Episode Day 3, 2006	0	CO (PPM)	0.34	-9.00	0.34	-9.00	
H_U	1	Episode Day 3, 2006	1	CO (PPM)	0.33	-9.00	0.33	-9.00	
H_U	1	Episode Day 3, 2006	2	CO (PPM)	0.27	-9.00	0.27	-9.00	
H_U	1	Episode Day 3, 2006	3	CO (PPM)	0.26	-9.00	0.26	-9.00	
H_U	1	Episode Day 3, 2006	4	CO (PPM)	0.26	-9.00	0.26	-9.00	
H_U	1	Episode Day 3, 2006	5	CO (PPM)	0.28	-9.00	0.28	-9.00	
H_U	1	Episode Day 3, 2006	6	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 3, 2006	7	CO (PPM)	1.12	-9.00	1.12	-9.00	
H_U	1	Episode Day 3, 2006	8	CO (PPM)	0.58	-9.00	0.58	-9.00	
H_U	1	Episode Day 3, 2006	9	CO (PPM)	0.58	-9.00	0.58	-9.00	
H_U	1	Episode Day 3, 2006	10	CO (PPM)	0.62	-9.00	0.62	-9.00	
H_U	1	Episode Day 3, 2006	11	CO (PPM)	0.62	-9.00	0.62	-9.00	
H_U	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
U_A	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2006	22	CO (PPM)	0.29	-9.00	0.29	-9.00	
U_A	1	Episode Day 1, 2006	23	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 2, 2006	0	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 2, 2006	1	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 2, 2006	2	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 2, 2006	3	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 2, 2006	4	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 2, 2006	5	CO (PPM)	0.24	-9.00	0.24	-9.00	
U_A	1	Episode Day 2, 2006	6	CO (PPM)	0.30	-9.00	0.30	-9.00	
U_A	1	Episode Day 2, 2006	7	CO (PPM)	0.45	-9.00	0.45	-9.00	
U_A	1	Episode Day 2, 2006	8	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2006	9	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 2, 2006	10	CO (PPM)	0.24	-9.00	0.24	-9.00	
U_A	1	Episode Day 2, 2006	11	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 2, 2006	12	CO (PPM)	0.40	-9.00	0.40	-9.00	
U_A	1	Episode Day 2, 2006	13	CO (PPM)	0.47	-9.00	0.47	-9.00	
U_A	1	Episode Day 2, 2006	14	CO (PPM)	0.68	-9.00	0.68	-9.00	
U_A	1	Episode Day 2, 2006	15	CO (PPM)	1.16	-9.00	1.16	-9.00	
U_A	1	Episode Day 2, 2006	16	CO (PPM)	2.83	-9.00	2.83	-9.00	
U_A	1	Episode Day 2, 2006	17	CO (PPM)	3.29	-9.00	3.29	-9.00	
U_A	1	Episode Day 2, 2006	18	CO (PPM)	1.33	-9.00	1.33	-9.00	
U_A	1	Episode Day 2, 2006	19	CO (PPM)	0.46	-9.00	0.46	-9.00	
U_A	1	Episode Day 2, 2006	20	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2006	21	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2006	22	CO (PPM)	0.29	-9.00	0.29	-9.00	
U_A	1	Episode Day 2, 2006	23	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 3, 2006	0	CO (PPM)	0.27	-9.00	0.27	-9.00	
U_A	1	Episode Day 3, 2006	1	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 3, 2006	2	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 3, 2006	3	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 3, 2006	4	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 3, 2006	5	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 3, 2006	6	CO (PPM)	0.34	-9.00	0.34	-9.00	
U_A	1	Episode Day 3, 2006	7	CO (PPM)	1.01	-9.00	1.01	-9.00	
U_A	1	Episode Day 3, 2006	8	CO (PPM)	0.62	-9.00	0.62	-9.00	
U_A	1	Episode Day 3, 2006	9	CO (PPM)	0.64	-9.00	0.64	-9.00	
U_A	1	Episode Day 3, 2006	10	CO (PPM)	0.56	-9.00	0.56	-9.00	
U_A	1	Episode Day 3, 2006	11	CO (PPM)	0.45	-9.00	0.45	-9.00	
U_A	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
P_I	1	Episode Day 1, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2006	22	CO (PPM)	0.71	-9.00	0.71	-9.00	
P_I	1	Episode Day 1, 2006	23	CO (PPM)	0.63	-9.00	0.63	-9.00	
P_I	1	Episode Day 2, 2006	0	CO (PPM)	0.45	-9.00	0.45	-9.00	
P_I	1	Episode Day 2, 2006	1	CO (PPM)	0.35	-9.00	0.35	-9.00	
P_I	1	Episode Day 2, 2006	2	CO (PPM)	0.30	-9.00	0.30	-9.00	
P_I	1	Episode Day 2, 2006	3	CO (PPM)	0.28	-9.00	0.28	-9.00	
P_I	1	Episode Day 2, 2006	4	CO (PPM)	0.31	-9.00	0.31	-9.00	
P_I	1	Episode Day 2, 2006	5	CO (PPM)	0.36	-9.00	0.36	-9.00	
P_I	1	Episode Day 2, 2006	6	CO (PPM)	0.59	-9.00	0.59	-9.00	
P_I	1	Episode Day 2, 2006	7	CO (PPM)	1.35	-9.00	1.35	-9.00	
P_I	1	Episode Day 2, 2006	8	CO (PPM)	0.84	-9.00	0.84	-9.00	
P_I	1	Episode Day 2, 2006	9	CO (PPM)	0.43	-9.00	0.43	-9.00	
P_I	1	Episode Day 2, 2006	10	CO (PPM)	0.34	-9.00	0.34	-9.00	
P_I	1	Episode Day 2, 2006	11	CO (PPM)	0.38	-9.00	0.38	-9.00	
P_I	1	Episode Day 2, 2006	12	CO (PPM)	0.49	-9.00	0.49	-9.00	
P_I	1	Episode Day 2, 2006	13	CO (PPM)	0.56	-9.00	0.56	-9.00	
P_I	1	Episode Day 2, 2006	14	CO (PPM)	0.78	-9.00	0.78	-9.00	
P_I	1	Episode Day 2, 2006	15	CO (PPM)	1.30	-9.00	1.30	-9.00	
P_I	1	Episode Day 2, 2006	16	CO (PPM)	3.15	-9.00	3.15	-9.00	
P_I	1	Episode Day 2, 2006	17	CO (PPM)	5.05	-9.00	5.05	-9.00	
P_I	1	Episode Day 2, 2006	18	CO (PPM)	6.15	-9.00	6.15	-9.00	
P_I	1	Episode Day 2, 2006	19	CO (PPM)	3.11	-9.00	3.11	-9.00	
P_I	1	Episode Day 2, 2006	20	CO (PPM)	1.04	-9.00	1.04	-9.00	
P_I	1	Episode Day 2, 2006	21	CO (PPM)	0.70	-9.00	0.70	-9.00	
P_I	1	Episode Day 2, 2006	22	CO (PPM)	0.68	-9.00	0.68	-9.00	
P_I	1	Episode Day 2, 2006	23	CO (PPM)	0.49	-9.00	0.49	-9.00	
P_I	1	Episode Day 3, 2006	0	CO (PPM)	0.41	-9.00	0.41	-9.00	
P_I	1	Episode Day 3, 2006	1	CO (PPM)	0.36	-9.00	0.36	-9.00	
P_I	1	Episode Day 3, 2006	2	CO (PPM)	0.28	-9.00	0.28	-9.00	
P_I	1	Episode Day 3, 2006	3	CO (PPM)	0.26	-9.00	0.26	-9.00	
P_I	1	Episode Day 3, 2006	4	CO (PPM)	0.27	-9.00	0.27	-9.00	
P_I	1	Episode Day 3, 2006	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
P_I	1	Episode Day 3, 2006	6	CO (PPM)	0.53	-9.00	0.53	-9.00	
P_I	1	Episode Day 3, 2006	7	CO (PPM)	1.34	-9.00	1.34	-9.00	
P_I	1	Episode Day 3, 2006	8	CO (PPM)	0.77	-9.00	0.77	-9.00	
P_I	1	Episode Day 3, 2006	9	CO (PPM)	0.75	-9.00	0.75	-9.00	
P_I	1	Episode Day 3, 2006	10	CO (PPM)	0.64	-9.00	0.64	-9.00	
P_I	1	Episode Day 3, 2006	11	CO (PPM)	0.50	-9.00	0.50	-9.00	
P_I	1	Episode Day 3, 2006	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2006	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

CMP	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
CMP	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	2.04	
CMP	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	1.90	
CMP	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	1.84	
CMP	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	1.81	
CMP	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	1.70	
CMP	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	1.59	
CMP	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	1.56	
CMP	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.57	
CMP	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.74	
CMP	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	2.36	
CMP	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	3.15	
CMP	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	3.84	
CMP	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	4.06	
CMP	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	3.96	
CMP	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	3.91	
CMP	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	3.84	
CMP	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	3.69	
CMP	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	3.08	
CMP	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	2.23	
CMP	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	1.38	
CMP	8	Episode Day 2, 2006	3	CO (PPM)	1.43	NA	1.43	0.93	
CMP	8	Episode Day 2, 2006	4	CO (PPM)	1.33	NA	1.33	0.76	
CMP	8	Episode Day 2, 2006	5	CO (PPM)	1.26	NA	1.26	0.65	
CMP	8	Episode Day 2, 2006	6	CO (PPM)	1.21	NA	1.21	0.63	
CMP	8	Episode Day 2, 2006	7	CO (PPM)	1.34	NA	1.34	0.94	
CMP	8	Episode Day 2, 2006	8	CO (PPM)	1.28	NA	1.28	1.43	
CMP	8	Episode Day 2, 2006	9	CO (PPM)	1.21	NA	1.21	1.69	
CMP	8	Episode Day 2, 2006	10	CO (PPM)	1.22	NA	1.22	2.05	
CMP	8	Episode Day 2, 2006	11	CO (PPM)	1.27	NA	1.27	2.61	
CMP	8	Episode Day 2, 2006	12	CO (PPM)	1.34	NA	1.34	3.11	
CMP	8	Episode Day 2, 2006	13	CO (PPM)	1.42	NA	1.42	3.61	
CMP	8	Episode Day 2, 2006	14	CO (PPM)	1.54	NA	1.54	4.08	
CMP	8	Episode Day 2, 2006	15	CO (PPM)	1.54	NA	1.54	4.44	
CMP	8	Episode Day 2, 2006	16	CO (PPM)	2.37	NA	2.37	9.39	
CMP	8	Episode Day 2, 2006	17	CO (PPM)	3.85	NA	3.85	15.34	
CMP	8	Episode Day 2, 2006	18	CO (PPM)	5.48	NA	5.48	18.73	
CMP	8	Episode Day 2, 2006	19	CO (PPM)	6.71	NA	6.71	18.65	
CMP	8	Episode Day 2, 2006	20	CO (PPM)	7.12	NA	7.12	18.41	
CMP	8	Episode Day 2, 2006	21	CO (PPM)	7.37	NA	7.37	18.16	
CMP	8	Episode Day 2, 2006	22	CO (PPM)	7.59	NA	7.59	18.08	
CMP	8	Episode Day 2, 2006	23	CO (PPM)	7.64	NA	7.64	17.70	
CMP	8	Episode Day 3, 2006	0	CO (PPM)	6.90	NA	6.90	12.64	
CMP	8	Episode Day 3, 2006	1	CO (PPM)	5.48	NA	5.48	6.65	
CMP	8	Episode Day 3, 2006	2	CO (PPM)	3.85	NA	3.85	3.04	
CMP	8	Episode Day 3, 2006	3	CO (PPM)	2.55	NA	2.55	2.65	
CMP	8	Episode Day 3, 2006	4	CO (PPM)	2.05	NA	2.05	2.53	
CMP	8	Episode Day 3, 2006	5	CO (PPM)	1.76	NA	1.76	2.54	
CMP	8	Episode Day 3, 2006	6	CO (PPM)	1.58	NA	1.58	2.70	
CMP	8	Episode Day 3, 2006	7	CO (PPM)	1.73	NA	1.73	3.36	
CMP	8	Episode Day 3, 2006	8	CO (PPM)	1.75	NA	1.75	4.14	
CMP	8	Episode Day 3, 2006	9	CO (PPM)	1.85	NA	1.85	4.71	
CMP	8	Episode Day 3, 2006	10	CO (PPM)	2.00	NA	2.00	5.21	
CMP	8	Episode Day 3, 2006	11	CO (PPM)	2.11	NA	2.11	5.56	
CMP	8	Episode Day 3, 2006	12	CO (PPM)	2.32	NA	2.32	5.74	
CMP	8	Episode Day 3, 2006	13	CO (PPM)	2.52	NA	2.52	5.69	
CMP	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	5.35	
CMP	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	4.64	
CMP	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	4.56	
CMP	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	5.28	
CMP	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	5.30	
CMP	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	5.34	
CMP	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	5.69	
CMP	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	5.94	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
CMP	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	6.00	
CMP	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	6.11	
WBY	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	2.44	
WBY	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	2.14	
WBY	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	1.73	
WBY	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	1.48	
WBY	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	1.23	
WBY	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	1.16	
WBY	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	1.14	
WBY	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.01	
WBY	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	0.85	
WBY	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	0.75	
WBY	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.14	
WBY	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	1.69	
WBY	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	1.94	
WBY	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	2.41	
WBY	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	2.61	
WBY	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	2.76	
WBY	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	2.95	
WBY	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	3.39	
WBY	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	3.28	
WBY	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	2.88	
WBY	8	Episode Day 2, 2006	3	CO (PPM)	1.31	NA	1.31	2.70	
WBY	8	Episode Day 2, 2006	4	CO (PPM)	1.25	NA	1.25	2.30	
WBY	8	Episode Day 2, 2006	5	CO (PPM)	1.20	NA	1.20	2.21	
WBY	8	Episode Day 2, 2006	6	CO (PPM)	1.17	NA	1.17	2.24	
WBY	8	Episode Day 2, 2006	7	CO (PPM)	1.19	NA	1.19	2.71	
WBY	8	Episode Day 2, 2006	8	CO (PPM)	1.13	NA	1.13	3.04	
WBY	8	Episode Day 2, 2006	9	CO (PPM)	1.07	NA	1.07	3.22	
WBY	8	Episode Day 2, 2006	10	CO (PPM)	1.04	NA	1.04	3.26	
WBY	8	Episode Day 2, 2006	11	CO (PPM)	1.01	NA	1.01	3.24	
WBY	8	Episode Day 2, 2006	12	CO (PPM)	0.99	NA	0.99	3.17	
WBY	8	Episode Day 2, 2006	13	CO (PPM)	0.96	NA	0.96	3.11	
WBY	8	Episode Day 2, 2006	14	CO (PPM)	0.92	NA	0.92	3.02	
WBY	8	Episode Day 2, 2006	15	CO (PPM)	0.83	NA	0.83	2.46	
WBY	8	Episode Day 2, 2006	16	CO (PPM)	0.90	NA	0.90	1.92	
WBY	8	Episode Day 2, 2006	17	CO (PPM)	1.11	NA	1.11	2.50	
WBY	8	Episode Day 2, 2006	18	CO (PPM)	1.43	NA	1.43	3.86	
WBY	8	Episode Day 2, 2006	19	CO (PPM)	1.66	NA	1.66	4.86	
WBY	8	Episode Day 2, 2006	20	CO (PPM)	2.03	NA	2.03	5.71	
WBY	8	Episode Day 2, 2006	21	CO (PPM)	2.58	NA	2.58	6.39	
WBY	8	Episode Day 2, 2006	22	CO (PPM)	3.14	NA	3.14	7.17	
WBY	8	Episode Day 2, 2006	23	CO (PPM)	3.68	NA	3.68	8.09	
WBY	8	Episode Day 3, 2006	0	CO (PPM)	4.05	NA	4.05	8.94	
WBY	8	Episode Day 3, 2006	1	CO (PPM)	4.05	NA	4.05	8.66	
WBY	8	Episode Day 3, 2006	2	CO (PPM)	3.76	NA	3.76	7.36	
WBY	8	Episode Day 3, 2006	3	CO (PPM)	3.52	NA	3.52	6.40	
WBY	8	Episode Day 3, 2006	4	CO (PPM)	3.14	NA	3.14	5.64	
WBY	8	Episode Day 3, 2006	5	CO (PPM)	2.60	NA	2.60	5.06	
WBY	8	Episode Day 3, 2006	6	CO (PPM)	2.06	NA	2.06	4.50	
WBY	8	Episode Day 3, 2006	7	CO (PPM)	1.55	NA	1.55	3.79	
WBY	8	Episode Day 3, 2006	8	CO (PPM)	1.12	NA	1.12	2.99	
WBY	8	Episode Day 3, 2006	9	CO (PPM)	0.94	NA	0.94	2.46	
WBY	8	Episode Day 3, 2006	10	CO (PPM)	0.92	NA	0.92	2.41	
WBY	8	Episode Day 3, 2006	11	CO (PPM)	0.93	NA	0.93	2.26	
WBY	8	Episode Day 3, 2006	12	CO (PPM)	0.98	NA	0.98	2.09	
WBY	8	Episode Day 3, 2006	13	CO (PPM)	1.02	NA	1.02	1.89	
WBY	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.53	
WBY	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.17	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2006 PREDICTED (UAM)	2006 PREDICTED (CAL3QHC)	2006 PREDICTED (UAM+CAL3)	1988 OBSERVED	
WBY	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.13	
WBY	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	0.88	
WBY	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	0.70	
WBY	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	1.01	
WBY	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	1.73	
WBY	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	2.44	
WBY	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	3.08	
WBY	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	3.59	
CRG	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	2.91	
CRG	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	2.54	
CRG	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	2.14	
CRG	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	1.85	
CRG	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	1.55	
CRG	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	1.51	
CRG	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	1.45	
CRG	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.30	
CRG	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.10	
CRG	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.19	
CRG	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.86	
CRG	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	2.77	
CRG	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	4.16	
CRG	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	4.51	
CRG	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	4.94	
CRG	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	5.37	
CRG	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	5.11	
CRG	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	5.28	
CRG	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	5.14	
CRG	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	4.58	
CRG	8	Episode Day 2, 2006	3	CO (PPM)	1.73	NA	1.73	3.54	
CRG	8	Episode Day 2, 2006	4	CO (PPM)	1.57	NA	1.57	3.43	
CRG	8	Episode Day 2, 2006	5	CO (PPM)	1.45	NA	1.45	3.34	
CRG	8	Episode Day 2, 2006	6	CO (PPM)	1.34	NA	1.34	3.63	
CRG	8	Episode Day 2, 2006	7	CO (PPM)	1.32	NA	1.32	4.48	
CRG	8	Episode Day 2, 2006	8	CO (PPM)	1.18	NA	1.18	5.33	
CRG	8	Episode Day 2, 2006	9	CO (PPM)	1.01	NA	1.01	5.21	
CRG	8	Episode Day 2, 2006	10	CO (PPM)	0.93	NA	0.93	5.01	
CRG	8	Episode Day 2, 2006	11	CO (PPM)	0.93	NA	0.93	4.85	
CRG	8	Episode Day 2, 2006	12	CO (PPM)	0.99	NA	0.99	4.71	
CRG	8	Episode Day 2, 2006	13	CO (PPM)	1.06	NA	1.06	4.54	
CRG	8	Episode Day 2, 2006	14	CO (PPM)	1.13	NA	1.13	4.01	
CRG	8	Episode Day 2, 2006	15	CO (PPM)	1.13	NA	1.13	2.85	
CRG	8	Episode Day 2, 2006	16	CO (PPM)	1.49	NA	1.49	2.34	
CRG	8	Episode Day 2, 2006	17	CO (PPM)	2.02	NA	2.02	3.03	
CRG	8	Episode Day 2, 2006	18	CO (PPM)	2.60	NA	2.60	4.50	
CRG	8	Episode Day 2, 2006	19	CO (PPM)	3.15	NA	3.15	6.39	
CRG	8	Episode Day 2, 2006	20	CO (PPM)	3.57	NA	3.57	7.80	
CRG	8	Episode Day 2, 2006	21	CO (PPM)	3.85	NA	3.85	8.52	
CRG	8	Episode Day 2, 2006	22	CO (PPM)	4.02	NA	4.02	8.94	
CRG	8	Episode Day 2, 2006	23	CO (PPM)	4.05	NA	4.05	9.91	
CRG	8	Episode Day 3, 2006	0	CO (PPM)	3.76	NA	3.76	10.38	
CRG	8	Episode Day 3, 2006	1	CO (PPM)	3.30	NA	3.30	9.73	
CRG	8	Episode Day 3, 2006	2	CO (PPM)	2.76	NA	2.76	8.69	
CRG	8	Episode Day 3, 2006	3	CO (PPM)	2.19	NA	2.19	7.14	
CRG	8	Episode Day 3, 2006	4	CO (PPM)	1.71	NA	1.71	5.78	
CRG	8	Episode Day 3, 2006	5	CO (PPM)	1.38	NA	1.38	5.26	
CRG	8	Episode Day 3, 2006	6	CO (PPM)	1.21	NA	1.21	5.04	
CRG	8	Episode Day 3, 2006	7	CO (PPM)	1.30	NA	1.30	4.73	
CRG	8	Episode Day 3, 2006	8	CO (PPM)	1.27	NA	1.27	4.10	
CRG	8	Episode Day 3, 2006	9	CO (PPM)	1.24	NA	1.24	4.08	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
CRG	8	Episode Day 3, 2006	10	CO (PPM)	1.22	NA	1.22	3.59	
CRG	8	Episode Day 3, 2006	11	CO (PPM)	1.24	NA	1.24	3.54	
CRG	8	Episode Day 3, 2006	12	CO (PPM)	1.34	NA	1.34	3.37	
CRG	8	Episode Day 3, 2006	13	CO (PPM)	1.44	NA	1.44	3.00	
CRG	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	2.60	
CRG	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.74	
CRG	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.30	
CRG	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.71	
CRG	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	2.86	
CRG	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	4.05	
CRG	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	5.23	
CRG	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	6.16	
CRG	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	7.05	
CRG	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	8.00	
NJH	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	2.08	
NJH	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	2.04	
NJH	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	2.13	
NJH	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	2.21	
NJH	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	2.25	
NJH	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	2.10	
NJH	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	1.98	
NJH	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.74	
NJH	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.49	
NJH	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.60	
NJH	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	2.43	
NJH	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	2.66	
NJH	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	2.85	
NJH	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	3.08	
NJH	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	3.28	
NJH	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	3.46	
NJH	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	3.58	
NJH	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	3.50	
NJH	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	2.56	
NJH	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	2.21	
NJH	8	Episode Day 2, 2006	3	CO (PPM)	0.89	NA	0.89	1.96	
NJH	8	Episode Day 2, 2006	4	CO (PPM)	0.84	NA	0.84	1.73	
NJH	8	Episode Day 2, 2006	5	CO (PPM)	0.79	NA	0.79	1.60	
NJH	8	Episode Day 2, 2006	6	CO (PPM)	0.74	NA	0.74	1.71	
NJH	8	Episode Day 2, 2006	7	CO (PPM)	0.83	NA	0.83	2.26	
NJH	8	Episode Day 2, 2006	8	CO (PPM)	0.85	NA	0.85	2.74	
NJH	8	Episode Day 2, 2006	9	CO (PPM)	0.89	NA	0.89	2.97	
NJH	8	Episode Day 2, 2006	10	CO (PPM)	0.91	NA	0.91	3.17	
NJH	8	Episode Day 2, 2006	11	CO (PPM)	0.93	NA	0.93	3.29	
NJH	8	Episode Day 2, 2006	12	CO (PPM)	0.96	NA	0.96	3.42	
NJH	8	Episode Day 2, 2006	13	CO (PPM)	0.99	NA	0.99	3.56	
NJH	8	Episode Day 2, 2006	14	CO (PPM)	1.04	NA	1.04	3.55	
NJH	8	Episode Day 2, 2006	15	CO (PPM)	1.00	NA	1.00	3.32	
NJH	8	Episode Day 2, 2006	16	CO (PPM)	1.27	NA	1.27	5.03	
NJH	8	Episode Day 2, 2006	17	CO (PPM)	1.74	NA	1.74	7.49	
NJH	8	Episode Day 2, 2006	18	CO (PPM)	2.34	NA	2.34	9.60	
NJH	8	Episode Day 2, 2006	19	CO (PPM)	3.09	NA	3.09	10.43	
NJH	8	Episode Day 2, 2006	20	CO (PPM)	3.36	NA	3.36	10.95	
NJH	8	Episode Day 2, 2006	21	CO (PPM)	3.44	NA	3.44	11.16	
NJH	8	Episode Day 2, 2006	22	CO (PPM)	3.48	NA	3.48	11.27	
NJH	8	Episode Day 2, 2006	23	CO (PPM)	3.41	NA	3.41	11.10	
NJH	8	Episode Day 3, 2006	0	CO (PPM)	3.06	NA	3.06	8.92	
NJH	8	Episode Day 3, 2006	1	CO (PPM)	2.55	NA	2.55	6.21	
NJH	8	Episode Day 3, 2006	2	CO (PPM)	1.93	NA	1.93	3.91	
NJH	8	Episode Day 3, 2006	3	CO (PPM)	1.14	NA	1.14	2.94	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
NJH	8	Episode Day 3, 2006	4	CO (PPM)	0.83	NA	0.83	2.25	
NJH	8	Episode Day 3, 2006	5	CO (PPM)	0.72	NA	0.72	1.90	
NJH	8	Episode Day 3, 2006	6	CO (PPM)	0.64	NA	0.64	1.75	
NJH	8	Episode Day 3, 2006	7	CO (PPM)	0.76	NA	0.76	2.22	
NJH	8	Episode Day 3, 2006	8	CO (PPM)	0.83	NA	0.83	2.65	
NJH	8	Episode Day 3, 2006	9	CO (PPM)	0.89	NA	0.89	3.11	
NJH	8	Episode Day 3, 2006	10	CO (PPM)	0.94	NA	0.94	3.40	
NJH	8	Episode Day 3, 2006	11	CO (PPM)	1.00	NA	1.00	3.46	
NJH	8	Episode Day 3, 2006	12	CO (PPM)	1.09	NA	1.09	3.51	
NJH	8	Episode Day 3, 2006	13	CO (PPM)	1.20	NA	1.20	3.79	
NJH	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	3.46	
NJH	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	2.57	
NJH	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	2.39	
NJH	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	2.63	
NJH	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	2.84	
NJH	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	3.64	
NJH	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	4.27	
NJH	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	4.24	
NJH	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	4.61	
NJH	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	4.81	
TIV	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2006	3	CO (PPM)	1.40	NA	1.40	-9.00	
TIV	8	Episode Day 2, 2006	4	CO (PPM)	1.29	NA	1.29	-9.00	
TIV	8	Episode Day 2, 2006	5	CO (PPM)	1.21	NA	1.21	-9.00	
TIV	8	Episode Day 2, 2006	6	CO (PPM)	1.14	NA	1.14	-9.00	
TIV	8	Episode Day 2, 2006	7	CO (PPM)	1.25	NA	1.25	-9.00	
TIV	8	Episode Day 2, 2006	8	CO (PPM)	1.17	NA	1.17	-9.00	
TIV	8	Episode Day 2, 2006	9	CO (PPM)	1.08	NA	1.08	-9.00	
TIV	8	Episode Day 2, 2006	10	CO (PPM)	1.08	NA	1.08	-9.00	
TIV	8	Episode Day 2, 2006	11	CO (PPM)	1.14	NA	1.14	-9.00	
TIV	8	Episode Day 2, 2006	12	CO (PPM)	1.24	NA	1.24	-9.00	
TIV	8	Episode Day 2, 2006	13	CO (PPM)	1.35	NA	1.35	-9.00	
TIV	8	Episode Day 2, 2006	14	CO (PPM)	1.46	NA	1.46	-9.00	
TIV	8	Episode Day 2, 2006	15	CO (PPM)	1.48	NA	1.48	-9.00	
TIV	8	Episode Day 2, 2006	16	CO (PPM)	2.34	NA	2.34	-9.00	
TIV	8	Episode Day 2, 2006	17	CO (PPM)	3.88	NA	3.88	-9.00	
TIV	8	Episode Day 2, 2006	18	CO (PPM)	5.49	NA	5.49	-9.00	
TIV	8	Episode Day 2, 2006	19	CO (PPM)	6.39	NA	6.39	-9.00	
TIV	8	Episode Day 2, 2006	20	CO (PPM)	6.70	NA	6.70	-9.00	
TIV	8	Episode Day 2, 2006	21	CO (PPM)	6.88	NA	6.88	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
TIV	8	Episode Day 2, 2006	22	CO (PPM)	7.02	NA	7.02	-9.00	
TIV	8	Episode Day 2, 2006	23	CO (PPM)	7.01	NA	7.01	-9.00	
TIV	8	Episode Day 3, 2006	0	CO (PPM)	6.23	NA	6.23	-9.00	
TIV	8	Episode Day 3, 2006	1	CO (PPM)	4.74	NA	4.74	-9.00	
TIV	8	Episode Day 3, 2006	2	CO (PPM)	3.15	NA	3.15	-9.00	
TIV	8	Episode Day 3, 2006	3	CO (PPM)	2.19	NA	2.19	-9.00	
TIV	8	Episode Day 3, 2006	4	CO (PPM)	1.77	NA	1.77	-9.00	
TIV	8	Episode Day 3, 2006	5	CO (PPM)	1.53	NA	1.53	-9.00	
TIV	8	Episode Day 3, 2006	6	CO (PPM)	1.45	NA	1.45	-9.00	
TIV	8	Episode Day 3, 2006	7	CO (PPM)	1.71	NA	1.71	-9.00	
TIV	8	Episode Day 3, 2006	8	CO (PPM)	1.77	NA	1.77	-9.00	
TIV	8	Episode Day 3, 2006	9	CO (PPM)	1.87	NA	1.87	-9.00	
TIV	8	Episode Day 3, 2006	10	CO (PPM)	1.93	NA	1.93	-9.00	
TIV	8	Episode Day 3, 2006	11	CO (PPM)	2.00	NA	2.00	-9.00	
TIV	8	Episode Day 3, 2006	12	CO (PPM)	2.20	NA	2.20	-9.00	
TIV	8	Episode Day 3, 2006	13	CO (PPM)	2.38	NA	2.38	-9.00	
TIV	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2006	3	CO (PPM)	1.43	NA	1.43	-9.00	
ICMP	8	Episode Day 2, 2006	4	CO (PPM)	1.33	NA	1.33	-9.00	
ICMP	8	Episode Day 2, 2006	5	CO (PPM)	1.26	NA	1.26	-9.00	
ICMP	8	Episode Day 2, 2006	6	CO (PPM)	1.21	NA	1.21	-9.00	
ICMP	8	Episode Day 2, 2006	7	CO (PPM)	1.34	NA	1.34	-9.00	
ICMP	8	Episode Day 2, 2006	8	CO (PPM)	1.28	NA	1.28	-9.00	
ICMP	8	Episode Day 2, 2006	9	CO (PPM)	1.21	NA	1.21	-9.00	
ICMP	8	Episode Day 2, 2006	10	CO (PPM)	1.22	NA	1.22	-9.00	
ICMP	8	Episode Day 2, 2006	11	CO (PPM)	1.27	NA	1.27	-9.00	
ICMP	8	Episode Day 2, 2006	12	CO (PPM)	1.34	NA	1.34	-9.00	
ICMP	8	Episode Day 2, 2006	13	CO (PPM)	1.42	NA	1.42	-9.00	
ICMP	8	Episode Day 2, 2006	14	CO (PPM)	1.54	NA	1.74	-9.00	
ICMP	8	Episode Day 2, 2006	15	CO (PPM)	1.54	NA	1.92	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
PERIOD									
ICMP	8	Episode Day 2, 2006	16	CO (PPM)	2.37	NA	3.09	-9.00	
ICMP	8	Episode Day 2, 2006	17	CO (PPM)	3.85	NA	4.90	-9.00	
ICMP	8	Episode Day 2, 2006	18	CO (PPM)	5.48	NA	6.66	-9.00	
ICMP	8	Episode Day 2, 2006	19	CO (PPM)	6.71	NA	7.93	-9.00	
ICMP	8	Episode Day 2, 2006	20	CO (PPM)	7.12	NA	8.39	-9.00	
ICMP	8	Episode Day 2, 2006	21	CO (PPM)	7.37	NA	8.64	-9.00	
ICMP	8	Episode Day 2, 2006	22	CO (PPM)	7.59	NA	8.71	-9.00	
ICMP	8	Episode Day 2, 2006	23	CO (PPM)	7.64	NA	8.61	-9.00	
ICMP	8	Episode Day 3, 2006	0	CO (PPM)	6.90	NA	7.52	-9.00	
ICMP	8	Episode Day 3, 2006	1	CO (PPM)	5.48	NA	5.77	-9.00	
ICMP	8	Episode Day 3, 2006	2	CO (PPM)	3.85	NA	4.01	-9.00	
ICMP	8	Episode Day 3, 2006	3	CO (PPM)	2.55	NA	2.66	-9.00	
ICMP	8	Episode Day 3, 2006	4	CO (PPM)	2.05	NA	2.12	-9.00	
ICMP	8	Episode Day 3, 2006	5	CO (PPM)	1.76	NA	1.84	-9.00	
ICMP	8	Episode Day 3, 2006	6	CO (PPM)	1.58	NA	1.60	-9.00	
ICMP	8	Episode Day 3, 2006	7	CO (PPM)	1.73	NA	1.73	-9.00	
ICMP	8	Episode Day 3, 2006	8	CO (PPM)	1.75	NA	1.75	-9.00	
ICMP	8	Episode Day 3, 2006	9	CO (PPM)	1.85	NA	1.85	-9.00	
ICMP	8	Episode Day 3, 2006	10	CO (PPM)	2.00	NA	2.00	-9.00	
ICMP	8	Episode Day 3, 2006	11	CO (PPM)	2.11	NA	2.11	-9.00	
ICMP	8	Episode Day 3, 2006	12	CO (PPM)	2.32	NA	2.32	-9.00	
ICMP	8	Episode Day 3, 2006	13	CO (PPM)	2.52	NA	2.52	-9.00	
ICMP	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ENG	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	1.50	
ENG	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	1.54	
ENG	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	1.54	
ENG	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	1.46	
ENG	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	1.32	
ENG	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	1.19	
ENG	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	1.05	
ENG	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	0.90	
ENG	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	0.76	
ENG	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	0.79	
ENG	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.21	
ENG	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	1.42	
ENG	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	1.52	
ENG	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	1.60	
ENG	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	1.67	
ENG	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	1.80	
ENG	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	1.86	
ENG	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	1.76	
ENG	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	1.30	
ENG	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	1.06	
ENG	8	Episode Day 2, 2006	3	CO (PPM)	0.41	NA	0.41	0.96	
ENG	8	Episode Day 2, 2006	4	CO (PPM)	0.39	NA	0.39	0.88	
ENG	8	Episode Day 2, 2006	5	CO (PPM)	0.38	NA	0.38	0.88	
ENG	8	Episode Day 2, 2006	6	CO (PPM)	0.35	NA	0.35	0.96	
ENG	8	Episode Day 2, 2006	7	CO (PPM)	0.42	NA	0.42	1.40	
ENG	8	Episode Day 2, 2006	8	CO (PPM)	0.45	NA	0.45	1.82	
ENG	8	Episode Day 2, 2006	9	CO (PPM)	0.46	NA	0.46	1.89	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
ENG	8	Episode Day 2, 2006	10	CO (PPM)	0.46	NA	0.46	1.91	
ENG	8	Episode Day 2, 2006	11	CO (PPM)	0.47	NA	0.47	1.94	
ENG	8	Episode Day 2, 2006	12	CO (PPM)	0.50	NA	0.50	1.97	
ENG	8	Episode Day 2, 2006	13	CO (PPM)	0.54	NA	0.54	1.96	
ENG	8	Episode Day 2, 2006	14	CO (PPM)	0.59	NA	0.59	1.85	
ENG	8	Episode Day 2, 2006	15	CO (PPM)	0.65	NA	0.65	1.63	
ENG	8	Episode Day 2, 2006	16	CO (PPM)	1.06	NA	1.06	1.89	
ENG	8	Episode Day 2, 2006	17	CO (PPM)	1.49	NA	1.49	2.91	
ENG	8	Episode Day 2, 2006	18	CO (PPM)	1.63	NA	1.63	3.22	
ENG	8	Episode Day 2, 2006	19	CO (PPM)	1.67	NA	1.67	3.38	
ENG	8	Episode Day 2, 2006	20	CO (PPM)	1.66	NA	1.66	3.47	
ENG	8	Episode Day 2, 2006	21	CO (PPM)	1.64	NA	1.64	3.56	
ENG	8	Episode Day 2, 2006	22	CO (PPM)	1.59	NA	1.59	3.66	
ENG	8	Episode Day 2, 2006	23	CO (PPM)	1.45	NA	1.45	3.50	
ENG	8	Episode Day 3, 2006	0	CO (PPM)	1.01	NA	1.01	2.91	
ENG	8	Episode Day 3, 2006	1	CO (PPM)	0.58	NA	0.58	1.86	
ENG	8	Episode Day 3, 2006	2	CO (PPM)	0.44	NA	0.44	1.54	
ENG	8	Episode Day 3, 2006	3	CO (PPM)	0.38	NA	0.38	1.36	
ENG	8	Episode Day 3, 2006	4	CO (PPM)	0.36	NA	0.36	1.22	
ENG	8	Episode Day 3, 2006	5	CO (PPM)	0.34	NA	0.34	1.09	
ENG	8	Episode Day 3, 2006	6	CO (PPM)	0.33	NA	0.33	1.02	
ENG	8	Episode Day 3, 2006	7	CO (PPM)	0.44	NA	0.44	1.26	
ENG	8	Episode Day 3, 2006	8	CO (PPM)	0.47	NA	0.47	1.23	
ENG	8	Episode Day 3, 2006	9	CO (PPM)	0.50	NA	0.50	1.49	
ENG	8	Episode Day 3, 2006	10	CO (PPM)	0.54	NA	0.54	1.69	
ENG	8	Episode Day 3, 2006	11	CO (PPM)	0.60	NA	0.60	1.70	
ENG	8	Episode Day 3, 2006	12	CO (PPM)	0.64	NA	0.64	1.71	
ENG	8	Episode Day 3, 2006	13	CO (PPM)	0.70	NA	0.70	1.70	
ENG	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.53	
ENG	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.11	
ENG	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.17	
ENG	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.30	
ENG	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	1.59	
ENG	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	1.89	
ENG	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	2.07	
ENG	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	2.17	
ENG	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	2.24	
ENG	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	2.35	
BOU	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	0.68	
BOU	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	0.85	
BOU	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	1.19	
BOU	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	1.43	
BOU	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	1.39	
BOU	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.28	
BOU	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	0.99	
BOU	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	0.83	
BOU	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	0.70	
BOU	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	0.61	
BOU	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	0.54	
BOU	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	0.46	
BOU	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	0.34	
BOU	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	0.21	
BOU	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	0.19	
BOU	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	0.16	
BOU	8	Episode Day 2, 2006	3	CO (PPM)	0.39	NA	0.39	0.16	

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High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
BOU	8	Episode Day 2, 2006	4	CO (PPM)	0.37	NA	0.37	0.20	
BOU	8	Episode Day 2, 2006	5	CO (PPM)	0.36	NA	0.36	0.28	
BOU	8	Episode Day 2, 2006	6	CO (PPM)	0.30	NA	0.30	0.40	
BOU	8	Episode Day 2, 2006	7	CO (PPM)	0.36	NA	0.36	0.66	
BOU	8	Episode Day 2, 2006	8	CO (PPM)	0.38	NA	0.38	0.91	
BOU	8	Episode Day 2, 2006	9	CO (PPM)	0.41	NA	0.41	1.41	
BOU	8	Episode Day 2, 2006	10	CO (PPM)	0.47	NA	0.47	1.76	
BOU	8	Episode Day 2, 2006	11	CO (PPM)	0.52	NA	0.52	1.91	
BOU	8	Episode Day 2, 2006	12	CO (PPM)	0.57	NA	0.57	2.05	
BOU	8	Episode Day 2, 2006	13	CO (PPM)	0.60	NA	0.60	2.13	
BOU	8	Episode Day 2, 2006	14	CO (PPM)	0.63	NA	0.63	2.13	
BOU	8	Episode Day 2, 2006	15	CO (PPM)	0.71	NA	0.71	2.04	
BOU	8	Episode Day 2, 2006	16	CO (PPM)	0.80	NA	0.80	2.01	
BOU	8	Episode Day 2, 2006	17	CO (PPM)	0.82	NA	0.82	1.65	
BOU	8	Episode Day 2, 2006	18	CO (PPM)	0.80	NA	0.80	1.42	
BOU	8	Episode Day 2, 2006	19	CO (PPM)	0.79	NA	0.79	2.07	
BOU	8	Episode Day 2, 2006	20	CO (PPM)	0.76	NA	0.76	2.10	
BOU	8	Episode Day 2, 2006	21	CO (PPM)	0.73	NA	0.73	2.11	
BOU	8	Episode Day 2, 2006	22	CO (PPM)	0.67	NA	0.67	2.06	
BOU	8	Episode Day 2, 2006	23	CO (PPM)	0.52	NA	0.52	1.88	
BOU	8	Episode Day 3, 2006	0	CO (PPM)	0.41	NA	0.41	1.63	
BOU	8	Episode Day 3, 2006	1	CO (PPM)	0.36	NA	0.36	1.46	
BOU	8	Episode Day 3, 2006	2	CO (PPM)	0.32	NA	0.32	1.32	
BOU	8	Episode Day 3, 2006	3	CO (PPM)	0.29	NA	0.29	0.51	
BOU	8	Episode Day 3, 2006	4	CO (PPM)	0.27	NA	0.27	0.32	
BOU	8	Episode Day 3, 2006	5	CO (PPM)	0.25	NA	0.25	0.21	
BOU	8	Episode Day 3, 2006	6	CO (PPM)	0.27	NA	0.27	0.21	
BOU	8	Episode Day 3, 2006	7	CO (PPM)	0.36	NA	0.36	0.66	
BOU	8	Episode Day 3, 2006	8	CO (PPM)	0.38	NA	0.38	0.95	
BOU	8	Episode Day 3, 2006	9	CO (PPM)	0.40	NA	0.40	1.31	
BOU	8	Episode Day 3, 2006	10	CO (PPM)	0.41	NA	0.41	1.40	
BOU	8	Episode Day 3, 2006	11	CO (PPM)	0.43	NA	0.43	1.51	
BOU	8	Episode Day 3, 2006	12	CO (PPM)	0.45	NA	0.45	1.61	
BOU	8	Episode Day 3, 2006	13	CO (PPM)	0.49	NA	0.49	1.72	
BOU	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.75	
BOU	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.49	
BOU	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.32	
BOU	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	1.27	
BOU	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	1.26	
BOU	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	1.26	
GRDS	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	2.00	
GRDS	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	2.25	
GRDS	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	2.75	
GRDS	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	3.00	
GRDS	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	3.13	
GRDS	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	3.00	
GRDS	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	2.75	
GRDS	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	2.25	
GRDS	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	2.13	
GRDS	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	2.00	
GRDS	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	2.00	

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High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
GRDS	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	2.38	
GRDS	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	2.35	
GRDS	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	2.04	
GRDS	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	1.87	
GRDS	8	Episode Day 2, 2006	3	CO (PPM)	0.46	NA	0.46	1.74	
GRDS	8	Episode Day 2, 2006	4	CO (PPM)	0.43	NA	0.43	1.62	
GRDS	8	Episode Day 2, 2006	5	CO (PPM)	0.42	NA	0.42	1.56	
GRDS	8	Episode Day 2, 2006	6	CO (PPM)	0.33	NA	0.33	1.72	
GRDS	8	Episode Day 2, 2006	7	CO (PPM)	0.41	NA	0.41	3.39	
GRDS	8	Episode Day 2, 2006	8	CO (PPM)	0.44	NA	0.44	5.36	
GRDS	8	Episode Day 2, 2006	9	CO (PPM)	0.49	NA	0.49	6.06	
GRDS	8	Episode Day 2, 2006	10	CO (PPM)	0.55	NA	0.55	6.22	
GRDS	8	Episode Day 2, 2006	11	CO (PPM)	0.61	NA	0.61	6.34	
GRDS	8	Episode Day 2, 2006	12	CO (PPM)	0.66	NA	0.66	6.42	
GRDS	8	Episode Day 2, 2006	13	CO (PPM)	0.69	NA	0.69	7.13	
GRDS	8	Episode Day 2, 2006	14	CO (PPM)	0.72	NA	0.72	6.71	
GRDS	8	Episode Day 2, 2006	15	CO (PPM)	0.77	NA	0.77	4.89	
GRDS	8	Episode Day 2, 2006	16	CO (PPM)	0.90	NA	0.90	3.19	
GRDS	8	Episode Day 2, 2006	17	CO (PPM)	0.93	NA	0.93	3.74	
GRDS	8	Episode Day 2, 2006	18	CO (PPM)	0.91	NA	0.91	5.34	
GRDS	8	Episode Day 2, 2006	19	CO (PPM)	0.90	NA	0.90	7.09	
GRDS	8	Episode Day 2, 2006	20	CO (PPM)	0.88	NA	0.88	8.34	
GRDS	8	Episode Day 2, 2006	21	CO (PPM)	0.86	NA	0.86	8.21	
GRDS	8	Episode Day 2, 2006	22	CO (PPM)	0.80	NA	0.80	8.32	
GRDS	8	Episode Day 2, 2006	23	CO (PPM)	0.64	NA	0.64	8.18	
GRDS	8	Episode Day 3, 2006	0	CO (PPM)	0.48	NA	0.48	7.71	
GRDS	8	Episode Day 3, 2006	1	CO (PPM)	0.40	NA	0.40	6.46	
GRDS	8	Episode Day 3, 2006	2	CO (PPM)	0.36	NA	0.36	4.81	
GRDS	8	Episode Day 3, 2006	3	CO (PPM)	0.31	NA	0.31	3.06	
GRDS	8	Episode Day 3, 2006	4	CO (PPM)	0.28	NA	0.28	1.74	
GRDS	8	Episode Day 3, 2006	5	CO (PPM)	0.26	NA	0.26	0.95	
GRDS	8	Episode Day 3, 2006	6	CO (PPM)	0.27	NA	0.27	0.79	
GRDS	8	Episode Day 3, 2006	7	CO (PPM)	0.37	NA	0.37	1.62	
GRDS	8	Episode Day 3, 2006	8	CO (PPM)	0.41	NA	0.41	2.50	
GRDS	8	Episode Day 3, 2006	9	CO (PPM)	0.44	NA	0.44	3.00	
GRDS	8	Episode Day 3, 2006	10	CO (PPM)	0.45	NA	0.45	3.13	
GRDS	8	Episode Day 3, 2006	11	CO (PPM)	0.46	NA	0.46	3.25	
GRDS	8	Episode Day 3, 2006	12	CO (PPM)	0.49	NA	0.49	3.38	
GRDS	8	Episode Day 3, 2006	13	CO (PPM)	0.54	NA	0.54	3.50	
GRDS	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	3.38	
GRDS	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	2.38	
GRDS	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	2.13	
GRDS	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	2.88	
GRDS	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	3.88	
GRDS	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	4.50	
GRDS	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	4.88	
GRDS	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	5.25	
ARV	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	2.01	
ARV	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	2.20	
ARV	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	2.04	
ARV	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	1.94	
ARV	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	1.98	
ARV	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	2.05	
ARV	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	2.05	
ARV	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.98	
ARV	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.83	

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SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
ARV	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.58	
ARV	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.80	
ARV	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	2.05	
ARV	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	2.30	
ARV	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	2.68	
ARV	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	3.36	
ARV	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	3.91	
ARV	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	4.05	
ARV	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	3.99	
ARV	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	3.68	
ARV	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	3.40	
ARV	8	Episode Day 2, 2006	3	CO (PPM)	1.43	NA	1.43	3.09	
ARV	8	Episode Day 2, 2006	4	CO (PPM)	1.28	NA	1.28	2.68	
ARV	8	Episode Day 2, 2006	5	CO (PPM)	1.16	NA	1.16	2.09	
ARV	8	Episode Day 2, 2006	6	CO (PPM)	0.88	NA	0.88	1.89	
ARV	8	Episode Day 2, 2006	7	CO (PPM)	0.68	NA	0.68	2.79	
ARV	8	Episode Day 2, 2006	8	CO (PPM)	0.61	NA	0.61	3.95	
ARV	8	Episode Day 2, 2006	9	CO (PPM)	0.62	NA	0.62	4.61	
ARV	8	Episode Day 2, 2006	10	CO (PPM)	0.60	NA	0.60	4.98	
ARV	8	Episode Day 2, 2006	11	CO (PPM)	0.63	NA	0.63	5.08	
ARV	8	Episode Day 2, 2006	12	CO (PPM)	0.70	NA	0.70	5.14	
ARV	8	Episode Day 2, 2006	13	CO (PPM)	0.79	NA	0.79	5.11	
ARV	8	Episode Day 2, 2006	14	CO (PPM)	0.88	NA	0.88	4.85	
ARV	8	Episode Day 2, 2006	15	CO (PPM)	0.97	NA	0.97	3.98	
ARV	8	Episode Day 2, 2006	16	CO (PPM)	1.27	NA	1.27	3.25	
ARV	8	Episode Day 2, 2006	17	CO (PPM)	1.46	NA	1.46	3.21	
ARV	8	Episode Day 2, 2006	18	CO (PPM)	1.50	NA	1.50	3.44	
ARV	8	Episode Day 2, 2006	19	CO (PPM)	1.46	NA	1.46	3.91	
ARV	8	Episode Day 2, 2006	20	CO (PPM)	1.40	NA	1.40	4.34	
ARV	8	Episode Day 2, 2006	21	CO (PPM)	1.33	NA	1.33	4.65	
ARV	8	Episode Day 2, 2006	22	CO (PPM)	1.24	NA	1.24	4.84	
ARV	8	Episode Day 2, 2006	23	CO (PPM)	1.09	NA	1.09	4.80	
ARV	8	Episode Day 3, 2006	0	CO (PPM)	0.76	NA	0.76	4.34	
ARV	8	Episode Day 3, 2006	1	CO (PPM)	0.51	NA	0.51	3.70	
ARV	8	Episode Day 3, 2006	2	CO (PPM)	0.42	NA	0.42	3.06	
ARV	8	Episode Day 3, 2006	3	CO (PPM)	0.38	NA	0.38	2.43	
ARV	8	Episode Day 3, 2006	4	CO (PPM)	0.35	NA	0.35	1.86	
ARV	8	Episode Day 3, 2006	5	CO (PPM)	0.33	NA	0.33	1.49	
ARV	8	Episode Day 3, 2006	6	CO (PPM)	0.34	NA	0.34	1.45	
ARV	8	Episode Day 3, 2006	7	CO (PPM)	0.47	NA	0.47	2.19	
ARV	8	Episode Day 3, 2006	8	CO (PPM)	0.52	NA	0.52	2.91	
ARV	8	Episode Day 3, 2006	9	CO (PPM)	0.58	NA	0.58	3.33	
ARV	8	Episode Day 3, 2006	10	CO (PPM)	0.63	NA	0.63	3.64	
ARV	8	Episode Day 3, 2006	11	CO (PPM)	0.69	NA	0.69	3.66	
ARV	8	Episode Day 3, 2006	12	CO (PPM)	0.75	NA	0.75	3.71	
ARV	8	Episode Day 3, 2006	13	CO (PPM)	0.83	NA	0.83	3.70	
ARV	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	3.41	
ARV	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	2.39	
ARV	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.69	
ARV	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.83	
ARV	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	2.25	
ARV	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	2.72	
ARV	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	3.09	
ARV	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	3.46	
ARV	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	3.89	
ARV	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	4.01	
HLD	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	0.75	
HLD	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	0.71	
HLD	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	0.66	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	0.62	
HLD	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	0.57	
HLD	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	0.52	
HLD	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	0.37	
HLD	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	0.19	
HLD	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	0.11	
HLD	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	0.14	
HLD	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	0.16	
HLD	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	0.19	
HLD	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	0.21	
HLD	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	0.24	
HLD	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	0.26	
HLD	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	0.30	
HLD	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	0.31	
HLD	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	0.27	
HLD	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	0.25	
HLD	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	0.21	
HLD	8	Episode Day 2, 2006	3	CO (PPM)	0.23	NA	0.23	0.20	
HLD	8	Episode Day 2, 2006	4	CO (PPM)	0.23	NA	0.23	0.19	
HLD	8	Episode Day 2, 2006	5	CO (PPM)	0.23	NA	0.23	0.17	
HLD	8	Episode Day 2, 2006	6	CO (PPM)	0.23	NA	0.23	0.15	
HLD	8	Episode Day 2, 2006	7	CO (PPM)	0.25	NA	0.25	0.14	
HLD	8	Episode Day 2, 2006	8	CO (PPM)	0.25	NA	0.25	0.11	
HLD	8	Episode Day 2, 2006	9	CO (PPM)	0.26	NA	0.26	0.09	
HLD	8	Episode Day 2, 2006	10	CO (PPM)	0.26	NA	0.26	0.07	
HLD	8	Episode Day 2, 2006	11	CO (PPM)	0.26	NA	0.26	0.05	
HLD	8	Episode Day 2, 2006	12	CO (PPM)	0.28	NA	0.28	0.04	
HLD	8	Episode Day 2, 2006	13	CO (PPM)	0.31	NA	0.31	0.02	
HLD	8	Episode Day 2, 2006	14	CO (PPM)	0.36	NA	0.36	0.01	
HLD	8	Episode Day 2, 2006	15	CO (PPM)	0.44	NA	0.44	0.09	
HLD	8	Episode Day 2, 2006	16	CO (PPM)	0.72	NA	0.72	0.59	
HLD	8	Episode Day 2, 2006	17	CO (PPM)	1.09	NA	1.09	1.14	
HLD	8	Episode Day 2, 2006	18	CO (PPM)	1.20	NA	1.20	1.34	
HLD	8	Episode Day 2, 2006	19	CO (PPM)	1.21	NA	1.21	1.42	
HLD	8	Episode Day 2, 2006	20	CO (PPM)	1.20	NA	1.20	1.49	
HLD	8	Episode Day 2, 2006	21	CO (PPM)	1.18	NA	1.18	1.52	
HLD	8	Episode Day 2, 2006	22	CO (PPM)	1.13	NA	1.13	1.56	
HLD	8	Episode Day 2, 2006	23	CO (PPM)	1.03	NA	1.03	1.52	
HLD	8	Episode Day 3, 2006	0	CO (PPM)	0.74	NA	0.74	1.07	
HLD	8	Episode Day 3, 2006	1	CO (PPM)	0.38	NA	0.38	0.57	
HLD	8	Episode Day 3, 2006	2	CO (PPM)	0.27	NA	0.27	0.44	
HLD	8	Episode Day 3, 2006	3	CO (PPM)	0.25	NA	0.25	0.41	
HLD	8	Episode Day 3, 2006	4	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2006	5	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2006	6	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2006	7	CO (PPM)	0.33	NA	0.33	0.59	
HLD	8	Episode Day 3, 2006	8	CO (PPM)	0.38	NA	0.38	0.79	
HLD	8	Episode Day 3, 2006	9	CO (PPM)	0.44	NA	0.44	0.87	
HLD	8	Episode Day 3, 2006	10	CO (PPM)	0.47	NA	0.47	0.81	
HLD	8	Episode Day 3, 2006	11	CO (PPM)	0.49	NA	0.49	0.75	
HLD	8	Episode Day 3, 2006	12	CO (PPM)	0.53	NA	0.53	0.70	
HLD	8	Episode Day 3, 2006	13	CO (PPM)	0.58	NA	0.58	0.66	
HLD	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	0.62	
HLD	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	0.39	
HLD	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	0.22	
HLD	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	0.17	
HLD	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	0.20	
HLD	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	0.22	
HLD	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	0.32	
HLD	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	0.36	
HLD	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	0.41	
HLD	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	0.64	
AUR	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
PERIOD									
AUR	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2006	3	CO (PPM)	0.56	NA	0.56	-9.00	
AUR	8	Episode Day 2, 2006	4	CO (PPM)	0.53	NA	0.53	-9.00	
AUR	8	Episode Day 2, 2006	5	CO (PPM)	0.51	NA	0.51	-9.00	
AUR	8	Episode Day 2, 2006	6	CO (PPM)	0.48	NA	0.48	-9.00	
AUR	8	Episode Day 2, 2006	7	CO (PPM)	0.54	NA	0.54	-9.00	
AUR	8	Episode Day 2, 2006	8	CO (PPM)	0.57	NA	0.57	-9.00	
AUR	8	Episode Day 2, 2006	9	CO (PPM)	0.60	NA	0.60	-9.00	
AUR	8	Episode Day 2, 2006	10	CO (PPM)	0.60	NA	0.60	-9.00	
AUR	8	Episode Day 2, 2006	11	CO (PPM)	0.62	NA	0.62	-9.00	
AUR	8	Episode Day 2, 2006	12	CO (PPM)	0.63	NA	0.63	-9.00	
AUR	8	Episode Day 2, 2006	13	CO (PPM)	0.65	NA	0.65	-9.00	
AUR	8	Episode Day 2, 2006	14	CO (PPM)	0.68	NA	0.68	-9.00	
AUR	8	Episode Day 2, 2006	15	CO (PPM)	0.68	NA	0.68	-9.00	
AUR	8	Episode Day 2, 2006	16	CO (PPM)	0.87	NA	0.87	-9.00	
AUR	8	Episode Day 2, 2006	17	CO (PPM)	1.17	NA	1.17	-9.00	
AUR	8	Episode Day 2, 2006	18	CO (PPM)	1.54	NA	1.54	-9.00	
AUR	8	Episode Day 2, 2006	19	CO (PPM)	2.02	NA	2.02	-9.00	
AUR	8	Episode Day 2, 2006	20	CO (PPM)	2.47	NA	2.47	-9.00	
AUR	8	Episode Day 2, 2006	21	CO (PPM)	2.56	NA	2.56	-9.00	
AUR	8	Episode Day 2, 2006	22	CO (PPM)	2.59	NA	2.59	-9.00	
AUR	8	Episode Day 2, 2006	23	CO (PPM)	2.52	NA	2.52	-9.00	
AUR	8	Episode Day 3, 2006	0	CO (PPM)	2.28	NA	2.28	-9.00	
AUR	8	Episode Day 3, 2006	1	CO (PPM)	1.94	NA	1.94	-9.00	
AUR	8	Episode Day 3, 2006	2	CO (PPM)	1.56	NA	1.56	-9.00	
AUR	8	Episode Day 3, 2006	3	CO (PPM)	1.07	NA	1.07	-9.00	
AUR	8	Episode Day 3, 2006	4	CO (PPM)	0.59	NA	0.59	-9.00	
AUR	8	Episode Day 3, 2006	5	CO (PPM)	0.47	NA	0.47	-9.00	
AUR	8	Episode Day 3, 2006	6	CO (PPM)	0.41	NA	0.41	-9.00	
AUR	8	Episode Day 3, 2006	7	CO (PPM)	0.46	NA	0.46	-9.00	
AUR	8	Episode Day 3, 2006	8	CO (PPM)	0.48	NA	0.48	-9.00	
AUR	8	Episode Day 3, 2006	9	CO (PPM)	0.51	NA	0.51	-9.00	
AUR	8	Episode Day 3, 2006	10	CO (PPM)	0.54	NA	0.54	-9.00	
AUR	8	Episode Day 3, 2006	11	CO (PPM)	0.57	NA	0.57	-9.00	
AUR	8	Episode Day 3, 2006	12	CO (PPM)	0.62	NA	0.62	-9.00	
AUR	8	Episode Day 3, 2006	13	CO (PPM)	0.67	NA	0.67	-9.00	
AUR	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED (UAM)	PREDICTED (CAL3QHC)	PREDICTED (UAM+CAL3)	1988 OBSERVED	
AUR	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
AURS	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	1.00	
AURS	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	1.09	
AURS	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	1.21	
AURS	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	1.32	
AURS	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	1.46	
AURS	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	1.51	
AURS	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	1.54	
AURS	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	1.31	
AURS	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.10	
AURS	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.07	
AURS	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.34	
AURS	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	1.36	
AURS	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	1.34	
AURS	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	1.35	
AURS	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	1.34	
AURS	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	1.38	
AURS	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	1.42	
AURS	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	1.38	
AURS	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	0.98	
AURS	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	0.81	
AURS	8	Episode Day 2, 2006	3	CO (PPM)	0.39	NA	0.39	0.69	
AURS	8	Episode Day 2, 2006	4	CO (PPM)	0.37	NA	0.37	0.61	
AURS	8	Episode Day 2, 2006	5	CO (PPM)	0.37	NA	0.37	0.63	
AURS	8	Episode Day 2, 2006	6	CO (PPM)	0.36	NA	0.36	0.85	
AURS	8	Episode Day 2, 2006	7	CO (PPM)	0.44	NA	0.44	1.23	
AURS	8	Episode Day 2, 2006	8	CO (PPM)	0.48	NA	0.48	1.46	
AURS	8	Episode Day 2, 2006	9	CO (PPM)	0.48	NA	0.48	1.69	
AURS	8	Episode Day 2, 2006	10	CO (PPM)	0.49	NA	0.49	1.91	
AURS	8	Episode Day 2, 2006	11	CO (PPM)	0.50	NA	0.50	2.21	
AURS	8	Episode Day 2, 2006	12	CO (PPM)	0.53	NA	0.53	2.46	
AURS	8	Episode Day 2, 2006	13	CO (PPM)	0.56	NA	0.56	2.66	
AURS	8	Episode Day 2, 2006	14	CO (PPM)	0.60	NA	0.60	2.53	
AURS	8	Episode Day 2, 2006	15	CO (PPM)	0.63	NA	0.63	2.36	
AURS	8	Episode Day 2, 2006	16	CO (PPM)	1.00	NA	1.00	2.69	
AURS	8	Episode Day 2, 2006	17	CO (PPM)	1.69	NA	1.69	3.80	
AURS	8	Episode Day 2, 2006	18	CO (PPM)	2.45	NA	2.45	4.24	
AURS	8	Episode Day 2, 2006	19	CO (PPM)	2.90	NA	2.90	4.28	
AURS	8	Episode Day 2, 2006	20	CO (PPM)	2.95	NA	2.95	4.26	
AURS	8	Episode Day 2, 2006	21	CO (PPM)	2.95	NA	2.95	4.18	
AURS	8	Episode Day 2, 2006	22	CO (PPM)	2.92	NA	2.92	4.18	
AURS	8	Episode Day 2, 2006	23	CO (PPM)	2.80	NA	2.80	4.01	
AURS	8	Episode Day 3, 2006	0	CO (PPM)	2.39	NA	2.39	3.45	
AURS	8	Episode Day 3, 2006	1	CO (PPM)	1.70	NA	1.70	2.11	
AURS	8	Episode Day 3, 2006	2	CO (PPM)	0.93	NA	0.93	1.48	
AURS	8	Episode Day 3, 2006	3	CO (PPM)	0.47	NA	0.47	1.16	
AURS	8	Episode Day 3, 2006	4	CO (PPM)	0.39	NA	0.39	0.98	
AURS	8	Episode Day 3, 2006	5	CO (PPM)	0.35	NA	0.35	0.90	
AURS	8	Episode Day 3, 2006	6	CO (PPM)	0.34	NA	0.34	1.36	
AURS	8	Episode Day 3, 2006	7	CO (PPM)	0.42	NA	0.42	2.06	
AURS	8	Episode Day 3, 2006	8	CO (PPM)	0.44	NA	0.44	2.59	
AURS	8	Episode Day 3, 2006	9	CO (PPM)	0.47	NA	0.47	2.94	
AURS	8	Episode Day 3, 2006	10	CO (PPM)	0.50	NA	0.50	2.99	
AURS	8	Episode Day 3, 2006	11	CO (PPM)	0.52	NA	0.52	3.04	
AURS	8	Episode Day 3, 2006	12	CO (PPM)	0.56	NA	0.56	3.04	
AURS	8	Episode Day 3, 2006	13	CO (PPM)	0.60	NA	0.60	2.99	
AURS	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	2.41	
AURS	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	1.65	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
AURS	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	1.25	
AURS	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	1.26	
AURS	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	1.64	
AURS	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	1.86	
AURS	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	2.15	
AURS	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	2.36	
AURS	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	2.45	
AURS	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	2.49	
PLM	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2006	3	CO (PPM)	0.74	NA	0.74	-9.00	
PLM	8	Episode Day 2, 2006	4	CO (PPM)	0.69	NA	0.69	-9.00	
PLM	8	Episode Day 2, 2006	5	CO (PPM)	0.66	NA	0.66	-9.00	
PLM	8	Episode Day 2, 2006	6	CO (PPM)	0.60	NA	0.60	-9.00	
PLM	8	Episode Day 2, 2006	7	CO (PPM)	0.67	NA	0.67	-9.00	
PLM	8	Episode Day 2, 2006	8	CO (PPM)	0.71	NA	0.71	-9.00	
PLM	8	Episode Day 2, 2006	9	CO (PPM)	0.75	NA	0.75	-9.00	
PLM	8	Episode Day 2, 2006	10	CO (PPM)	0.77	NA	0.77	-9.00	
PLM	8	Episode Day 2, 2006	11	CO (PPM)	0.78	NA	0.78	-9.00	
PLM	8	Episode Day 2, 2006	12	CO (PPM)	0.81	NA	0.81	-9.00	
PLM	8	Episode Day 2, 2006	13	CO (PPM)	0.84	NA	0.84	-9.00	
PLM	8	Episode Day 2, 2006	14	CO (PPM)	0.88	NA	0.88	-9.00	
PLM	8	Episode Day 2, 2006	15	CO (PPM)	0.86	NA	0.86	-9.00	
PLM	8	Episode Day 2, 2006	16	CO (PPM)	1.12	NA	1.12	-9.00	
PLM	8	Episode Day 2, 2006	17	CO (PPM)	1.54	NA	1.54	-9.00	
PLM	8	Episode Day 2, 2006	18	CO (PPM)	2.09	NA	2.09	-9.00	
PLM	8	Episode Day 2, 2006	19	CO (PPM)	2.81	NA	2.81	-9.00	
PLM	8	Episode Day 2, 2006	20	CO (PPM)	2.99	NA	2.99	-9.00	
PLM	8	Episode Day 2, 2006	21	CO (PPM)	3.04	NA	3.04	-9.00	
PLM	8	Episode Day 2, 2006	22	CO (PPM)	3.06	NA	3.06	-9.00	
PLM	8	Episode Day 2, 2006	23	CO (PPM)	2.97	NA	2.97	-9.00	
PLM	8	Episode Day 3, 2006	0	CO (PPM)	2.64	NA	2.64	-9.00	
PLM	8	Episode Day 3, 2006	1	CO (PPM)	2.16	NA	2.16	-9.00	
PLM	8	Episode Day 3, 2006	2	CO (PPM)	1.60	NA	1.60	-9.00	
PLM	8	Episode Day 3, 2006	3	CO (PPM)	0.86	NA	0.86	-9.00	
PLM	8	Episode Day 3, 2006	4	CO (PPM)	0.64	NA	0.64	-9.00	
PLM	8	Episode Day 3, 2006	5	CO (PPM)	0.55	NA	0.55	-9.00	
PLM	8	Episode Day 3, 2006	6	CO (PPM)	0.48	NA	0.48	-9.00	
PLM	8	Episode Day 3, 2006	7	CO (PPM)	0.58	NA	0.58	-9.00	
PLM	8	Episode Day 3, 2006	8	CO (PPM)	0.63	NA	0.63	-9.00	
PLM	8	Episode Day 3, 2006	9	CO (PPM)	0.66	NA	0.66	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
PERIOD									
PLM	8	Episode Day 3, 2006	10	CO (PPM)	0.70	NA	0.70	-9.00	
PLM	8	Episode Day 3, 2006	11	CO (PPM)	0.76	NA	0.76	-9.00	
PLM	8	Episode Day 3, 2006	12	CO (PPM)	0.83	NA	0.83	-9.00	
PLM	8	Episode Day 3, 2006	13	CO (PPM)	0.91	NA	0.91	-9.00	
PLM	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2006	3	CO (PPM)	0.39	NA	0.39	-9.00	
BTN	8	Episode Day 2, 2006	4	CO (PPM)	0.38	NA	0.38	-9.00	
BTN	8	Episode Day 2, 2006	5	CO (PPM)	0.37	NA	0.37	-9.00	
BTN	8	Episode Day 2, 2006	6	CO (PPM)	0.38	NA	0.38	-9.00	
BTN	8	Episode Day 2, 2006	7	CO (PPM)	0.40	NA	0.40	-9.00	
BTN	8	Episode Day 2, 2006	8	CO (PPM)	0.40	NA	0.40	-9.00	
BTN	8	Episode Day 2, 2006	9	CO (PPM)	0.41	NA	0.41	-9.00	
BTN	8	Episode Day 2, 2006	10	CO (PPM)	0.43	NA	0.43	-9.00	
BTN	8	Episode Day 2, 2006	11	CO (PPM)	0.47	NA	0.47	-9.00	
BTN	8	Episode Day 2, 2006	12	CO (PPM)	0.52	NA	0.52	-9.00	
BTN	8	Episode Day 2, 2006	13	CO (PPM)	0.58	NA	0.58	-9.00	
BTN	8	Episode Day 2, 2006	14	CO (PPM)	0.63	NA	0.63	-9.00	
BTN	8	Episode Day 2, 2006	15	CO (PPM)	0.68	NA	0.68	-9.00	
BTN	8	Episode Day 2, 2006	16	CO (PPM)	0.76	NA	0.76	-9.00	
BTN	8	Episode Day 2, 2006	17	CO (PPM)	0.84	NA	0.84	-9.00	
BTN	8	Episode Day 2, 2006	18	CO (PPM)	0.91	NA	0.91	-9.00	
BTN	8	Episode Day 2, 2006	19	CO (PPM)	0.94	NA	0.94	-9.00	
BTN	8	Episode Day 2, 2006	20	CO (PPM)	0.93	NA	0.93	-9.00	
BTN	8	Episode Day 2, 2006	21	CO (PPM)	0.94	NA	0.94	-9.00	
BTN	8	Episode Day 2, 2006	22	CO (PPM)	1.02	NA	1.02	-9.00	
BTN	8	Episode Day 2, 2006	23	CO (PPM)	1.12	NA	1.12	-9.00	
BTN	8	Episode Day 3, 2006	0	CO (PPM)	1.11	NA	1.11	-9.00	
BTN	8	Episode Day 3, 2006	1	CO (PPM)	1.05	NA	1.05	-9.00	
BTN	8	Episode Day 3, 2006	2	CO (PPM)	0.97	NA	0.97	-9.00	
BTN	8	Episode Day 3, 2006	3	CO (PPM)	0.90	NA	0.90	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
BTN	8	Episode Day 3, 2006	4	CO (PPM)	0.85	NA	0.85	-9.00	
BTN	8	Episode Day 3, 2006	5	CO (PPM)	0.79	NA	0.79	-9.00	
BTN	8	Episode Day 3, 2006	6	CO (PPM)	0.66	NA	0.66	-9.00	
BTN	8	Episode Day 3, 2006	7	CO (PPM)	0.51	NA	0.51	-9.00	
BTN	8	Episode Day 3, 2006	8	CO (PPM)	0.43	NA	0.43	-9.00	
BTN	8	Episode Day 3, 2006	9	CO (PPM)	0.38	NA	0.38	-9.00	
BTN	8	Episode Day 3, 2006	10	CO (PPM)	0.35	NA	0.35	-9.00	
BTN	8	Episode Day 3, 2006	11	CO (PPM)	0.33	NA	0.33	-9.00	
BTN	8	Episode Day 3, 2006	12	CO (PPM)	0.33	NA	0.33	-9.00	
BTN	8	Episode Day 3, 2006	13	CO (PPM)	0.33	NA	0.33	-9.00	
BTN	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2006	3	CO (PPM)	0.75	NA	0.75	-9.00	
U_1	8	Episode Day 2, 2006	4	CO (PPM)	0.71	NA	0.71	-9.00	
U_1	8	Episode Day 2, 2006	5	CO (PPM)	0.68	NA	0.68	-9.00	
U_1	8	Episode Day 2, 2006	6	CO (PPM)	0.63	NA	0.63	-9.00	
U_1	8	Episode Day 2, 2006	7	CO (PPM)	0.74	NA	0.74	-9.00	
U_1	8	Episode Day 2, 2006	8	CO (PPM)	0.80	NA	0.80	-9.00	
U_1	8	Episode Day 2, 2006	9	CO (PPM)	0.83	NA	0.83	-9.00	
U_1	8	Episode Day 2, 2006	10	CO (PPM)	0.84	NA	0.84	-9.00	
U_1	8	Episode Day 2, 2006	11	CO (PPM)	0.86	NA	0.86	-9.00	
U_1	8	Episode Day 2, 2006	12	CO (PPM)	0.90	NA	0.90	-9.00	
U_1	8	Episode Day 2, 2006	13	CO (PPM)	0.95	NA	0.95	-9.00	
U_1	8	Episode Day 2, 2006	14	CO (PPM)	1.05	NA	1.05	-9.00	
U_1	8	Episode Day 2, 2006	15	CO (PPM)	1.07	NA	1.07	-9.00	
U_1	8	Episode Day 2, 2006	16	CO (PPM)	1.56	NA	1.56	-9.00	
U_1	8	Episode Day 2, 2006	17	CO (PPM)	2.59	NA	2.59	-9.00	
U_1	8	Episode Day 2, 2006	18	CO (PPM)	3.66	NA	3.66	-9.00	
U_1	8	Episode Day 2, 2006	19	CO (PPM)	3.94	NA	3.94	-9.00	
U_1	8	Episode Day 2, 2006	20	CO (PPM)	3.99	NA	3.99	-9.00	
U_1	8	Episode Day 2, 2006	21	CO (PPM)	4.00	NA	4.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
U_1	8	Episode Day 2, 2006	22	CO (PPM)	3.94	NA	3.94	-9.00	
U_1	8	Episode Day 2, 2006	23	CO (PPM)	3.79	NA	3.79	-9.00	
U_1	8	Episode Day 3, 2006	0	CO (PPM)	3.22	NA	3.22	-9.00	
U_1	8	Episode Day 3, 2006	1	CO (PPM)	2.16	NA	2.16	-9.00	
U_1	8	Episode Day 3, 2006	2	CO (PPM)	1.08	NA	1.08	-9.00	
U_1	8	Episode Day 3, 2006	3	CO (PPM)	0.76	NA	0.76	-9.00	
U_1	8	Episode Day 3, 2006	4	CO (PPM)	0.66	NA	0.66	-9.00	
U_1	8	Episode Day 3, 2006	5	CO (PPM)	0.59	NA	0.59	-9.00	
U_1	8	Episode Day 3, 2006	6	CO (PPM)	0.57	NA	0.57	-9.00	
U_1	8	Episode Day 3, 2006	7	CO (PPM)	0.78	NA	0.78	-9.00	
U_1	8	Episode Day 3, 2006	8	CO (PPM)	0.89	NA	0.89	-9.00	
U_1	8	Episode Day 3, 2006	9	CO (PPM)	0.96	NA	0.96	-9.00	
U_1	8	Episode Day 3, 2006	10	CO (PPM)	1.02	NA	1.02	-9.00	
U_1	8	Episode Day 3, 2006	11	CO (PPM)	1.09	NA	1.09	-9.00	
U_1	8	Episode Day 3, 2006	12	CO (PPM)	1.20	NA	1.20	-9.00	
U_1	8	Episode Day 3, 2006	13	CO (PPM)	1.32	NA	1.32	-9.00	
U_1	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2006	3	CO (PPM)	0.51	NA	0.51	-9.00	
F_A	8	Episode Day 2, 2006	4	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 2, 2006	5	CO (PPM)	0.46	NA	0.46	-9.00	
F_A	8	Episode Day 2, 2006	6	CO (PPM)	0.36	NA	0.36	-9.00	
F_A	8	Episode Day 2, 2006	7	CO (PPM)	0.44	NA	0.44	-9.00	
F_A	8	Episode Day 2, 2006	8	CO (PPM)	0.49	NA	0.49	-9.00	
F_A	8	Episode Day 2, 2006	9	CO (PPM)	0.53	NA	0.53	-9.00	
F_A	8	Episode Day 2, 2006	10	CO (PPM)	0.57	NA	0.57	-9.00	
F_A	8	Episode Day 2, 2006	11	CO (PPM)	0.61	NA	0.61	-9.00	
F_A	8	Episode Day 2, 2006	12	CO (PPM)	0.64	NA	0.64	-9.00	
F_A	8	Episode Day 2, 2006	13	CO (PPM)	0.66	NA	0.66	-9.00	
F_A	8	Episode Day 2, 2006	14	CO (PPM)	0.66	NA	0.66	-9.00	
F_A	8	Episode Day 2, 2006	15	CO (PPM)	0.65	NA	0.65	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
F_A	8	Episode Day 2, 2006	16	CO (PPM)	0.79	NA	0.79	-9.00	
F_A	8	Episode Day 2, 2006	17	CO (PPM)	0.83	NA	0.83	-9.00	
F_A	8	Episode Day 2, 2006	18	CO (PPM)	0.86	NA	0.86	-9.00	
F_A	8	Episode Day 2, 2006	19	CO (PPM)	0.88	NA	0.88	-9.00	
F_A	8	Episode Day 2, 2006	20	CO (PPM)	0.91	NA	0.91	-9.00	
F_A	8	Episode Day 2, 2006	21	CO (PPM)	0.91	NA	0.91	-9.00	
F_A	8	Episode Day 2, 2006	22	CO (PPM)	0.87	NA	0.87	-9.00	
F_A	8	Episode Day 2, 2006	23	CO (PPM)	0.76	NA	0.76	-9.00	
F_A	8	Episode Day 3, 2006	0	CO (PPM)	0.58	NA	0.58	-9.00	
F_A	8	Episode Day 3, 2006	1	CO (PPM)	0.49	NA	0.49	-9.00	
F_A	8	Episode Day 3, 2006	2	CO (PPM)	0.43	NA	0.43	-9.00	
F_A	8	Episode Day 3, 2006	3	CO (PPM)	0.36	NA	0.36	-9.00	
F_A	8	Episode Day 3, 2006	4	CO (PPM)	0.31	NA	0.31	-9.00	
F_A	8	Episode Day 3, 2006	5	CO (PPM)	0.28	NA	0.28	-9.00	
F_A	8	Episode Day 3, 2006	6	CO (PPM)	0.29	NA	0.29	-9.00	
F_A	8	Episode Day 3, 2006	7	CO (PPM)	0.40	NA	0.40	-9.00	
F_A	8	Episode Day 3, 2006	8	CO (PPM)	0.44	NA	0.44	-9.00	
F_A	8	Episode Day 3, 2006	9	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 3, 2006	10	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 3, 2006	11	CO (PPM)	0.49	NA	0.49	-9.00	
F_A	8	Episode Day 3, 2006	12	CO (PPM)	0.52	NA	0.52	-9.00	
F_A	8	Episode Day 3, 2006	13	CO (PPM)	0.56	NA	0.56	-9.00	
F_A	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2006	3	CO (PPM)	0.37	NA	0.37	-9.00	
H_U	8	Episode Day 2, 2006	4	CO (PPM)	0.36	NA	0.36	-9.00	
H_U	8	Episode Day 2, 2006	5	CO (PPM)	0.35	NA	0.35	-9.00	
H_U	8	Episode Day 2, 2006	6	CO (PPM)	0.32	NA	0.32	-9.00	
H_U	8	Episode Day 2, 2006	7	CO (PPM)	0.38	NA	0.38	-9.00	
H_U	8	Episode Day 2, 2006	8	CO (PPM)	0.40	NA	0.40	-9.00	
H_U	8	Episode Day 2, 2006	9	CO (PPM)	0.41	NA	0.41	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
H_U	8	Episode Day 2, 2006	10	CO (PPM)	0.41	NA	0.41	-9.00	
H_U	8	Episode Day 2, 2006	11	CO (PPM)	0.41	NA	0.41	-9.00	
H_U	8	Episode Day 2, 2006	12	CO (PPM)	0.43	NA	0.43	-9.00	
H_U	8	Episode Day 2, 2006	13	CO (PPM)	0.46	NA	0.46	-9.00	
H_U	8	Episode Day 2, 2006	14	CO (PPM)	0.54	NA	0.54	-9.00	
H_U	8	Episode Day 2, 2006	15	CO (PPM)	0.67	NA	0.67	-9.00	
H_U	8	Episode Day 2, 2006	16	CO (PPM)	1.13	NA	1.13	-9.00	
H_U	8	Episode Day 2, 2006	17	CO (PPM)	1.64	NA	1.64	-9.00	
H_U	8	Episode Day 2, 2006	18	CO (PPM)	1.83	NA	1.83	-9.00	
H_U	8	Episode Day 2, 2006	19	CO (PPM)	1.89	NA	1.89	-9.00	
H_U	8	Episode Day 2, 2006	20	CO (PPM)	1.89	NA	1.89	-9.00	
H_U	8	Episode Day 2, 2006	21	CO (PPM)	1.87	NA	1.87	-9.00	
H_U	8	Episode Day 2, 2006	22	CO (PPM)	1.79	NA	1.79	-9.00	
H_U	8	Episode Day 2, 2006	23	CO (PPM)	1.61	NA	1.61	-9.00	
H_U	8	Episode Day 3, 2006	0	CO (PPM)	1.12	NA	1.12	-9.00	
H_U	8	Episode Day 3, 2006	1	CO (PPM)	0.61	NA	0.61	-9.00	
H_U	8	Episode Day 3, 2006	2	CO (PPM)	0.42	NA	0.42	-9.00	
H_U	8	Episode Day 3, 2006	3	CO (PPM)	0.35	NA	0.35	-9.00	
H_U	8	Episode Day 3, 2006	4	CO (PPM)	0.33	NA	0.33	-9.00	
H_U	8	Episode Day 3, 2006	5	CO (PPM)	0.31	NA	0.31	-9.00	
H_U	8	Episode Day 3, 2006	6	CO (PPM)	0.31	NA	0.31	-9.00	
H_U	8	Episode Day 3, 2006	7	CO (PPM)	0.41	NA	0.41	-9.00	
H_U	8	Episode Day 3, 2006	8	CO (PPM)	0.44	NA	0.44	-9.00	
H_U	8	Episode Day 3, 2006	9	CO (PPM)	0.47	NA	0.47	-9.00	
H_U	8	Episode Day 3, 2006	10	CO (PPM)	0.51	NA	0.51	-9.00	
H_U	8	Episode Day 3, 2006	11	CO (PPM)	0.56	NA	0.56	-9.00	
H_U	8	Episode Day 3, 2006	12	CO (PPM)	0.60	NA	0.60	-9.00	
H_U	8	Episode Day 3, 2006	13	CO (PPM)	0.65	NA	0.65	-9.00	
H_U	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2006	3	CO (PPM)	0.25	NA	0.25	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
U_A	8	Episode Day 2, 2006	4	CO (PPM)	0.24	NA	0.24	-9.00	
U_A	8	Episode Day 2, 2006	5	CO (PPM)	0.24	NA	0.24	-9.00	
U_A	8	Episode Day 2, 2006	6	CO (PPM)	0.24	NA	0.24	-9.00	
U_A	8	Episode Day 2, 2006	7	CO (PPM)	0.27	NA	0.27	-9.00	
U_A	8	Episode Day 2, 2006	8	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2006	9	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2006	10	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2006	11	CO (PPM)	0.29	NA	0.29	-9.00	
U_A	8	Episode Day 2, 2006	12	CO (PPM)	0.31	NA	0.31	-9.00	
U_A	8	Episode Day 2, 2006	13	CO (PPM)	0.34	NA	0.34	-9.00	
U_A	8	Episode Day 2, 2006	14	CO (PPM)	0.38	NA	0.38	-9.00	
U_A	8	Episode Day 2, 2006	15	CO (PPM)	0.47	NA	0.47	-9.00	
U_A	8	Episode Day 2, 2006	16	CO (PPM)	0.79	NA	0.79	-9.00	
U_A	8	Episode Day 2, 2006	17	CO (PPM)	1.17	NA	1.17	-9.00	
U_A	8	Episode Day 2, 2006	18	CO (PPM)	1.30	NA	1.30	-9.00	
U_A	8	Episode Day 2, 2006	19	CO (PPM)	1.33	NA	1.33	-9.00	
U_A	8	Episode Day 2, 2006	20	CO (PPM)	1.32	NA	1.32	-9.00	
U_A	8	Episode Day 2, 2006	21	CO (PPM)	1.30	NA	1.30	-9.00	
U_A	8	Episode Day 2, 2006	22	CO (PPM)	1.25	NA	1.25	-9.00	
U_A	8	Episode Day 2, 2006	23	CO (PPM)	1.14	NA	1.14	-9.00	
U_A	8	Episode Day 3, 2006	0	CO (PPM)	0.82	NA	0.82	-9.00	
U_A	8	Episode Day 3, 2006	1	CO (PPM)	0.44	NA	0.44	-9.00	
U_A	8	Episode Day 3, 2006	2	CO (PPM)	0.30	NA	0.30	-9.00	
U_A	8	Episode Day 3, 2006	3	CO (PPM)	0.27	NA	0.27	-9.00	
U_A	8	Episode Day 3, 2006	4	CO (PPM)	0.26	NA	0.26	-9.00	
U_A	8	Episode Day 3, 2006	5	CO (PPM)	0.25	NA	0.25	-9.00	
U_A	8	Episode Day 3, 2006	6	CO (PPM)	0.26	NA	0.26	-9.00	
U_A	8	Episode Day 3, 2006	7	CO (PPM)	0.35	NA	0.35	-9.00	
U_A	8	Episode Day 3, 2006	8	CO (PPM)	0.40	NA	0.40	-9.00	
U_A	8	Episode Day 3, 2006	9	CO (PPM)	0.44	NA	0.44	-9.00	
U_A	8	Episode Day 3, 2006	10	CO (PPM)	0.48	NA	0.48	-9.00	
U_A	8	Episode Day 3, 2006	11	CO (PPM)	0.51	NA	0.51	-9.00	
U_A	8	Episode Day 3, 2006	12	CO (PPM)	0.55	NA	0.55	-9.00	
U_A	8	Episode Day 3, 2006	13	CO (PPM)	0.60	NA	0.60	-9.00	
U_A	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	0	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2006	1	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2006	2	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2006	3	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2006	4	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2006	5	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2006	6	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2006	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	PREDICTED 2006 (UAM)	PREDICTED 2006 (CAL3QHC)	PREDICTED 2006 (UAM+CAL3)	1988 OBSERVED	
P_I	8	Episode Day 1, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2006	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2006	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2006	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2006	3	CO (PPM)	0.45	NA	0.45	-9.00	
P_I	8	Episode Day 2, 2006	4	CO (PPM)	0.43	NA	0.43	-9.00	
P_I	8	Episode Day 2, 2006	5	CO (PPM)	0.42	NA	0.42	-9.00	
P_I	8	Episode Day 2, 2006	6	CO (PPM)	0.41	NA	0.41	-9.00	
P_I	8	Episode Day 2, 2006	7	CO (PPM)	0.50	NA	0.50	-9.00	
P_I	8	Episode Day 2, 2006	8	CO (PPM)	0.55	NA	0.55	-9.00	
P_I	8	Episode Day 2, 2006	9	CO (PPM)	0.56	NA	0.56	-9.00	
P_I	8	Episode Day 2, 2006	10	CO (PPM)	0.56	NA	0.56	-9.00	
P_I	8	Episode Day 2, 2006	11	CO (PPM)	0.57	NA	0.57	-9.00	
P_I	8	Episode Day 2, 2006	12	CO (PPM)	0.60	NA	0.60	-9.00	
P_I	8	Episode Day 2, 2006	13	CO (PPM)	0.62	NA	0.62	-9.00	
P_I	8	Episode Day 2, 2006	14	CO (PPM)	0.65	NA	0.65	-9.00	
P_I	8	Episode Day 2, 2006	15	CO (PPM)	0.64	NA	0.64	-9.00	
P_I	8	Episode Day 2, 2006	16	CO (PPM)	0.93	NA	0.93	-9.00	
P_I	8	Episode Day 2, 2006	17	CO (PPM)	1.51	NA	1.51	-9.00	
P_I	8	Episode Day 2, 2006	18	CO (PPM)	2.23	NA	2.23	-9.00	
P_I	8	Episode Day 2, 2006	19	CO (PPM)	2.57	NA	2.57	-9.00	
P_I	8	Episode Day 2, 2006	20	CO (PPM)	2.64	NA	2.64	-9.00	
P_I	8	Episode Day 2, 2006	21	CO (PPM)	2.66	NA	2.66	-9.00	
P_I	8	Episode Day 2, 2006	22	CO (PPM)	2.65	NA	2.65	-9.00	
P_I	8	Episode Day 2, 2006	23	CO (PPM)	2.55	NA	2.55	-9.00	
P_I	8	Episode Day 3, 2006	0	CO (PPM)	2.20	NA	2.20	-9.00	
P_I	8	Episode Day 3, 2006	1	CO (PPM)	1.62	NA	1.62	-9.00	
P_I	8	Episode Day 3, 2006	2	CO (PPM)	0.88	NA	0.88	-9.00	
P_I	8	Episode Day 3, 2006	3	CO (PPM)	0.53	NA	0.53	-9.00	
P_I	8	Episode Day 3, 2006	4	CO (PPM)	0.43	NA	0.43	-9.00	
P_I	8	Episode Day 3, 2006	5	CO (PPM)	0.38	NA	0.38	-9.00	
P_I	8	Episode Day 3, 2006	6	CO (PPM)	0.36	NA	0.36	-9.00	
P_I	8	Episode Day 3, 2006	7	CO (PPM)	0.47	NA	0.47	-9.00	
P_I	8	Episode Day 3, 2006	8	CO (PPM)	0.51	NA	0.51	-9.00	
P_I	8	Episode Day 3, 2006	9	CO (PPM)	0.56	NA	0.56	-9.00	
P_I	8	Episode Day 3, 2006	10	CO (PPM)	0.61	NA	0.61	-9.00	
P_I	8	Episode Day 3, 2006	11	CO (PPM)	0.64	NA	0.64	-9.00	
P_I	8	Episode Day 3, 2006	12	CO (PPM)	0.69	NA	0.69	-9.00	
P_I	8	Episode Day 3, 2006	13	CO (PPM)	0.75	NA	0.75	-9.00	
P_I	8	Episode Day 3, 2006	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2006	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
NOTE:									
NA in THIS report appears for ALL 8-hr avg CAL3QHC values since 8-hr running averages for CAL3QHC results are NOT computed; 1-hr averages for UAM and CAL3QHC are summed and then 8-hour running averages are computed.									

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

MET A7, 08-27-99 EI, 01-11-94 PT, 09-09-99 CAL, 08-27-99 UAM
 High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;

TIME AND MAGNITUDE OF MAXIMUM CONCENTRATION
 FOR 8-HR AVERAGING PERIOD:

station	max concentration (1988 observed)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	18.7	43	18
WBY	8.9	49	0
CRG	10.4	49	0
NJH	11.3	47	22
TIV	0.0	0	0
ICMP	0.0	0	0
ENG	3.7	47	22
BOU	2.1	38	13
GRDS	8.3	45	20
ARV	5.1	37	12
HLD	1.6	47	22
AUR	0.0	0	0
AURS	4.3	44	19
PLM	0.0	0	0
BTN	0.0	0	0
U_1	0.0	0	0
F_A	0.0	0	0
H_U	0.0	0	0
U_A	0.0	0	0
P_I	0.0	0	0

station	max concentration (2006 predicted)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	7.6	48	23
WBY	4.1	50	1
CRG	4.1	48	23
NJH	3.5	47	22
TIV	7.0	47	22
ICMP	8.7	47	22
ENG	1.7	44	19
BOU	0.8	42	17
GRDS	0.9	42	17
ARV	1.5	43	18
HLD	1.2	44	19
AUR	2.6	47	22
AURS	3.0	45	20
PLM	3.1	47	22
BTN	1.1	48	23
U_1	4.0	46	21
F_A	0.9	46	21
H_U	1.9	45	20
U_A	1.3	44	19
P_I	2.7	46	21

NOTE: The "performance statistics hour" refers to a unique hour for the entire simulation that is used to determine when the maximum concentration occurred. It is based on the system where HOUR 1 is ALWAYS the period from "midnight to 1am" on the FIRST day of the simulation; if there are three calendar days in the simulation; this hour counter increments from 1 to 72.

The "hour of day" refers to the actual hour of the day where HOUR 0 is the period from "midnight to 1am;" this hour counter increments from 0 to 23 for each day.

 MET A7, 08-27-99 EI, 01-11-94 PT, 09-09-99 CAL, 08-27-99 UAM
 High: 2006 mob=844.7tpd;1.5;80;I/M 240 w/newest 4myr exempt;

TIME AND MAGNITUDE OF MAXIMUM CONCENTRATION
 FOR 1-HR AVERAGING PERIOD:

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

station	max concentration (1988 observed)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	50.5	42	17
WBY	13.4	43	18
CRG	16.3	44	19
NJH	22.9	42	17
TIV	0.0	0	0
ICMP	0.0	0	0
ENG	9.4	42	17
BOU	6.5	44	19
GRDS	16.6	33	8
ARV	11.0	33	8
HLD	4.4	42	17
AUR	0.0	0	0
AURS	11.2	42	17
PLM	0.0	0	0
BTN	0.0	0	0
U_1	0.0	0	0
F_A	0.0	0	0
H_U	0.0	0	0
U_A	0.0	0	0
P_I	0.0	0	0

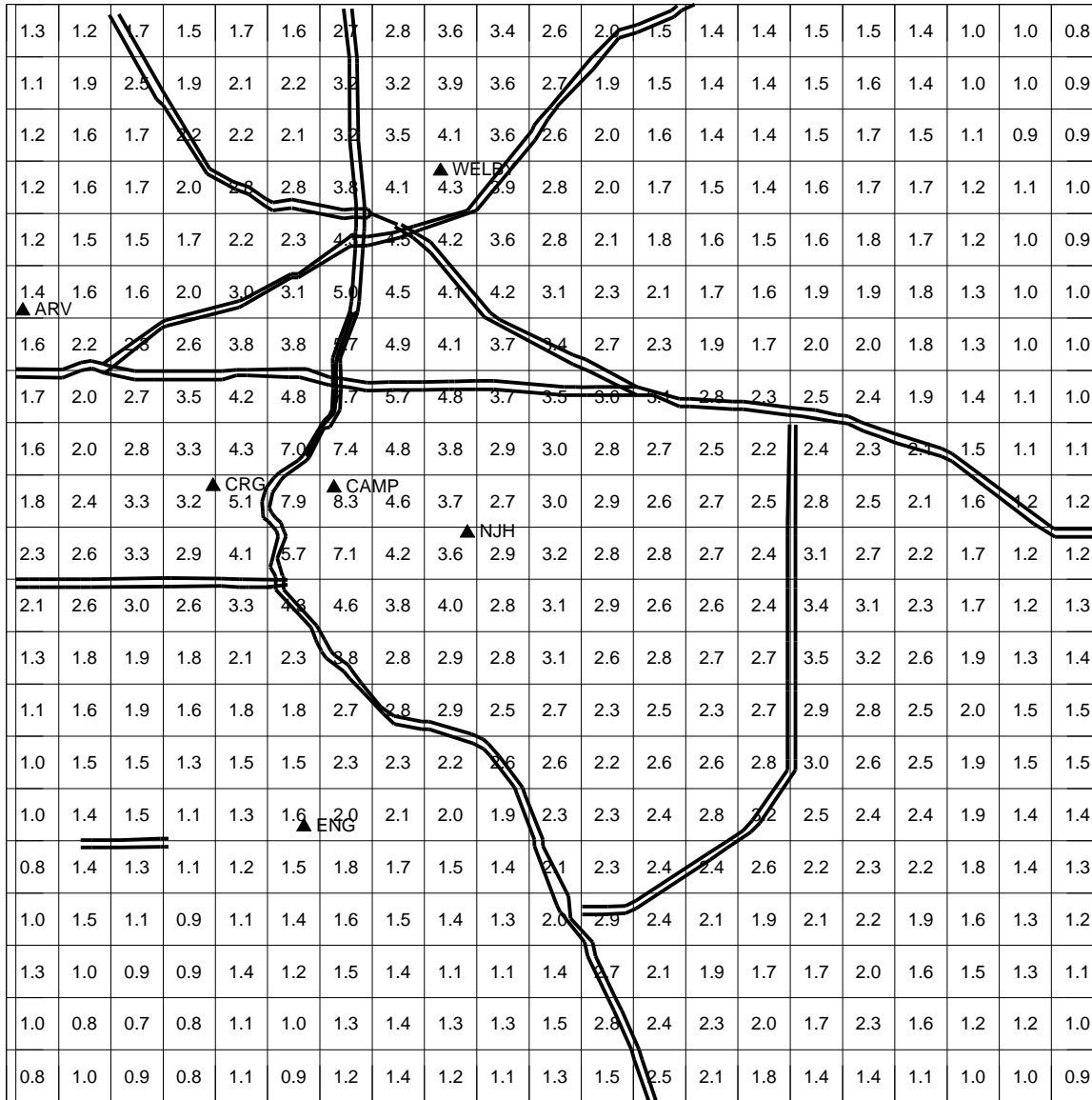
station	max concentration (2006 predicted)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	14.0	43	18
WBY	5.1	48	23
CRG	5.5	43	18
NJH	6.7	44	19
TIV	13.8	43	18
ICMP	15.6	42	17
ENG	3.9	41	16
BOU	1.5	40	15
GRDS	1.6	41	16
ARV	3.0	41	16
HLD	3.2	42	17
AUR	4.2	44	19
AURS	6.4	43	18
PLM	6.3	44	19
BTN	1.6	48	23
U_1	9.1	43	18
F_A	1.8	41	16
H_U	4.5	42	17
U_A	3.3	42	17
P_I	6.2	43	18

NOTE: The "performance statistics hour" refers to a unique hour for the entire simulation that is used to determine when the maximum concentration occurred. It is based on the system where HOUR 1 is ALWAYS the period from "midnight to 1am" on the FIRST day of the simulation; if there are three calendar days in the simulation; this hour counter increments from 1 to 72.

The "hour of day" refers to the actual hour of the day where HOUR 0 is the period from "midnight to 1am;" this hour counter increments from 0 to 23 for each day.

Appendix F – Urban Airshed Modeling: High Episode 2012 Results (Run L)

Maximum 8-hr Average Carbon Monoxide Concentration Estimates (ppm)
from the Urban Airshed Model for Denver Colorado
2012 Projection for the "High" Episode (05DEC88)
Control Strategy: 1.5%oxyFuels; 80%RemoteSensing;4yrExempt I/M240
On-Road Mobile Emission Inventory Total = 869 tons/day



One Grid is One Square Mile

The value in each grid cell shows the maximum CO 8-hr running average for the entire simulation

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

URBAN AIRHSED MODEL OUTPUT - RUNNING 8-HOUR AVERAGES FOR ENTIRE DOMAIN

```
\ FILENAME: c:\den_co\graphix\l\tmap8_1.max
\ UAM Level 1
\ CO SIP for Denver, Colorado
\ Episode code processed: 1
\ Base episode code:      a (05DEC88)
\ L: 2012 mobile=868.8 tpd 30aug99 12aoxy15.prn
\ 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;27aug99PTS
\ MET A7: DWMZ=12,UAMZ=5,DB=40-225,SimDrainJet,ModEC, 11-01-93
\ QA Check - select files used in 2nd day of simulation:
\   c:\den_co\inputs\l\ar_12.b??, 08-30-99 (EI year: 2012)
\   c:\den_co\inputs\l\pt_12.bin, 01-11-94
\   c:\den_co\inputs\l\uw_a2.bin, 11-01-93
\   c:\den_co\outputs\l\avg_12.out, 08-30-99
\
\ TMAP run dated: 08:25:43 08-31-99
\ 8-Hr Averaging Period
\ Time, magnitude, and location of max/min predicted concentration
\
Ending time 600.
UAM Maximum 8-hr average: 2.11 cell (21,47)
UAM Minimum 8-hr average: 0.17 cell ( 9,44)
```

```
Ending time 700.
UAM Maximum 8-hr average: 2.02 cell (21,47)
UAM Minimum 8-hr average: 0.17 cell ( 9,44)
```

```
Ending time 800.
UAM Maximum 8-hr average: 1.95 cell (21,47)
UAM Minimum 8-hr average: 0.16 cell ( 9,44)
```

```
Ending time 900.
UAM Maximum 8-hr average: 1.72 cell (21,47)
UAM Minimum 8-hr average: 0.16 cell ( 9,44)
```

```
Ending time 1000.
UAM Maximum 8-hr average: 1.46 cell (21,47)
UAM Minimum 8-hr average: 0.18 cell ( 9,44)
```

```
Ending time 1100.
UAM Maximum 8-hr average: 1.38 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

```
Ending time 1200.
UAM Maximum 8-hr average: 1.40 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

```
Ending time 1300.
UAM Maximum 8-hr average: 1.44 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Ending time 1400.
UAM Maximum 8-hr average: 1.51 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (3,37)

Ending time 1500.
UAM Maximum 8-hr average: 1.64 cell (23,43)
UAM Minimum 8-hr average: 0.19 cell (3,37)

Ending time 1600.
UAM Maximum 8-hr average: 1.67 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (3,37)

Ending time 1700.
UAM Maximum 8-hr average: 2.70 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (3,37)

Ending time 1800.
UAM Maximum 8-hr average: 4.81 cell (23,42)
UAM Minimum 8-hr average: 0.18 cell (27,11)

Ending time 1900.
UAM Maximum 8-hr average: 6.65 cell (23,42)
UAM Minimum 8-hr average: 0.18 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	6.650
22	43	6.341
23	43	6.462

Ending time 2000.
UAM Maximum 8-hr average: 7.70 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.099
22	43	7.315
23	43	7.703

Ending time 2100.
UAM Maximum 8-hr average: 7.97 cell (23,43)

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

UAM Minimum 8-hr average: 0.17 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.114
22	43	7.590
23	43	7.974
22	44	6.088
23	44	6.449
23	45	6.597

Ending time 2200.

UAM Maximum 8-hr average: 8.17 cell (23,43)

UAM Minimum 8-hr average: 0.17 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.085
22	43	7.762
23	43	8.167
22	44	6.478
23	44	6.852
23	45	7.113

Ending time 2300.

UAM Maximum 8-hr average: 8.34 cell (23,43)

UAM Minimum 8-hr average: 0.17 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.001
22	43	7.890
23	43	8.335
22	44	6.806
23	44	7.192
23	45	7.470

Ending time 0.

UAM Maximum 8-hr average: 8.30 cell (23,43)

UAM Minimum 8-hr average: 0.16 cell (28,16)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	6.732
22	43	7.860
23	43	8.298
22	44	7.036
23	44	7.404
23	45	7.729

Ending time 100.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

UAM Maximum 8-hr average: 7.37 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (28,16)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
22	43	6.926
23	43	7.296
22	44	6.692
23	44	6.985
23	45	7.372

Ending time 200.
UAM Maximum 8-hr average: 6.45 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	44	6.032
23	45	6.445

Ending time 300.
UAM Maximum 8-hr average: 5.40 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 400.
UAM Maximum 8-hr average: 4.16 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 500.
UAM Maximum 8-hr average: 3.30 cell (25,49)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 600.
UAM Maximum 8-hr average: 2.71 cell (25,50)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 700.
UAM Maximum 8-hr average: 2.29 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 800.
UAM Maximum 8-hr average: 2.30 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Ending time 900.
UAM Maximum 8-hr average: 2.07 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 1000.
UAM Maximum 8-hr average: 2.04 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (16,28)

Ending time 1100.
UAM Maximum 8-hr average: 2.20 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (16,28)

Ending time 1200.
UAM Maximum 8-hr average: 2.31 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (16,28)

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

File: ar_1_tot.qa0

Daily emissions for each source category as input to the Urban Airshed Model

CO: TOTAL EMISSIONS FOR CATEGORY	AMP	BEFORE HRLY SCALARS APPLIED	=	186.105283	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	186.105289	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	186.105283	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	PMP	BEFORE HRLY SCALARS APPLIED	=	249.454414	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	249.454414	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	435.559697	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	OFP	BEFORE HRLY SCALARS APPLIED	=	433.273964	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	433.187313	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	868.833661	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	RR	BEFORE HRLY SCALARS APPLIED	=	0.333074	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	0.333074	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	869.166736	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	HLI	BEFORE HRLY SCALARS APPLIED	=	0.370857	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	0.370857	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	869.537593	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	AC	BEFORE HRLY SCALARS APPLIED	=	24.103800	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	24.272526	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	893.641393	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	ACS	BEFORE HRLY SCALARS APPLIED	=	7.700000	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	7.753900	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	901.341393	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	AG	BEFORE HRLY SCALARS APPLIED	=	0.255744	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	0.255744	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	901.597137	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	CST	BEFORE HRLY SCALARS APPLIED	=	8.060200	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	8.060200	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	909.657337	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	IND	BEFORE HRLY SCALARS APPLIED	=	23.541000	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	23.541000	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	933.198337	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	LTC	BEFORE HRLY SCALARS APPLIED	=	130.383000	TOI

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	130.383002	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1063.581337	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	FP	BEFORE HRLY SCALARS APPLIED	=	10.254174	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	10.254174	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1073.835511	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	STV	BEFORE HRLY SCALARS APPLIED	=	16.511581	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	16.511581	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1090.347091	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	SFR	BEFORE HRLY SCALARS APPLIED	=	5.446302	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	5.446738	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1095.793394	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	NG	BEFORE HRLY SCALARS APPLIED	=	9.893396	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	9.893396	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1105.686789	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	MIN	BEFORE HRLY SCALARS APPLIED	=	21.075900	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	21.077585	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1126.762689	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	MJA	BEFORE HRLY SCALARS APPLIED	=	0.000000	TOI
INVENTORY CODE: L		AFTER HRLY SCALARS APPLIED	=	0.000000	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1126.762689	TOI

QA check of	CO EMISSIONS total in UAM binary file (NOTES: 1. hourly scalars applied; 2. MJE e				
INVENTORY CODE: L					
				1126.900793	TOI
				36510971.5	GRAM-MOLI

CO: TOTAL EMISSIONS FROM ALL CATEGORIES INCLUDING ELEVATED POINTS					
INVENTORY CODE: L					
		BEFORE HRLY SCALARS APPLIED	=	1152.327589	TOI
		AFTER HRLY SCALARS APPLIED	=	1152.465693	TOI

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

File: ar_omax.qa0

Maximum emission rate and corresponding UAM grid cell for each source category

CATEGORY=	AMP: MAXIMUM VALUE=	0.990000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	PMP: MAXIMUM VALUE=	2.090000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	OFP: MAXIMUM VALUE=	2.850000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	RR: MAXIMUM VALUE=	0.029800	TPD @GRID CELL (X,Y): (22, 47)
CATEGORY=	HLI: MAXIMUM VALUE=	0.008990	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	AC: MAXIMUM VALUE=	3.090000	TPD @GRID CELL (X,Y): (39, 50)
CATEGORY=	ACS: MAXIMUM VALUE=	1.100000	TPD @GRID CELL (X,Y): (28, 44)
CATEGORY=	AG: MAXIMUM VALUE=	0.000148	TPD @GRID CELL (X,Y): (7, 69)
CATEGORY=	CST: MAXIMUM VALUE=	0.021100	TPD @GRID CELL (X,Y): (3, 26)
CATEGORY=	IND: MAXIMUM VALUE=	0.413000	TPD @GRID CELL (X,Y): (8, 61)
CATEGORY=	LTC: MAXIMUM VALUE=	0.594000	TPD @GRID CELL (X,Y): (8, 61)
CATEGORY=	FP: MAXIMUM VALUE=	0.056100	TPD @GRID CELL (X,Y): (24, 42)
CATEGORY=	STV: MAXIMUM VALUE=	0.129000	TPD @GRID CELL (X,Y): (17, 35)
CATEGORY=	SFR: MAXIMUM VALUE=	0.033700	TPD @GRID CELL (X,Y): (23, 42)
CATEGORY=	NG: MAXIMUM VALUE=	0.218000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	MIN: MAXIMUM VALUE=	2.560000	TPD @GRID CELL (X,Y): (28, 67)
CATEGORY=	MJA: MAXIMUM VALUE=	0.000000	TPD @GRID CELL (X,Y): (28, 67)
CATEGORY=	MJE: MAXIMUM VALUE=	5.950000	TPD @GRID CELL (X,Y): (24, 47)
CATEGORY=	TOT: MAXIMUM VALUE=	7.470000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	SUM: MAXIMUM VALUE=	7.473437	TPD @GRID CELL (X,Y): (23, 43)

Air Quality Modeling Results for the Denver Carbon Monoxide Maintenance Plan UAM and CAL3QHC Estimates at Monitoring Sites and Roadway Intersections

The attached report is one of several files generated by a the Colorado Department of Public Health and Environment's postprocessing batch program "DPLOT.BTM." This particular report, which presents 1-hour and 8-hour average UAM and CAL3QHC estimates for each monitoring site and roadway intersection, was generated by the FORTRAN program "P_STATS." Strings of text at the beginning of the report uniquely identify the modeling scenario. These ID's (see example on page 2) are auto-built by DPLOT.BTM. Automated title generation for each modeling run streamlines postprocessing while enhancing QA procedures.

P_STATS reads SAI's DPLOT format data files which contain hourly concentration estimates from the Urban Airshed Model and observed concentrations from various monitoring sites. In addition, P_STATS reads another set of DPLOT format files containing hourly concentration estimates from the CAL3QHC model. While there are UAM estimates for every monitoring site and roadway intersection, CAL3QHC estimates are available only at intersections where refined modeling was performed. Please note that all "observed" values are from the historic episode on which the modeling is based. The "DATE" column indicates the year of the MODELED estimates; all observed estimates are for the base year (e.g., 1988 for the "high" and "2nd-high" episodes).

A "-9.00" entry indicates that values were not generated. "NA" is used for all 8-hour CAL3QHC entries because 8-hour average values are not computed; instead, hourly CAL3QHC and UAM estimates are summed before 8-hour average UAM/CAL3QHC values are computed. A key to site abbreviations follows:

Monitoring Sites

CMP
WBV
CRG
TIV
FED
NJH
PLM
ARV
ENG
BOU
GRDS
HLD
AUR
AURS
BTN

Description

CAMP
Welby
Carriage
Tivoli
Roof of Federal Bldg (downtown) - inlet 72 meters above ground
NJH-E
Palmer School (inlet on top of 2 story bldg)
Arvada
Englewood
Boulder (Marine St)
Boulder Grandy's Special Study Site
Highland
Aurora
Aurora Special Study Site
Brighton

Intersections

ICMP
U_1
F_A
H_U
U_A
P_1

Broadway & Champa (CAMP intersection)
University & 1st
Foothills & Arapahoe (Boulder)
Hampden & University
University & Arapahoe
Parker & Iliff

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;
 MET A7, 08-30-99 EI, 01-11-94 PT, 09-09-99 CAL, 08-30-99 UAM

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;								
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED
CMP	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	2.50
CMP	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	1.80
CMP	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	1.50
CMP	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	2.70
CMP	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	3.00
CMP	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	1.80
CMP	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	1.50
CMP	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	1.50
CMP	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	1.40
CMP	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	1.30
CMP	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	1.30
CMP	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	1.80
CMP	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	2.10
CMP	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	1.60
CMP	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	1.60
CMP	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	2.80
CMP	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	6.40
CMP	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	7.60
CMP	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	6.80
CMP	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	3.60
CMP	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	1.30
CMP	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	1.20
CMP	1	Episode Day 1, 2012	22	CO (PPM)	1.29	-9.00	1.29	1.00
CMP	1	Episode Day 1, 2012	23	CO (PPM)	1.81	-9.00	1.81	1.60
CMP	1	Episode Day 2, 2012	0	CO (PPM)	2.17	-9.00	2.17	1.50
CMP	1	Episode Day 2, 2012	1	CO (PPM)	1.76	-9.00	1.76	0.80
CMP	1	Episode Day 2, 2012	2	CO (PPM)	0.89	-9.00	0.89	0.00
CMP	1	Episode Day 2, 2012	3	CO (PPM)	0.78	-9.00	0.78	0.00
CMP	1	Episode Day 2, 2012	4	CO (PPM)	0.80	-9.00	0.80	0.00
CMP	1	Episode Day 2, 2012	5	CO (PPM)	0.74	-9.00	0.74	0.30
CMP	1	Episode Day 2, 2012	6	CO (PPM)	0.95	-9.00	0.95	0.80
CMP	1	Episode Day 2, 2012	7	CO (PPM)	2.91	-9.00	2.91	4.10
CMP	1	Episode Day 2, 2012	8	CO (PPM)	1.63	-9.00	1.63	5.40
CMP	1	Episode Day 2, 2012	9	CO (PPM)	1.12	-9.00	1.12	2.90
CMP	1	Episode Day 2, 2012	10	CO (PPM)	0.98	-9.00	0.98	2.90
CMP	1	Episode Day 2, 2012	11	CO (PPM)	1.26	-9.00	1.26	4.50
CMP	1	Episode Day 2, 2012	12	CO (PPM)	1.35	-9.00	1.35	4.00
CMP	1	Episode Day 2, 2012	13	CO (PPM)	1.46	-9.00	1.46	4.30
CMP	1	Episode Day 2, 2012	14	CO (PPM)	1.89	-9.00	1.89	4.50
CMP	1	Episode Day 2, 2012	15	CO (PPM)	3.03	-9.00	3.03	7.00
CMP	1	Episode Day 2, 2012	16	CO (PPM)	8.79	-9.00	8.79	45.00
CMP	1	Episode Day 2, 2012	17	CO (PPM)	13.87	-9.00	13.87	50.50
CMP	1	Episode Day 2, 2012	18	CO (PPM)	14.68	-9.00	14.68	30.00
CMP	1	Episode Day 2, 2012	19	CO (PPM)	11.14	-9.00	11.14	3.90
CMP	1	Episode Day 2, 2012	20	CO (PPM)	4.56	-9.00	4.56	2.10
CMP	1	Episode Day 2, 2012	21	CO (PPM)	3.47	-9.00	3.47	2.30
CMP	1	Episode Day 2, 2012	22	CO (PPM)	3.59	-9.00	3.59	3.80
CMP	1	Episode Day 2, 2012	23	CO (PPM)	3.35	-9.00	3.35	4.00
CMP	1	Episode Day 3, 2012	0	CO (PPM)	2.31	-9.00	2.31	4.50
CMP	1	Episode Day 3, 2012	1	CO (PPM)	1.61	-9.00	1.61	2.60
CMP	1	Episode Day 3, 2012	2	CO (PPM)	1.05	-9.00	1.05	1.10
CMP	1	Episode Day 3, 2012	3	CO (PPM)	0.58	-9.00	0.58	0.80
CMP	1	Episode Day 3, 2012	4	CO (PPM)	0.62	-9.00	0.62	1.10
CMP	1	Episode Day 3, 2012	5	CO (PPM)	1.20	-9.00	1.20	2.40
CMP	1	Episode Day 3, 2012	6	CO (PPM)	2.16	-9.00	2.16	5.10
CMP	1	Episode Day 3, 2012	7	CO (PPM)	4.75	-9.00	4.75	9.30
CMP	1	Episode Day 3, 2012	8	CO (PPM)	2.56	-9.00	2.56	10.70
CMP	1	Episode Day 3, 2012	9	CO (PPM)	2.37	-9.00	2.37	7.20
CMP	1	Episode Day 3, 2012	10	CO (PPM)	2.15	-9.00	2.15	5.10
CMP	1	Episode Day 3, 2012	11	CO (PPM)	1.46	-9.00	1.46	3.60
CMP	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	2.50

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CMP	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	2.00	
CMP	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	2.40	
CMP	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	3.60	
CMP	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	10.10	
CMP	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	12.90	
CMP	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	5.30	
CMP	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	3.90	
CMP	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	5.30	
CMP	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
CMP	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	2.90	
CMP	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	4.50	
WBY	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	4.00	
WBY	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	4.50	
WBY	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	0.70	
WBY	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	1.70	
WBY	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	1.60	
WBY	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	1.20	
WBY	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	1.00	
WBY	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	1.00	
WBY	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.50	
WBY	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.40	
WBY	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	4.30	
WBY	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	5.40	
WBY	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	4.60	
WBY	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	2.10	
WBY	1	Episode Day 1, 2012	22	CO (PPM)	1.13	-9.00	1.13	1.50	
WBY	1	Episode Day 1, 2012	23	CO (PPM)	1.36	-9.00	1.36	1.90	
WBY	1	Episode Day 2, 2012	0	CO (PPM)	1.52	-9.00	1.52	4.30	
WBY	1	Episode Day 2, 2012	1	CO (PPM)	1.42	-9.00	1.42	3.40	
WBY	1	Episode Day 2, 2012	2	CO (PPM)	1.33	-9.00	1.33	2.20	
WBY	1	Episode Day 2, 2012	3	CO (PPM)	1.14	-9.00	1.14	1.60	
WBY	1	Episode Day 2, 2012	4	CO (PPM)	0.90	-9.00	0.90	1.40	
WBY	1	Episode Day 2, 2012	5	CO (PPM)	0.84	-9.00	0.84	1.40	
WBY	1	Episode Day 2, 2012	6	CO (PPM)	0.98	-9.00	0.98	1.70	
WBY	1	Episode Day 2, 2012	7	CO (PPM)	1.51	-9.00	1.51	5.70	
WBY	1	Episode Day 2, 2012	8	CO (PPM)	1.00	-9.00	1.00	6.90	
WBY	1	Episode Day 2, 2012	9	CO (PPM)	0.95	-9.00	0.95	4.90	
WBY	1	Episode Day 2, 2012	10	CO (PPM)	1.08	-9.00	1.08	2.50	
WBY	1	Episode Day 2, 2012	11	CO (PPM)	0.90	-9.00	0.90	1.40	
WBY	1	Episode Day 2, 2012	12	CO (PPM)	0.75	-9.00	0.75	0.90	
WBY	1	Episode Day 2, 2012	13	CO (PPM)	0.61	-9.00	0.61	0.90	
WBY	1	Episode Day 2, 2012	14	CO (PPM)	0.60	-9.00	0.60	1.00	
WBY	1	Episode Day 2, 2012	15	CO (PPM)	0.82	-9.00	0.82	1.20	
WBY	1	Episode Day 2, 2012	16	CO (PPM)	1.56	-9.00	1.56	2.60	
WBY	1	Episode Day 2, 2012	17	CO (PPM)	2.60	-9.00	2.60	9.50	
WBY	1	Episode Day 2, 2012	18	CO (PPM)	3.64	-9.00	3.64	13.40	
WBY	1	Episode Day 2, 2012	19	CO (PPM)	2.77	-9.00	2.77	9.40	
WBY	1	Episode Day 2, 2012	20	CO (PPM)	3.74	-9.00	3.74	7.70	
WBY	1	Episode Day 2, 2012	21	CO (PPM)	5.12	-9.00	5.12	6.30	
WBY	1	Episode Day 2, 2012	22	CO (PPM)	5.17	-9.00	5.17	7.30	
WBY	1	Episode Day 2, 2012	23	CO (PPM)	5.21	-9.00	5.21	8.50	
WBY	1	Episode Day 3, 2012	0	CO (PPM)	4.47	-9.00	4.47	9.40	
WBY	1	Episode Day 3, 2012	1	CO (PPM)	2.63	-9.00	2.63	7.30	
WBY	1	Episode Day 3, 2012	2	CO (PPM)	1.35	-9.00	1.35	3.00	
WBY	1	Episode Day 3, 2012	3	CO (PPM)	0.81	-9.00	0.81	1.70	
WBY	1	Episode Day 3, 2012	4	CO (PPM)	0.65	-9.00	0.65	1.60	
WBY	1	Episode Day 3, 2012	5	CO (PPM)	0.71	-9.00	0.71	1.70	
WBY	1	Episode Day 3, 2012	6	CO (PPM)	0.80	-9.00	0.80	2.80	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
WBY	1	Episode Day 3, 2012	7	CO (PPM)	1.04	-9.00	1.04	2.80	
WBY	1	Episode Day 3, 2012	8	CO (PPM)	1.02	-9.00	1.02	-9.00	
WBY	1	Episode Day 3, 2012	9	CO (PPM)	1.17	-9.00	1.17	3.60	
WBY	1	Episode Day 3, 2012	10	CO (PPM)	1.15	-9.00	1.15	2.70	
WBY	1	Episode Day 3, 2012	11	CO (PPM)	0.92	-9.00	0.92	0.60	
WBY	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.40	
WBY	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	1.60	
WBY	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	3.10	
WBY	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	6.10	
WBY	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	6.00	
WBY	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	5.40	
WBY	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	4.40	
CRG	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	4.80	
CRG	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	4.50	
CRG	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	3.90	
CRG	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	3.50	
CRG	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CRG	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	0.90	
CRG	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	1.70	
CRG	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	2.70	
CRG	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	1.80	
CRG	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CRG	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	1.60	
CRG	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	1.10	
CRG	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
CRG	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.40	
CRG	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.50	
CRG	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
CRG	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	2.40	
CRG	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	6.00	
CRG	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	8.00	
CRG	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	10.80	
CRG	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	3.50	
CRG	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	3.40	
CRG	1	Episode Day 1, 2012	22	CO (PPM)	1.68	-9.00	1.68	3.50	
CRG	1	Episode Day 1, 2012	23	CO (PPM)	1.92	-9.00	1.92	3.30	
CRG	1	Episode Day 2, 2012	0	CO (PPM)	2.28	-9.00	2.28	3.70	
CRG	1	Episode Day 2, 2012	1	CO (PPM)	2.28	-9.00	2.28	4.90	
CRG	1	Episode Day 2, 2012	2	CO (PPM)	1.43	-9.00	1.43	3.50	
CRG	1	Episode Day 2, 2012	3	CO (PPM)	0.75	-9.00	0.75	2.50	
CRG	1	Episode Day 2, 2012	4	CO (PPM)	0.58	-9.00	0.58	2.60	
CRG	1	Episode Day 2, 2012	5	CO (PPM)	0.63	-9.00	0.63	2.70	
CRG	1	Episode Day 2, 2012	6	CO (PPM)	0.81	-9.00	0.81	5.80	
CRG	1	Episode Day 2, 2012	7	CO (PPM)	1.76	-9.00	1.76	10.10	
CRG	1	Episode Day 2, 2012	8	CO (PPM)	1.05	-9.00	1.05	10.50	
CRG	1	Episode Day 2, 2012	9	CO (PPM)	0.90	-9.00	0.90	4.00	
CRG	1	Episode Day 2, 2012	10	CO (PPM)	0.79	-9.00	0.79	1.90	
CRG	1	Episode Day 2, 2012	11	CO (PPM)	0.81	-9.00	0.81	1.20	
CRG	1	Episode Day 2, 2012	12	CO (PPM)	1.08	-9.00	1.08	1.50	
CRG	1	Episode Day 2, 2012	13	CO (PPM)	1.20	-9.00	1.20	1.30	
CRG	1	Episode Day 2, 2012	14	CO (PPM)	1.37	-9.00	1.37	1.60	
CRG	1	Episode Day 2, 2012	15	CO (PPM)	1.79	-9.00	1.79	0.80	
CRG	1	Episode Day 2, 2012	16	CO (PPM)	3.94	-9.00	3.94	6.40	
CRG	1	Episode Day 2, 2012	17	CO (PPM)	4.99	-9.00	4.99	9.50	
CRG	1	Episode Day 2, 2012	18	CO (PPM)	5.33	-9.00	5.33	13.70	
CRG	1	Episode Day 2, 2012	19	CO (PPM)	5.11	-9.00	5.11	16.30	
CRG	1	Episode Day 2, 2012	20	CO (PPM)	4.31	-9.00	4.31	12.80	
CRG	1	Episode Day 2, 2012	21	CO (PPM)	3.37	-9.00	3.37	7.10	
CRG	1	Episode Day 2, 2012	22	CO (PPM)	2.65	-9.00	2.65	4.90	
CRG	1	Episode Day 2, 2012	23	CO (PPM)	2.02	-9.00	2.02	8.60	
CRG	1	Episode Day 3, 2012	0	CO (PPM)	1.65	-9.00	1.65	10.10	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CRG	1	Episode Day 3, 2012	1	CO (PPM)	1.47	-9.00	1.47	4.30	
CRG	1	Episode Day 3, 2012	2	CO (PPM)	1.14	-9.00	1.14	5.40	
CRG	1	Episode Day 3, 2012	3	CO (PPM)	0.72	-9.00	0.72	3.90	
CRG	1	Episode Day 3, 2012	4	CO (PPM)	0.56	-9.00	0.56	1.90	
CRG	1	Episode Day 3, 2012	5	CO (PPM)	0.72	-9.00	0.72	3.00	
CRG	1	Episode Day 3, 2012	6	CO (PPM)	1.41	-9.00	1.41	3.10	
CRG	1	Episode Day 3, 2012	7	CO (PPM)	2.82	-9.00	2.82	6.10	
CRG	1	Episode Day 3, 2012	8	CO (PPM)	1.36	-9.00	1.36	5.10	
CRG	1	Episode Day 3, 2012	9	CO (PPM)	1.23	-9.00	1.23	4.10	
CRG	1	Episode Day 3, 2012	10	CO (PPM)	0.94	-9.00	0.94	1.50	
CRG	1	Episode Day 3, 2012	11	CO (PPM)	0.84	-9.00	0.84	-9.00	
CRG	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
CRG	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.40	
CRG	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
CRG	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.10	
CRG	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	2.00	
CRG	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	7.00	
CRG	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	9.50	
CRG	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	12.40	
CRG	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	10.10	
CRG	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	7.90	
CRG	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	7.40	
CRG	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	7.70	
NJH	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	2.30	
NJH	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	1.50	
NJH	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	1.40	
NJH	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	1.30	
NJH	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	2.20	
NJH	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	2.00	
NJH	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	2.80	
NJH	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	3.10	
NJH	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	2.00	
NJH	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	2.20	
NJH	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	2.10	
NJH	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	1.60	
NJH	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
NJH	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
NJH	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.90	
NJH	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	1.10	
NJH	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	2.90	
NJH	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	8.80	
NJH	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	4.00	
NJH	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	3.10	
NJH	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	2.80	
NJH	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	2.60	
NJH	1	Episode Day 1, 2012	22	CO (PPM)	1.16	-9.00	1.16	2.40	
NJH	1	Episode Day 1, 2012	23	CO (PPM)	1.30	-9.00	1.30	2.00	
NJH	1	Episode Day 2, 2012	0	CO (PPM)	1.16	-9.00	1.16	2.30	
NJH	1	Episode Day 2, 2012	1	CO (PPM)	0.70	-9.00	0.70	1.30	
NJH	1	Episode Day 2, 2012	2	CO (PPM)	0.48	-9.00	0.48	1.20	
NJH	1	Episode Day 2, 2012	3	CO (PPM)	0.47	-9.00	0.47	1.10	
NJH	1	Episode Day 2, 2012	4	CO (PPM)	0.50	-9.00	0.50	0.90	
NJH	1	Episode Day 2, 2012	5	CO (PPM)	0.51	-9.00	0.51	1.60	
NJH	1	Episode Day 2, 2012	6	CO (PPM)	0.73	-9.00	0.73	3.30	
NJH	1	Episode Day 2, 2012	7	CO (PPM)	1.86	-9.00	1.86	6.40	
NJH	1	Episode Day 2, 2012	8	CO (PPM)	1.28	-9.00	1.28	6.10	
NJH	1	Episode Day 2, 2012	9	CO (PPM)	0.96	-9.00	0.96	3.20	
NJH	1	Episode Day 2, 2012	10	CO (PPM)	0.62	-9.00	0.62	2.80	
NJH	1	Episode Day 2, 2012	11	CO (PPM)	0.65	-9.00	0.65	2.00	
NJH	1	Episode Day 2, 2012	12	CO (PPM)	0.70	-9.00	0.70	2.00	
NJH	1	Episode Day 2, 2012	13	CO (PPM)	0.75	-9.00	0.75	2.70	
NJH	1	Episode Day 2, 2012	14	CO (PPM)	1.14	-9.00	1.14	3.20	
NJH	1	Episode Day 2, 2012	15	CO (PPM)	1.72	-9.00	1.72	4.60	
NJH	1	Episode Day 2, 2012	16	CO (PPM)	3.50	-9.00	3.50	19.70	
NJH	1	Episode Day 2, 2012	17	CO (PPM)	4.58	-9.00	4.58	22.90	
NJH	1	Episode Day 2, 2012	18	CO (PPM)	5.29	-9.00	5.29	19.70	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
NJH	1	Episode Day 2, 2012	19	CO (PPM)	6.39	-9.00	6.39	8.60	
NJH	1	Episode Day 2, 2012	20	CO (PPM)	2.70	-9.00	2.70	6.20	
NJH	1	Episode Day 2, 2012	21	CO (PPM)	1.37	-9.00	1.37	4.40	
NJH	1	Episode Day 2, 2012	22	CO (PPM)	1.38	-9.00	1.38	4.10	
NJH	1	Episode Day 2, 2012	23	CO (PPM)	1.13	-9.00	1.13	3.20	
NJH	1	Episode Day 3, 2012	0	CO (PPM)	0.79	-9.00	0.79	2.30	
NJH	1	Episode Day 3, 2012	1	CO (PPM)	0.63	-9.00	0.63	1.20	
NJH	1	Episode Day 3, 2012	2	CO (PPM)	0.48	-9.00	0.48	1.30	
NJH	1	Episode Day 3, 2012	3	CO (PPM)	0.34	-9.00	0.34	0.80	
NJH	1	Episode Day 3, 2012	4	CO (PPM)	0.36	-9.00	0.36	0.70	
NJH	1	Episode Day 3, 2012	5	CO (PPM)	0.48	-9.00	0.48	1.60	
NJH	1	Episode Day 3, 2012	6	CO (PPM)	0.78	-9.00	0.78	2.90	
NJH	1	Episode Day 3, 2012	7	CO (PPM)	2.01	-9.00	2.01	7.00	
NJH	1	Episode Day 3, 2012	8	CO (PPM)	1.26	-9.00	1.26	5.70	
NJH	1	Episode Day 3, 2012	9	CO (PPM)	1.01	-9.00	1.01	4.90	
NJH	1	Episode Day 3, 2012	10	CO (PPM)	0.86	-9.00	0.86	3.60	
NJH	1	Episode Day 3, 2012	11	CO (PPM)	0.83	-9.00	0.83	1.30	
NJH	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	1.10	
NJH	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
NJH	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.60	
NJH	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.80	
NJH	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	4.40	
NJH	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	6.60	
NJH	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	5.10	
NJH	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	6.90	
NJH	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	5.50	
NJH	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
NJH	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	3.60	
NJH	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	2.40	
TIV	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2012	22	CO (PPM)	1.41	-9.00	1.41	-9.00	
TIV	1	Episode Day 1, 2012	23	CO (PPM)	1.72	-9.00	1.72	-9.00	
TIV	1	Episode Day 2, 2012	0	CO (PPM)	2.07	-9.00	2.07	-9.00	
TIV	1	Episode Day 2, 2012	1	CO (PPM)	1.76	-9.00	1.76	-9.00	
TIV	1	Episode Day 2, 2012	2	CO (PPM)	0.88	-9.00	0.88	-9.00	
TIV	1	Episode Day 2, 2012	3	CO (PPM)	0.64	-9.00	0.64	-9.00	
TIV	1	Episode Day 2, 2012	4	CO (PPM)	0.64	-9.00	0.64	-9.00	
TIV	1	Episode Day 2, 2012	5	CO (PPM)	0.69	-9.00	0.69	-9.00	
TIV	1	Episode Day 2, 2012	6	CO (PPM)	0.90	-9.00	0.90	-9.00	
TIV	1	Episode Day 2, 2012	7	CO (PPM)	2.57	-9.00	2.57	-9.00	
TIV	1	Episode Day 2, 2012	8	CO (PPM)	1.40	-9.00	1.40	-9.00	
TIV	1	Episode Day 2, 2012	9	CO (PPM)	0.99	-9.00	0.99	-9.00	
TIV	1	Episode Day 2, 2012	10	CO (PPM)	0.87	-9.00	0.87	-9.00	
TIV	1	Episode Day 2, 2012	11	CO (PPM)	1.13	-9.00	1.13	-9.00	
TIV	1	Episode Day 2, 2012	12	CO (PPM)	1.51	-9.00	1.51	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
TIV	1	Episode Day 2, 2012	13	CO (PPM)	1.64	-9.00	1.64	-9.00	
TIV	1	Episode Day 2, 2012	14	CO (PPM)	1.85	-9.00	1.85	-9.00	
TIV	1	Episode Day 2, 2012	15	CO (PPM)	2.87	-9.00	2.87	-9.00	
TIV	1	Episode Day 2, 2012	16	CO (PPM)	8.90	-9.00	8.90	-9.00	
TIV	1	Episode Day 2, 2012	17	CO (PPM)	14.31	-9.00	14.31	-9.00	
TIV	1	Episode Day 2, 2012	18	CO (PPM)	14.38	-9.00	14.38	-9.00	
TIV	1	Episode Day 2, 2012	19	CO (PPM)	8.33	-9.00	8.33	-9.00	
TIV	1	Episode Day 2, 2012	20	CO (PPM)	3.85	-9.00	3.85	-9.00	
TIV	1	Episode Day 2, 2012	21	CO (PPM)	3.06	-9.00	3.06	-9.00	
TIV	1	Episode Day 2, 2012	22	CO (PPM)	2.84	-9.00	2.84	-9.00	
TIV	1	Episode Day 2, 2012	23	CO (PPM)	2.66	-9.00	2.66	-9.00	
TIV	1	Episode Day 3, 2012	0	CO (PPM)	2.00	-9.00	2.00	-9.00	
TIV	1	Episode Day 3, 2012	1	CO (PPM)	1.49	-9.00	1.49	-9.00	
TIV	1	Episode Day 3, 2012	2	CO (PPM)	1.04	-9.00	1.04	-9.00	
TIV	1	Episode Day 3, 2012	3	CO (PPM)	0.58	-9.00	0.58	-9.00	
TIV	1	Episode Day 3, 2012	4	CO (PPM)	0.58	-9.00	0.58	-9.00	
TIV	1	Episode Day 3, 2012	5	CO (PPM)	1.19	-9.00	1.19	-9.00	
TIV	1	Episode Day 3, 2012	6	CO (PPM)	2.29	-9.00	2.29	-9.00	
TIV	1	Episode Day 3, 2012	7	CO (PPM)	4.97	-9.00	4.97	-9.00	
TIV	1	Episode Day 3, 2012	8	CO (PPM)	2.65	-9.00	2.65	-9.00	
TIV	1	Episode Day 3, 2012	9	CO (PPM)	2.22	-9.00	2.22	-9.00	
TIV	1	Episode Day 3, 2012	10	CO (PPM)	1.51	-9.00	1.51	-9.00	
TIV	1	Episode Day 3, 2012	11	CO (PPM)	1.12	-9.00	1.12	-9.00	
TIV	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2012	22	CO (PPM)	1.29	-9.00	1.29	-9.00	
ICMP	1	Episode Day 1, 2012	23	CO (PPM)	1.81	-9.00	1.81	-9.00	
ICMP	1	Episode Day 2, 2012	0	CO (PPM)	2.17	-9.00	2.17	-9.00	
ICMP	1	Episode Day 2, 2012	1	CO (PPM)	1.76	-9.00	1.76	-9.00	
ICMP	1	Episode Day 2, 2012	2	CO (PPM)	0.89	-9.00	0.89	-9.00	
ICMP	1	Episode Day 2, 2012	3	CO (PPM)	0.78	-9.00	0.78	-9.00	
ICMP	1	Episode Day 2, 2012	4	CO (PPM)	0.80	-9.00	0.80	-9.00	
ICMP	1	Episode Day 2, 2012	5	CO (PPM)	0.74	-9.00	0.74	-9.00	
ICMP	1	Episode Day 2, 2012	6	CO (PPM)	0.95	-9.00	0.95	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ICMP	1	Episode Day 2, 2012	7	CO (PPM)	2.91	-9.00	2.91	-9.00	
ICMP	1	Episode Day 2, 2012	8	CO (PPM)	1.63	-9.00	1.63	-9.00	
ICMP	1	Episode Day 2, 2012	9	CO (PPM)	1.12	-9.00	1.12	-9.00	
ICMP	1	Episode Day 2, 2012	10	CO (PPM)	0.98	-9.00	0.98	-9.00	
ICMP	1	Episode Day 2, 2012	11	CO (PPM)	1.26	-9.00	1.26	-9.00	
ICMP	1	Episode Day 2, 2012	12	CO (PPM)	1.35	-9.00	1.35	-9.00	
ICMP	1	Episode Day 2, 2012	13	CO (PPM)	1.46	-9.00	1.46	-9.00	
ICMP	1	Episode Day 2, 2012	14	CO (PPM)	1.89	1.84	3.73	-9.00	
ICMP	1	Episode Day 2, 2012	15	CO (PPM)	3.03	1.38	4.41	-9.00	
ICMP	1	Episode Day 2, 2012	16	CO (PPM)	8.79	2.99	11.78	-9.00	
ICMP	1	Episode Day 2, 2012	17	CO (PPM)	13.87	2.07	15.94	-9.00	
ICMP	1	Episode Day 2, 2012	18	CO (PPM)	14.68	1.15	15.83	-9.00	
ICMP	1	Episode Day 2, 2012	19	CO (PPM)	11.14	0.35	11.49	-9.00	
ICMP	1	Episode Day 2, 2012	20	CO (PPM)	4.56	0.35	4.91	-9.00	
ICMP	1	Episode Day 2, 2012	21	CO (PPM)	3.47	0.00	3.47	-9.00	
ICMP	1	Episode Day 2, 2012	22	CO (PPM)	3.59	0.46	4.05	-9.00	
ICMP	1	Episode Day 2, 2012	23	CO (PPM)	3.35	0.12	3.47	-9.00	
ICMP	1	Episode Day 3, 2012	0	CO (PPM)	2.31	-9.00	2.31	-9.00	
ICMP	1	Episode Day 3, 2012	1	CO (PPM)	1.61	-9.00	1.61	-9.00	
ICMP	1	Episode Day 3, 2012	2	CO (PPM)	1.05	-9.00	1.05	-9.00	
ICMP	1	Episode Day 3, 2012	3	CO (PPM)	0.58	-9.00	0.58	-9.00	
ICMP	1	Episode Day 3, 2012	4	CO (PPM)	0.62	-9.00	0.62	-9.00	
ICMP	1	Episode Day 3, 2012	5	CO (PPM)	1.20	-9.00	1.20	-9.00	
ICMP	1	Episode Day 3, 2012	6	CO (PPM)	2.16	-9.00	2.16	-9.00	
ICMP	1	Episode Day 3, 2012	7	CO (PPM)	4.75	-9.00	4.75	-9.00	
ICMP	1	Episode Day 3, 2012	8	CO (PPM)	2.56	-9.00	2.56	-9.00	
ICMP	1	Episode Day 3, 2012	9	CO (PPM)	2.37	-9.00	2.37	-9.00	
ICMP	1	Episode Day 3, 2012	10	CO (PPM)	2.15	-9.00	2.15	-9.00	
ICMP	1	Episode Day 3, 2012	11	CO (PPM)	1.46	-9.00	1.46	-9.00	
ICMP	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ENG	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ENG	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ENG	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ENG	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	1.90	
ENG	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	1.80	
ENG	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	0.50	
ENG	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	1.50	
ENG	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	4.40	
ENG	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	2.40	
ENG	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	1.20	
ENG	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	1.20	
ENG	1	Episode Day 1, 2012	22	CO (PPM)	0.74	-9.00	0.74	1.70	
ENG	1	Episode Day 1, 2012	23	CO (PPM)	0.46	-9.00	0.46	1.20	
ENG	1	Episode Day 2, 2012	0	CO (PPM)	0.34	-9.00	0.34	0.70	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ENG	1	Episode Day 2, 2012	1	CO (PPM)	0.32	-9.00	0.32	0.70	
ENG	1	Episode Day 2, 2012	2	CO (PPM)	0.29	-9.00	0.29	0.50	
ENG	1	Episode Day 2, 2012	3	CO (PPM)	0.28	-9.00	0.28	0.50	
ENG	1	Episode Day 2, 2012	4	CO (PPM)	0.30	-9.00	0.30	0.50	
ENG	1	Episode Day 2, 2012	5	CO (PPM)	0.33	-9.00	0.33	1.20	
ENG	1	Episode Day 2, 2012	6	CO (PPM)	0.44	-9.00	0.44	2.40	
ENG	1	Episode Day 2, 2012	7	CO (PPM)	1.00	-9.00	1.00	4.70	
ENG	1	Episode Day 2, 2012	8	CO (PPM)	0.60	-9.00	0.60	4.10	
ENG	1	Episode Day 2, 2012	9	CO (PPM)	0.38	-9.00	0.38	1.20	
ENG	1	Episode Day 2, 2012	10	CO (PPM)	0.32	-9.00	0.32	0.70	
ENG	1	Episode Day 2, 2012	11	CO (PPM)	0.37	-9.00	0.37	0.70	
ENG	1	Episode Day 2, 2012	12	CO (PPM)	0.51	-9.00	0.51	0.80	
ENG	1	Episode Day 2, 2012	13	CO (PPM)	0.66	-9.00	0.66	1.10	
ENG	1	Episode Day 2, 2012	14	CO (PPM)	0.82	-9.00	0.82	1.50	
ENG	1	Episode Day 2, 2012	15	CO (PPM)	1.53	-9.00	1.53	2.90	
ENG	1	Episode Day 2, 2012	16	CO (PPM)	3.82	-9.00	3.82	6.20	
ENG	1	Episode Day 2, 2012	17	CO (PPM)	3.73	-9.00	3.73	9.40	
ENG	1	Episode Day 2, 2012	18	CO (PPM)	1.39	-9.00	1.39	3.20	
ENG	1	Episode Day 2, 2012	19	CO (PPM)	0.71	-9.00	0.71	1.90	
ENG	1	Episode Day 2, 2012	20	CO (PPM)	0.45	-9.00	0.45	1.60	
ENG	1	Episode Day 2, 2012	21	CO (PPM)	0.44	-9.00	0.44	1.80	
ENG	1	Episode Day 2, 2012	22	CO (PPM)	0.44	-9.00	0.44	2.30	
ENG	1	Episode Day 2, 2012	23	CO (PPM)	0.42	-9.00	0.42	1.60	
ENG	1	Episode Day 3, 2012	0	CO (PPM)	0.39	-9.00	0.39	1.50	
ENG	1	Episode Day 3, 2012	1	CO (PPM)	0.35	-9.00	0.35	1.00	
ENG	1	Episode Day 3, 2012	2	CO (PPM)	0.28	-9.00	0.28	0.60	
ENG	1	Episode Day 3, 2012	3	CO (PPM)	0.26	-9.00	0.26	0.50	
ENG	1	Episode Day 3, 2012	4	CO (PPM)	0.26	-9.00	0.26	0.50	
ENG	1	Episode Day 3, 2012	5	CO (PPM)	0.28	-9.00	0.28	0.70	
ENG	1	Episode Day 3, 2012	6	CO (PPM)	0.43	-9.00	0.43	1.80	
ENG	1	Episode Day 3, 2012	7	CO (PPM)	1.25	-9.00	1.25	3.50	
ENG	1	Episode Day 3, 2012	8	CO (PPM)	0.58	-9.00	0.58	-9.00	
ENG	1	Episode Day 3, 2012	9	CO (PPM)	0.61	-9.00	0.61	2.80	
ENG	1	Episode Day 3, 2012	10	CO (PPM)	0.62	-9.00	0.62	2.00	
ENG	1	Episode Day 3, 2012	11	CO (PPM)	0.68	-9.00	0.68	0.60	
ENG	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ENG	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	3.80	
ENG	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	4.30	
ENG	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	3.00	
ENG	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	2.10	
ENG	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	1.40	
ENG	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	1.10	
ENG	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	1.50	
BOU	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	0.40	
BOU	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	0.00	
BOU	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	0.30	
BOU	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	0.50	
BOU	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	1.00	
BOU	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	1.40	
BOU	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	1.80	
BOU	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	2.70	
BOU	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	1.60	
BOU	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	1.10	
BOU	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
BOU	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
BOU	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	1.50	
BOU	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	1.20	
BOU	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	0.40	
BOU	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	0.30	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
BOU	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	0.10	
BOU	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	0.00	
BOU	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	0.00	
BOU	1	Episode Day 1, 2012	22	CO (PPM)	0.98	-9.00	0.98	0.20	
BOU	1	Episode Day 1, 2012	23	CO (PPM)	0.41	-9.00	0.41	0.50	
BOU	1	Episode Day 2, 2012	0	CO (PPM)	0.25	-9.00	0.25	0.20	
BOU	1	Episode Day 2, 2012	1	CO (PPM)	0.23	-9.00	0.23	0.20	
BOU	1	Episode Day 2, 2012	2	CO (PPM)	0.23	-9.00	0.23	0.10	
BOU	1	Episode Day 2, 2012	3	CO (PPM)	0.23	-9.00	0.23	0.10	
BOU	1	Episode Day 2, 2012	4	CO (PPM)	0.24	-9.00	0.24	0.30	
BOU	1	Episode Day 2, 2012	5	CO (PPM)	0.30	-9.00	0.30	0.60	
BOU	1	Episode Day 2, 2012	6	CO (PPM)	0.52	-9.00	0.52	1.20	
BOU	1	Episode Day 2, 2012	7	CO (PPM)	0.85	-9.00	0.85	2.60	
BOU	1	Episode Day 2, 2012	8	CO (PPM)	0.41	-9.00	0.41	2.20	
BOU	1	Episode Day 2, 2012	9	CO (PPM)	0.50	-9.00	0.50	4.20	
BOU	1	Episode Day 2, 2012	10	CO (PPM)	0.65	-9.00	0.65	2.90	
BOU	1	Episode Day 2, 2012	11	CO (PPM)	0.65	-9.00	0.65	1.30	
BOU	1	Episode Day 2, 2012	12	CO (PPM)	0.63	-9.00	0.63	1.40	
BOU	1	Episode Day 2, 2012	13	CO (PPM)	0.57	-9.00	0.57	1.20	
BOU	1	Episode Day 2, 2012	14	CO (PPM)	0.78	-9.00	0.78	1.20	
BOU	1	Episode Day 2, 2012	15	CO (PPM)	1.47	-9.00	1.47	1.90	
BOU	1	Episode Day 2, 2012	16	CO (PPM)	1.15	-9.00	1.15	2.00	
BOU	1	Episode Day 2, 2012	17	CO (PPM)	0.63	-9.00	0.63	1.30	
BOU	1	Episode Day 2, 2012	18	CO (PPM)	0.50	-9.00	0.50	1.10	
BOU	1	Episode Day 2, 2012	19	CO (PPM)	0.51	-9.00	0.51	6.50	
BOU	1	Episode Day 2, 2012	20	CO (PPM)	0.40	-9.00	0.40	1.60	
BOU	1	Episode Day 2, 2012	21	CO (PPM)	0.35	-9.00	0.35	1.30	
BOU	1	Episode Day 2, 2012	22	CO (PPM)	0.28	-9.00	0.28	0.80	
BOU	1	Episode Day 2, 2012	23	CO (PPM)	0.26	-9.00	0.26	0.40	
BOU	1	Episode Day 3, 2012	0	CO (PPM)	0.25	-9.00	0.25	0.00	
BOU	1	Episode Day 3, 2012	1	CO (PPM)	0.24	-9.00	0.24	0.00	
BOU	1	Episode Day 3, 2012	2	CO (PPM)	0.24	-9.00	0.24	0.00	
BOU	1	Episode Day 3, 2012	3	CO (PPM)	0.25	-9.00	0.25	0.00	
BOU	1	Episode Day 3, 2012	4	CO (PPM)	0.25	-9.00	0.25	0.10	
BOU	1	Episode Day 3, 2012	5	CO (PPM)	0.24	-9.00	0.24	0.40	
BOU	1	Episode Day 3, 2012	6	CO (PPM)	0.45	-9.00	0.45	0.80	
BOU	1	Episode Day 3, 2012	7	CO (PPM)	0.90	-9.00	0.90	4.00	
BOU	1	Episode Day 3, 2012	8	CO (PPM)	0.46	-9.00	0.46	2.30	
BOU	1	Episode Day 3, 2012	9	CO (PPM)	0.40	-9.00	0.40	2.90	
BOU	1	Episode Day 3, 2012	10	CO (PPM)	0.31	-9.00	0.31	0.70	
BOU	1	Episode Day 3, 2012	11	CO (PPM)	0.36	-9.00	0.36	0.90	
BOU	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	1.30	
BOU	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
BOU	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.70	
BOU	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	3.50	
BOU	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	1.60	
BOU	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	0.70	
GRDS	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	2.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
GRDS	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2012	22	CO (PPM)	1.27	-9.00	1.27	4.00	
GRDS	1	Episode Day 1, 2012	23	CO (PPM)	0.50	-9.00	0.50	3.00	
GRDS	1	Episode Day 2, 2012	0	CO (PPM)	0.26	-9.00	0.26	0.80	
GRDS	1	Episode Day 2, 2012	1	CO (PPM)	0.24	-9.00	0.24	0.50	
GRDS	1	Episode Day 2, 2012	2	CO (PPM)	0.24	-9.00	0.24	0.70	
GRDS	1	Episode Day 2, 2012	3	CO (PPM)	0.24	-9.00	0.24	0.90	
GRDS	1	Episode Day 2, 2012	4	CO (PPM)	0.25	-9.00	0.25	1.10	
GRDS	1	Episode Day 2, 2012	5	CO (PPM)	0.30	-9.00	0.30	1.50	
GRDS	1	Episode Day 2, 2012	6	CO (PPM)	0.57	-9.00	0.57	5.30	
GRDS	1	Episode Day 2, 2012	7	CO (PPM)	1.14	-9.00	1.14	16.30	
GRDS	1	Episode Day 2, 2012	8	CO (PPM)	0.54	-9.00	0.54	16.60	
GRDS	1	Episode Day 2, 2012	9	CO (PPM)	0.58	-9.00	0.58	6.10	
GRDS	1	Episode Day 2, 2012	10	CO (PPM)	0.76	-9.00	0.76	2.00	
GRDS	1	Episode Day 2, 2012	11	CO (PPM)	0.74	-9.00	0.74	1.80	
GRDS	1	Episode Day 2, 2012	12	CO (PPM)	0.63	-9.00	0.63	1.80	
GRDS	1	Episode Day 2, 2012	13	CO (PPM)	0.58	-9.00	0.58	-9.00	
GRDS	1	Episode Day 2, 2012	14	CO (PPM)	0.81	-9.00	0.81	2.40	
GRDS	1	Episode Day 2, 2012	15	CO (PPM)	1.56	-9.00	1.56	3.50	
GRDS	1	Episode Day 2, 2012	16	CO (PPM)	1.57	-9.00	1.57	4.70	
GRDS	1	Episode Day 2, 2012	17	CO (PPM)	0.82	-9.00	0.82	10.00	
GRDS	1	Episode Day 2, 2012	18	CO (PPM)	0.62	-9.00	0.62	13.20	
GRDS	1	Episode Day 2, 2012	19	CO (PPM)	0.61	-9.00	0.61	14.00	
GRDS	1	Episode Day 2, 2012	20	CO (PPM)	0.48	-9.00	0.48	10.60	
GRDS	1	Episode Day 2, 2012	21	CO (PPM)	0.39	-9.00	0.39	7.30	
GRDS	1	Episode Day 2, 2012	22	CO (PPM)	0.30	-9.00	0.30	3.30	
GRDS	1	Episode Day 2, 2012	23	CO (PPM)	0.27	-9.00	0.27	2.30	
GRDS	1	Episode Day 3, 2012	0	CO (PPM)	0.26	-9.00	0.26	1.00	
GRDS	1	Episode Day 3, 2012	1	CO (PPM)	0.24	-9.00	0.24	0.00	
GRDS	1	Episode Day 3, 2012	2	CO (PPM)	0.24	-9.00	0.24	0.00	
GRDS	1	Episode Day 3, 2012	3	CO (PPM)	0.25	-9.00	0.25	0.00	
GRDS	1	Episode Day 3, 2012	4	CO (PPM)	0.26	-9.00	0.26	0.00	
GRDS	1	Episode Day 3, 2012	5	CO (PPM)	0.24	-9.00	0.24	1.00	
GRDS	1	Episode Day 3, 2012	6	CO (PPM)	0.43	-9.00	0.43	2.00	
GRDS	1	Episode Day 3, 2012	7	CO (PPM)	1.01	-9.00	1.01	9.00	
GRDS	1	Episode Day 3, 2012	8	CO (PPM)	0.54	-9.00	0.54	8.00	
GRDS	1	Episode Day 3, 2012	9	CO (PPM)	0.49	-9.00	0.49	4.00	
GRDS	1	Episode Day 3, 2012	10	CO (PPM)	0.32	-9.00	0.32	1.00	
GRDS	1	Episode Day 3, 2012	11	CO (PPM)	0.37	-9.00	0.37	1.00	
GRDS	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	6.00	
GRDS	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	9.00	
GRDS	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	7.00	
GRDS	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	4.00	
ARV	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	2.70	
ARV	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	3.30	
ARV	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	2.50	
ARV	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ARV	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	0.90	
ARV	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	1.60	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ARV	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	2.50	
ARV	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	4.20	
ARV	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	2.00	
ARV	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ARV	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	1.90	
ARV	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	1.50	
ARV	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ARV	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	2.20	
ARV	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	3.80	
ARV	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	3.70	
ARV	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	3.90	
ARV	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	4.50	
ARV	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	6.50	
ARV	1	Episode Day 1, 2012	22	CO (PPM)	2.70	-9.00	2.70	5.40	
ARV	1	Episode Day 1, 2012	23	CO (PPM)	2.42	-9.00	2.42	2.40	
ARV	1	Episode Day 2, 2012	0	CO (PPM)	1.20	-9.00	1.20	1.70	
ARV	1	Episode Day 2, 2012	1	CO (PPM)	0.69	-9.00	0.69	1.30	
ARV	1	Episode Day 2, 2012	2	CO (PPM)	0.90	-9.00	0.90	1.50	
ARV	1	Episode Day 2, 2012	3	CO (PPM)	0.62	-9.00	0.62	1.40	
ARV	1	Episode Day 2, 2012	4	CO (PPM)	0.37	-9.00	0.37	1.20	
ARV	1	Episode Day 2, 2012	5	CO (PPM)	0.36	-9.00	0.36	1.80	
ARV	1	Episode Day 2, 2012	6	CO (PPM)	0.43	-9.00	0.43	3.80	
ARV	1	Episode Day 2, 2012	7	CO (PPM)	0.74	-9.00	0.74	9.60	
ARV	1	Episode Day 2, 2012	8	CO (PPM)	0.63	-9.00	0.63	11.00	
ARV	1	Episode Day 2, 2012	9	CO (PPM)	0.76	-9.00	0.76	6.60	
ARV	1	Episode Day 2, 2012	10	CO (PPM)	0.75	-9.00	0.75	4.40	
ARV	1	Episode Day 2, 2012	11	CO (PPM)	0.83	-9.00	0.83	2.20	
ARV	1	Episode Day 2, 2012	12	CO (PPM)	0.96	-9.00	0.96	1.70	
ARV	1	Episode Day 2, 2012	13	CO (PPM)	1.03	-9.00	1.03	1.60	
ARV	1	Episode Day 2, 2012	14	CO (PPM)	1.19	-9.00	1.19	1.70	
ARV	1	Episode Day 2, 2012	15	CO (PPM)	1.52	-9.00	1.52	2.60	
ARV	1	Episode Day 2, 2012	16	CO (PPM)	2.93	-9.00	2.93	5.20	
ARV	1	Episode Day 2, 2012	17	CO (PPM)	2.18	-9.00	2.18	6.30	
ARV	1	Episode Day 2, 2012	18	CO (PPM)	0.95	-9.00	0.95	6.20	
ARV	1	Episode Day 2, 2012	19	CO (PPM)	0.53	-9.00	0.53	6.00	
ARV	1	Episode Day 2, 2012	20	CO (PPM)	0.44	-9.00	0.44	5.10	
ARV	1	Episode Day 2, 2012	21	CO (PPM)	0.45	-9.00	0.45	4.10	
ARV	1	Episode Day 2, 2012	22	CO (PPM)	0.43	-9.00	0.43	3.20	
ARV	1	Episode Day 2, 2012	23	CO (PPM)	0.37	-9.00	0.37	2.30	
ARV	1	Episode Day 3, 2012	0	CO (PPM)	0.33	-9.00	0.33	1.50	
ARV	1	Episode Day 3, 2012	1	CO (PPM)	0.31	-9.00	0.31	1.20	
ARV	1	Episode Day 3, 2012	2	CO (PPM)	0.30	-9.00	0.30	1.10	
ARV	1	Episode Day 3, 2012	3	CO (PPM)	0.28	-9.00	0.28	0.90	
ARV	1	Episode Day 3, 2012	4	CO (PPM)	0.25	-9.00	0.25	0.60	
ARV	1	Episode Day 3, 2012	5	CO (PPM)	0.28	-9.00	0.28	1.10	
ARV	1	Episode Day 3, 2012	6	CO (PPM)	0.58	-9.00	0.58	2.90	
ARV	1	Episode Day 3, 2012	7	CO (PPM)	1.33	-9.00	1.33	8.20	
ARV	1	Episode Day 3, 2012	8	CO (PPM)	0.75	-9.00	0.75	7.30	
ARV	1	Episode Day 3, 2012	9	CO (PPM)	0.75	-9.00	0.75	4.50	
ARV	1	Episode Day 3, 2012	10	CO (PPM)	0.73	-9.00	0.73	-9.00	
ARV	1	Episode Day 3, 2012	11	CO (PPM)	0.76	-9.00	0.76	1.00	
ARV	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.90	
ARV	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	2.40	
ARV	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	5.50	
ARV	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	5.20	
ARV	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	4.80	
ARV	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	3.90	
ARV	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
ARV	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	4.30	
ARV	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	2.00	
HLD	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	0.60	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	0.60	
HLD	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	0.50	
HLD	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	0.50	
HLD	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	1.20	
HLD	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	1.50	
HLD	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	0.10	
HLD	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.10	
HLD	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	0.50	
HLD	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2012	22	CO (PPM)	0.25	-9.00	0.25	0.30	
HLD	1	Episode Day 1, 2012	23	CO (PPM)	0.24	-9.00	0.24	0.20	
HLD	1	Episode Day 2, 2012	0	CO (PPM)	0.23	-9.00	0.23	0.20	
HLD	1	Episode Day 2, 2012	1	CO (PPM)	0.22	-9.00	0.22	0.20	
HLD	1	Episode Day 2, 2012	2	CO (PPM)	0.21	-9.00	0.21	0.10	
HLD	1	Episode Day 2, 2012	3	CO (PPM)	0.21	-9.00	0.21	0.20	
HLD	1	Episode Day 2, 2012	4	CO (PPM)	0.22	-9.00	0.22	0.10	
HLD	1	Episode Day 2, 2012	5	CO (PPM)	0.23	-9.00	0.23	0.10	
HLD	1	Episode Day 2, 2012	6	CO (PPM)	0.28	-9.00	0.28	0.10	
HLD	1	Episode Day 2, 2012	7	CO (PPM)	0.39	-9.00	0.39	0.10	
HLD	1	Episode Day 2, 2012	8	CO (PPM)	0.27	-9.00	0.27	0.00	
HLD	1	Episode Day 2, 2012	9	CO (PPM)	0.23	-9.00	0.23	0.00	
HLD	1	Episode Day 2, 2012	10	CO (PPM)	0.23	-9.00	0.23	0.00	
HLD	1	Episode Day 2, 2012	11	CO (PPM)	0.24	-9.00	0.24	0.00	
HLD	1	Episode Day 2, 2012	12	CO (PPM)	0.40	-9.00	0.40	0.00	
HLD	1	Episode Day 2, 2012	13	CO (PPM)	0.47	-9.00	0.47	0.00	
HLD	1	Episode Day 2, 2012	14	CO (PPM)	0.62	-9.00	0.62	0.00	
HLD	1	Episode Day 2, 2012	15	CO (PPM)	1.05	-9.00	1.05	0.70	
HLD	1	Episode Day 2, 2012	16	CO (PPM)	2.55	-9.00	2.55	4.00	
HLD	1	Episode Day 2, 2012	17	CO (PPM)	3.20	-9.00	3.20	4.40	
HLD	1	Episode Day 2, 2012	18	CO (PPM)	1.09	-9.00	1.09	1.60	
HLD	1	Episode Day 2, 2012	19	CO (PPM)	0.39	-9.00	0.39	0.70	
HLD	1	Episode Day 2, 2012	20	CO (PPM)	0.30	-9.00	0.30	0.50	
HLD	1	Episode Day 2, 2012	21	CO (PPM)	0.28	-9.00	0.28	0.30	
HLD	1	Episode Day 2, 2012	22	CO (PPM)	0.26	-9.00	0.26	0.30	
HLD	1	Episode Day 2, 2012	23	CO (PPM)	0.24	-9.00	0.24	0.40	
HLD	1	Episode Day 3, 2012	0	CO (PPM)	0.25	-9.00	0.25	0.40	
HLD	1	Episode Day 3, 2012	1	CO (PPM)	0.24	-9.00	0.24	0.40	
HLD	1	Episode Day 3, 2012	2	CO (PPM)	0.22	-9.00	0.22	0.50	
HLD	1	Episode Day 3, 2012	3	CO (PPM)	0.22	-9.00	0.22	0.50	
HLD	1	Episode Day 3, 2012	4	CO (PPM)	0.22	-9.00	0.22	0.40	
HLD	1	Episode Day 3, 2012	5	CO (PPM)	0.24	-9.00	0.24	0.30	
HLD	1	Episode Day 3, 2012	6	CO (PPM)	0.31	-9.00	0.31	0.30	
HLD	1	Episode Day 3, 2012	7	CO (PPM)	0.89	-9.00	0.89	1.90	
HLD	1	Episode Day 3, 2012	8	CO (PPM)	0.72	-9.00	0.72	2.00	
HLD	1	Episode Day 3, 2012	9	CO (PPM)	0.68	-9.00	0.68	1.10	
HLD	1	Episode Day 3, 2012	10	CO (PPM)	0.47	-9.00	0.47	0.00	
HLD	1	Episode Day 3, 2012	11	CO (PPM)	0.39	-9.00	0.39	0.00	
HLD	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	0.20	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	0.80	
HLD	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	1.80	
AUR	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2012	22	CO (PPM)	0.78	-9.00	0.78	-9.00	
AUR	1	Episode Day 1, 2012	23	CO (PPM)	0.79	-9.00	0.79	-9.00	
AUR	1	Episode Day 2, 2012	0	CO (PPM)	0.69	-9.00	0.69	-9.00	
AUR	1	Episode Day 2, 2012	1	CO (PPM)	0.44	-9.00	0.44	-9.00	
AUR	1	Episode Day 2, 2012	2	CO (PPM)	0.34	-9.00	0.34	-9.00	
AUR	1	Episode Day 2, 2012	3	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 2, 2012	4	CO (PPM)	0.33	-9.00	0.33	-9.00	
AUR	1	Episode Day 2, 2012	5	CO (PPM)	0.37	-9.00	0.37	-9.00	
AUR	1	Episode Day 2, 2012	6	CO (PPM)	0.54	-9.00	0.54	-9.00	
AUR	1	Episode Day 2, 2012	7	CO (PPM)	1.16	-9.00	1.16	-9.00	
AUR	1	Episode Day 2, 2012	8	CO (PPM)	0.90	-9.00	0.90	-9.00	
AUR	1	Episode Day 2, 2012	9	CO (PPM)	0.63	-9.00	0.63	-9.00	
AUR	1	Episode Day 2, 2012	10	CO (PPM)	0.41	-9.00	0.41	-9.00	
AUR	1	Episode Day 2, 2012	11	CO (PPM)	0.41	-9.00	0.41	-9.00	
AUR	1	Episode Day 2, 2012	12	CO (PPM)	0.46	-9.00	0.46	-9.00	
AUR	1	Episode Day 2, 2012	13	CO (PPM)	0.54	-9.00	0.54	-9.00	
AUR	1	Episode Day 2, 2012	14	CO (PPM)	0.77	-9.00	0.77	-9.00	
AUR	1	Episode Day 2, 2012	15	CO (PPM)	1.23	-9.00	1.23	-9.00	
AUR	1	Episode Day 2, 2012	16	CO (PPM)	2.36	-9.00	2.36	-9.00	
AUR	1	Episode Day 2, 2012	17	CO (PPM)	2.96	-9.00	2.96	-9.00	
AUR	1	Episode Day 2, 2012	18	CO (PPM)	3.22	-9.00	3.22	-9.00	
AUR	1	Episode Day 2, 2012	19	CO (PPM)	4.09	-9.00	4.09	-9.00	
AUR	1	Episode Day 2, 2012	20	CO (PPM)	3.96	-9.00	3.96	-9.00	
AUR	1	Episode Day 2, 2012	21	CO (PPM)	1.27	-9.00	1.27	-9.00	
AUR	1	Episode Day 2, 2012	22	CO (PPM)	0.93	-9.00	0.93	-9.00	
AUR	1	Episode Day 2, 2012	23	CO (PPM)	0.70	-9.00	0.70	-9.00	
AUR	1	Episode Day 3, 2012	0	CO (PPM)	0.50	-9.00	0.50	-9.00	
AUR	1	Episode Day 3, 2012	1	CO (PPM)	0.38	-9.00	0.38	-9.00	
AUR	1	Episode Day 3, 2012	2	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 3, 2012	3	CO (PPM)	0.27	-9.00	0.27	-9.00	
AUR	1	Episode Day 3, 2012	4	CO (PPM)	0.28	-9.00	0.28	-9.00	
AUR	1	Episode Day 3, 2012	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 3, 2012	6	CO (PPM)	0.47	-9.00	0.47	-9.00	
AUR	1	Episode Day 3, 2012	7	CO (PPM)	1.06	-9.00	1.06	-9.00	
AUR	1	Episode Day 3, 2012	8	CO (PPM)	0.66	-9.00	0.66	-9.00	
AUR	1	Episode Day 3, 2012	9	CO (PPM)	0.59	-9.00	0.59	-9.00	
AUR	1	Episode Day 3, 2012	10	CO (PPM)	0.58	-9.00	0.58	-9.00	
AUR	1	Episode Day 3, 2012	11	CO (PPM)	0.53	-9.00	0.53	-9.00	
AUR	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AUR	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AURS	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	0.60	
AURS	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	0.50	
AURS	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	0.40	
AURS	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	0.40	
AURS	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	2.50	
AURS	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	2.20	
AURS	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	1.40	
AURS	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	1.60	
AURS	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	1.40	
AURS	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	1.50	
AURS	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.90	
AURS	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.50	
AURS	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	1.20	
AURS	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	3.70	
AURS	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	1.60	
AURS	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	1.30	
AURS	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	0.90	
AURS	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 1, 2012	22	CO (PPM)	0.56	-9.00	0.56	1.00	
AURS	1	Episode Day 1, 2012	23	CO (PPM)	0.53	-9.00	0.53	0.90	
AURS	1	Episode Day 2, 2012	0	CO (PPM)	0.40	-9.00	0.40	0.80	
AURS	1	Episode Day 2, 2012	1	CO (PPM)	0.31	-9.00	0.31	0.50	
AURS	1	Episode Day 2, 2012	2	CO (PPM)	0.27	-9.00	0.27	0.30	
AURS	1	Episode Day 2, 2012	3	CO (PPM)	0.26	-9.00	0.26	0.30	
AURS	1	Episode Day 2, 2012	4	CO (PPM)	0.28	-9.00	0.28	0.30	
AURS	1	Episode Day 2, 2012	5	CO (PPM)	0.32	-9.00	0.32	0.90	
AURS	1	Episode Day 2, 2012	6	CO (PPM)	0.54	-9.00	0.54	2.80	
AURS	1	Episode Day 2, 2012	7	CO (PPM)	1.09	-9.00	1.09	3.90	
AURS	1	Episode Day 2, 2012	8	CO (PPM)	0.65	-9.00	0.65	2.70	
AURS	1	Episode Day 2, 2012	9	CO (PPM)	0.37	-9.00	0.37	2.30	
AURS	1	Episode Day 2, 2012	10	CO (PPM)	0.31	-9.00	0.31	2.10	
AURS	1	Episode Day 2, 2012	11	CO (PPM)	0.35	-9.00	0.35	2.70	
AURS	1	Episode Day 2, 2012	12	CO (PPM)	0.48	-9.00	0.48	2.30	
AURS	1	Episode Day 2, 2012	13	CO (PPM)	0.62	-9.00	0.62	2.50	
AURS	1	Episode Day 2, 2012	14	CO (PPM)	0.83	-9.00	0.83	1.70	
AURS	1	Episode Day 2, 2012	15	CO (PPM)	1.34	-9.00	1.34	2.60	
AURS	1	Episode Day 2, 2012	16	CO (PPM)	3.55	-9.00	3.55	5.30	
AURS	1	Episode Day 2, 2012	17	CO (PPM)	5.76	-9.00	5.76	11.20	
AURS	1	Episode Day 2, 2012	18	CO (PPM)	6.21	-9.00	6.21	5.60	
AURS	1	Episode Day 2, 2012	19	CO (PPM)	3.82	-9.00	3.82	3.00	
AURS	1	Episode Day 2, 2012	20	CO (PPM)	0.93	-9.00	0.93	2.20	
AURS	1	Episode Day 2, 2012	21	CO (PPM)	0.62	-9.00	0.62	1.80	
AURS	1	Episode Day 2, 2012	22	CO (PPM)	0.55	-9.00	0.55	1.70	
AURS	1	Episode Day 2, 2012	23	CO (PPM)	0.41	-9.00	0.41	1.30	
AURS	1	Episode Day 3, 2012	0	CO (PPM)	0.37	-9.00	0.37	0.80	
AURS	1	Episode Day 3, 2012	1	CO (PPM)	0.35	-9.00	0.35	0.50	
AURS	1	Episode Day 3, 2012	2	CO (PPM)	0.28	-9.00	0.28	0.50	
AURS	1	Episode Day 3, 2012	3	CO (PPM)	0.25	-9.00	0.25	0.50	
AURS	1	Episode Day 3, 2012	4	CO (PPM)	0.26	-9.00	0.26	0.70	
AURS	1	Episode Day 3, 2012	5	CO (PPM)	0.30	-9.00	0.30	1.20	
AURS	1	Episode Day 3, 2012	6	CO (PPM)	0.48	-9.00	0.48	5.40	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AURS	1	Episode Day 3, 2012	7	CO (PPM)	1.08	-9.00	1.08	6.90	
AURS	1	Episode Day 3, 2012	8	CO (PPM)	0.54	-9.00	0.54	5.00	
AURS	1	Episode Day 3, 2012	9	CO (PPM)	0.56	-9.00	0.56	3.30	
AURS	1	Episode Day 3, 2012	10	CO (PPM)	0.50	-9.00	0.50	0.90	
AURS	1	Episode Day 3, 2012	11	CO (PPM)	0.45	-9.00	0.45	0.90	
AURS	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	1.80	
AURS	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	3.40	
AURS	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	3.90	
AURS	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	2.70	
AURS	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	3.00	
AURS	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	2.50	
AURS	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	1.50	
AURS	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	1.10	
PLM	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2012	22	CO (PPM)	1.09	-9.00	1.09	-9.00	
PLM	1	Episode Day 1, 2012	23	CO (PPM)	1.13	-9.00	1.13	-9.00	
PLM	1	Episode Day 2, 2012	0	CO (PPM)	0.86	-9.00	0.86	-9.00	
PLM	1	Episode Day 2, 2012	1	CO (PPM)	0.50	-9.00	0.50	-9.00	
PLM	1	Episode Day 2, 2012	2	CO (PPM)	0.41	-9.00	0.41	-9.00	
PLM	1	Episode Day 2, 2012	3	CO (PPM)	0.38	-9.00	0.38	-9.00	
PLM	1	Episode Day 2, 2012	4	CO (PPM)	0.40	-9.00	0.40	-9.00	
PLM	1	Episode Day 2, 2012	5	CO (PPM)	0.43	-9.00	0.43	-9.00	
PLM	1	Episode Day 2, 2012	6	CO (PPM)	0.64	-9.00	0.64	-9.00	
PLM	1	Episode Day 2, 2012	7	CO (PPM)	1.58	-9.00	1.58	-9.00	
PLM	1	Episode Day 2, 2012	8	CO (PPM)	1.07	-9.00	1.07	-9.00	
PLM	1	Episode Day 2, 2012	9	CO (PPM)	0.82	-9.00	0.82	-9.00	
PLM	1	Episode Day 2, 2012	10	CO (PPM)	0.52	-9.00	0.52	-9.00	
PLM	1	Episode Day 2, 2012	11	CO (PPM)	0.51	-9.00	0.51	-9.00	
PLM	1	Episode Day 2, 2012	12	CO (PPM)	0.59	-9.00	0.59	-9.00	
PLM	1	Episode Day 2, 2012	13	CO (PPM)	0.65	-9.00	0.65	-9.00	
PLM	1	Episode Day 2, 2012	14	CO (PPM)	0.95	-9.00	0.95	-9.00	
PLM	1	Episode Day 2, 2012	15	CO (PPM)	1.54	-9.00	1.54	-9.00	
PLM	1	Episode Day 2, 2012	16	CO (PPM)	3.13	-9.00	3.13	-9.00	
PLM	1	Episode Day 2, 2012	17	CO (PPM)	4.05	-9.00	4.05	-9.00	
PLM	1	Episode Day 2, 2012	18	CO (PPM)	4.66	-9.00	4.66	-9.00	
PLM	1	Episode Day 2, 2012	19	CO (PPM)	5.93	-9.00	5.93	-9.00	
PLM	1	Episode Day 2, 2012	20	CO (PPM)	1.98	-9.00	1.98	-9.00	
PLM	1	Episode Day 2, 2012	21	CO (PPM)	1.04	-9.00	1.04	-9.00	
PLM	1	Episode Day 2, 2012	22	CO (PPM)	1.07	-9.00	1.07	-9.00	
PLM	1	Episode Day 2, 2012	23	CO (PPM)	0.82	-9.00	0.82	-9.00	
PLM	1	Episode Day 3, 2012	0	CO (PPM)	0.57	-9.00	0.57	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
PLM	1	Episode Day 3, 2012	1	CO (PPM)	0.47	-9.00	0.47	-9.00	
PLM	1	Episode Day 3, 2012	2	CO (PPM)	0.39	-9.00	0.39	-9.00	
PLM	1	Episode Day 3, 2012	3	CO (PPM)	0.31	-9.00	0.31	-9.00	
PLM	1	Episode Day 3, 2012	4	CO (PPM)	0.31	-9.00	0.31	-9.00	
PLM	1	Episode Day 3, 2012	5	CO (PPM)	0.37	-9.00	0.37	-9.00	
PLM	1	Episode Day 3, 2012	6	CO (PPM)	0.55	-9.00	0.55	-9.00	
PLM	1	Episode Day 3, 2012	7	CO (PPM)	1.48	-9.00	1.48	-9.00	
PLM	1	Episode Day 3, 2012	8	CO (PPM)	0.91	-9.00	0.91	-9.00	
PLM	1	Episode Day 3, 2012	9	CO (PPM)	0.73	-9.00	0.73	-9.00	
PLM	1	Episode Day 3, 2012	10	CO (PPM)	0.69	-9.00	0.69	-9.00	
PLM	1	Episode Day 3, 2012	11	CO (PPM)	0.78	-9.00	0.78	-9.00	
PLM	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2012	22	CO (PPM)	0.27	-9.00	0.27	-9.00	
BTN	1	Episode Day 1, 2012	23	CO (PPM)	0.30	-9.00	0.30	-9.00	
BTN	1	Episode Day 2, 2012	0	CO (PPM)	0.42	-9.00	0.42	-9.00	
BTN	1	Episode Day 2, 2012	1	CO (PPM)	0.52	-9.00	0.52	-9.00	
BTN	1	Episode Day 2, 2012	2	CO (PPM)	0.49	-9.00	0.49	-9.00	
BTN	1	Episode Day 2, 2012	3	CO (PPM)	0.44	-9.00	0.44	-9.00	
BTN	1	Episode Day 2, 2012	4	CO (PPM)	0.36	-9.00	0.36	-9.00	
BTN	1	Episode Day 2, 2012	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
BTN	1	Episode Day 2, 2012	6	CO (PPM)	0.32	-9.00	0.32	-9.00	
BTN	1	Episode Day 2, 2012	7	CO (PPM)	0.51	-9.00	0.51	-9.00	
BTN	1	Episode Day 2, 2012	8	CO (PPM)	0.47	-9.00	0.47	-9.00	
BTN	1	Episode Day 2, 2012	9	CO (PPM)	0.54	-9.00	0.54	-9.00	
BTN	1	Episode Day 2, 2012	10	CO (PPM)	0.65	-9.00	0.65	-9.00	
BTN	1	Episode Day 2, 2012	11	CO (PPM)	0.77	-9.00	0.77	-9.00	
BTN	1	Episode Day 2, 2012	12	CO (PPM)	0.76	-9.00	0.76	-9.00	
BTN	1	Episode Day 2, 2012	13	CO (PPM)	0.74	-9.00	0.74	-9.00	
BTN	1	Episode Day 2, 2012	14	CO (PPM)	0.78	-9.00	0.78	-9.00	
BTN	1	Episode Day 2, 2012	15	CO (PPM)	0.91	-9.00	0.91	-9.00	
BTN	1	Episode Day 2, 2012	16	CO (PPM)	1.24	-9.00	1.24	-9.00	
BTN	1	Episode Day 2, 2012	17	CO (PPM)	1.43	-9.00	1.43	-9.00	
BTN	1	Episode Day 2, 2012	18	CO (PPM)	1.53	-9.00	1.53	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
BTN	1	Episode Day 2, 2012	19	CO (PPM)	1.23	-9.00	1.23	-9.00	
BTN	1	Episode Day 2, 2012	20	CO (PPM)	0.75	-9.00	0.75	-9.00	
BTN	1	Episode Day 2, 2012	21	CO (PPM)	0.86	-9.00	0.86	-9.00	
BTN	1	Episode Day 2, 2012	22	CO (PPM)	1.39	-9.00	1.39	-9.00	
BTN	1	Episode Day 2, 2012	23	CO (PPM)	1.68	-9.00	1.68	-9.00	
BTN	1	Episode Day 3, 2012	0	CO (PPM)	1.05	-9.00	1.05	-9.00	
BTN	1	Episode Day 3, 2012	1	CO (PPM)	0.80	-9.00	0.80	-9.00	
BTN	1	Episode Day 3, 2012	2	CO (PPM)	0.61	-9.00	0.61	-9.00	
BTN	1	Episode Day 3, 2012	3	CO (PPM)	0.41	-9.00	0.41	-9.00	
BTN	1	Episode Day 3, 2012	4	CO (PPM)	0.34	-9.00	0.34	-9.00	
BTN	1	Episode Day 3, 2012	5	CO (PPM)	0.33	-9.00	0.33	-9.00	
BTN	1	Episode Day 3, 2012	6	CO (PPM)	0.38	-9.00	0.38	-9.00	
BTN	1	Episode Day 3, 2012	7	CO (PPM)	0.42	-9.00	0.42	-9.00	
BTN	1	Episode Day 3, 2012	8	CO (PPM)	0.35	-9.00	0.35	-9.00	
BTN	1	Episode Day 3, 2012	9	CO (PPM)	0.39	-9.00	0.39	-9.00	
BTN	1	Episode Day 3, 2012	10	CO (PPM)	0.35	-9.00	0.35	-9.00	
BTN	1	Episode Day 3, 2012	11	CO (PPM)	0.26	-9.00	0.26	-9.00	
BTN	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2012	22	CO (PPM)	1.10	-9.00	1.10	-9.00	
U_1	1	Episode Day 1, 2012	23	CO (PPM)	1.14	-9.00	1.14	-9.00	
U_1	1	Episode Day 2, 2012	0	CO (PPM)	0.84	-9.00	0.84	-9.00	
U_1	1	Episode Day 2, 2012	1	CO (PPM)	0.54	-9.00	0.54	-9.00	
U_1	1	Episode Day 2, 2012	2	CO (PPM)	0.44	-9.00	0.44	-9.00	
U_1	1	Episode Day 2, 2012	3	CO (PPM)	0.41	-9.00	0.41	-9.00	
U_1	1	Episode Day 2, 2012	4	CO (PPM)	0.44	-9.00	0.44	-9.00	
U_1	1	Episode Day 2, 2012	5	CO (PPM)	0.48	-9.00	0.48	-9.00	
U_1	1	Episode Day 2, 2012	6	CO (PPM)	0.70	-9.00	0.70	-9.00	
U_1	1	Episode Day 2, 2012	7	CO (PPM)	1.86	-9.00	1.86	-9.00	
U_1	1	Episode Day 2, 2012	8	CO (PPM)	1.22	-9.00	1.22	-9.00	
U_1	1	Episode Day 2, 2012	9	CO (PPM)	0.74	-9.00	0.74	-9.00	
U_1	1	Episode Day 2, 2012	10	CO (PPM)	0.50	-9.00	0.50	-9.00	
U_1	1	Episode Day 2, 2012	11	CO (PPM)	0.56	-9.00	0.56	-9.00	
U_1	1	Episode Day 2, 2012	12	CO (PPM)	0.75	-9.00	0.75	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
U_1	1	Episode Day 2, 2012	13	CO (PPM)	0.95	-9.00	0.95	-9.00	
U_1	1	Episode Day 2, 2012	14	CO (PPM)	1.52	-9.00	1.52	-9.00	
U_1	1	Episode Day 2, 2012	15	CO (PPM)	2.12	-9.00	2.12	-9.00	
U_1	1	Episode Day 2, 2012	16	CO (PPM)	5.03	-9.00	5.03	-9.00	
U_1	1	Episode Day 2, 2012	17	CO (PPM)	8.62	-9.00	8.62	-9.00	
U_1	1	Episode Day 2, 2012	18	CO (PPM)	8.64	-9.00	8.64	-9.00	
U_1	1	Episode Day 2, 2012	19	CO (PPM)	2.73	-9.00	2.73	-9.00	
U_1	1	Episode Day 2, 2012	20	CO (PPM)	1.15	-9.00	1.15	-9.00	
U_1	1	Episode Day 2, 2012	21	CO (PPM)	1.02	-9.00	1.02	-9.00	
U_1	1	Episode Day 2, 2012	22	CO (PPM)	0.99	-9.00	0.99	-9.00	
U_1	1	Episode Day 2, 2012	23	CO (PPM)	0.87	-9.00	0.87	-9.00	
U_1	1	Episode Day 3, 2012	0	CO (PPM)	0.67	-9.00	0.67	-9.00	
U_1	1	Episode Day 3, 2012	1	CO (PPM)	0.58	-9.00	0.58	-9.00	
U_1	1	Episode Day 3, 2012	2	CO (PPM)	0.41	-9.00	0.41	-9.00	
U_1	1	Episode Day 3, 2012	3	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_1	1	Episode Day 3, 2012	4	CO (PPM)	0.34	-9.00	0.34	-9.00	
U_1	1	Episode Day 3, 2012	5	CO (PPM)	0.47	-9.00	0.47	-9.00	
U_1	1	Episode Day 3, 2012	6	CO (PPM)	0.86	-9.00	0.86	-9.00	
U_1	1	Episode Day 3, 2012	7	CO (PPM)	2.35	-9.00	2.35	-9.00	
U_1	1	Episode Day 3, 2012	8	CO (PPM)	1.47	-9.00	1.47	-9.00	
U_1	1	Episode Day 3, 2012	9	CO (PPM)	1.03	-9.00	1.03	-9.00	
U_1	1	Episode Day 3, 2012	10	CO (PPM)	0.89	-9.00	0.89	-9.00	
U_1	1	Episode Day 3, 2012	11	CO (PPM)	0.86	-9.00	0.86	-9.00	
U_1	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2012	22	CO (PPM)	1.34	-9.00	1.34	-9.00	
F_A	1	Episode Day 1, 2012	23	CO (PPM)	0.65	-9.00	0.65	-9.00	
F_A	1	Episode Day 2, 2012	0	CO (PPM)	0.29	-9.00	0.29	-9.00	
F_A	1	Episode Day 2, 2012	1	CO (PPM)	0.25	-9.00	0.25	-9.00	
F_A	1	Episode Day 2, 2012	2	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 2, 2012	3	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 2, 2012	4	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 2, 2012	5	CO (PPM)	0.34	-9.00	0.34	-9.00	
F_A	1	Episode Day 2, 2012	6	CO (PPM)	0.62	-9.00	0.62	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
F_A	1	Episode Day 2, 2012	7	CO (PPM)	1.30	-9.00	1.30	-9.00	
F_A	1	Episode Day 2, 2012	8	CO (PPM)	0.65	-9.00	0.65	-9.00	
F_A	1	Episode Day 2, 2012	9	CO (PPM)	0.60	-9.00	0.60	-9.00	
F_A	1	Episode Day 2, 2012	10	CO (PPM)	0.59	-9.00	0.59	-9.00	
F_A	1	Episode Day 2, 2012	11	CO (PPM)	0.54	-9.00	0.54	-9.00	
F_A	1	Episode Day 2, 2012	12	CO (PPM)	0.51	-9.00	0.51	-9.00	
F_A	1	Episode Day 2, 2012	13	CO (PPM)	0.48	-9.00	0.48	-9.00	
F_A	1	Episode Day 2, 2012	14	CO (PPM)	0.66	-9.00	0.66	-9.00	
F_A	1	Episode Day 2, 2012	15	CO (PPM)	1.19	-9.00	1.19	-9.00	
F_A	1	Episode Day 2, 2012	16	CO (PPM)	1.77	-9.00	1.77	-9.00	
F_A	1	Episode Day 2, 2012	17	CO (PPM)	0.97	-9.00	0.97	-9.00	
F_A	1	Episode Day 2, 2012	18	CO (PPM)	0.74	-9.00	0.74	-9.00	
F_A	1	Episode Day 2, 2012	19	CO (PPM)	0.77	-9.00	0.77	-9.00	
F_A	1	Episode Day 2, 2012	20	CO (PPM)	0.66	-9.00	0.66	-9.00	
F_A	1	Episode Day 2, 2012	21	CO (PPM)	0.48	-9.00	0.48	-9.00	
F_A	1	Episode Day 2, 2012	22	CO (PPM)	0.36	-9.00	0.36	-9.00	
F_A	1	Episode Day 2, 2012	23	CO (PPM)	0.30	-9.00	0.30	-9.00	
F_A	1	Episode Day 3, 2012	0	CO (PPM)	0.28	-9.00	0.28	-9.00	
F_A	1	Episode Day 3, 2012	1	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2012	2	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2012	3	CO (PPM)	0.27	-9.00	0.27	-9.00	
F_A	1	Episode Day 3, 2012	4	CO (PPM)	0.29	-9.00	0.29	-9.00	
F_A	1	Episode Day 3, 2012	5	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2012	6	CO (PPM)	0.44	-9.00	0.44	-9.00	
F_A	1	Episode Day 3, 2012	7	CO (PPM)	1.13	-9.00	1.13	-9.00	
F_A	1	Episode Day 3, 2012	8	CO (PPM)	0.64	-9.00	0.64	-9.00	
F_A	1	Episode Day 3, 2012	9	CO (PPM)	0.44	-9.00	0.44	-9.00	
F_A	1	Episode Day 3, 2012	10	CO (PPM)	0.31	-9.00	0.31	-9.00	
F_A	1	Episode Day 3, 2012	11	CO (PPM)	0.38	-9.00	0.38	-9.00	
F_A	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2012	22	CO (PPM)	0.60	-9.00	0.60	-9.00	
H_U	1	Episode Day 1, 2012	23	CO (PPM)	0.40	-9.00	0.40	-9.00	
H_U	1	Episode Day 2, 2012	0	CO (PPM)	0.34	-9.00	0.34	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
H_U	1	Episode Day 2, 2012	1	CO (PPM)	0.31	-9.00	0.31	-9.00	
H_U	1	Episode Day 2, 2012	2	CO (PPM)	0.28	-9.00	0.28	-9.00	
H_U	1	Episode Day 2, 2012	3	CO (PPM)	0.28	-9.00	0.28	-9.00	
H_U	1	Episode Day 2, 2012	4	CO (PPM)	0.29	-9.00	0.29	-9.00	
H_U	1	Episode Day 2, 2012	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
H_U	1	Episode Day 2, 2012	6	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2012	7	CO (PPM)	0.77	-9.00	0.77	-9.00	
H_U	1	Episode Day 2, 2012	8	CO (PPM)	0.54	-9.00	0.54	-9.00	
H_U	1	Episode Day 2, 2012	9	CO (PPM)	0.33	-9.00	0.33	-9.00	
H_U	1	Episode Day 2, 2012	10	CO (PPM)	0.29	-9.00	0.29	-9.00	
H_U	1	Episode Day 2, 2012	11	CO (PPM)	0.32	-9.00	0.32	-9.00	
H_U	1	Episode Day 2, 2012	12	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2012	13	CO (PPM)	0.59	-9.00	0.59	-9.00	
H_U	1	Episode Day 2, 2012	14	CO (PPM)	1.00	-9.00	1.00	-9.00	
H_U	1	Episode Day 2, 2012	15	CO (PPM)	1.85	-9.00	1.85	-9.00	
H_U	1	Episode Day 2, 2012	16	CO (PPM)	4.14	-9.00	4.14	-9.00	
H_U	1	Episode Day 2, 2012	17	CO (PPM)	4.43	-9.00	4.43	-9.00	
H_U	1	Episode Day 2, 2012	18	CO (PPM)	1.76	-9.00	1.76	-9.00	
H_U	1	Episode Day 2, 2012	19	CO (PPM)	0.80	-9.00	0.80	-9.00	
H_U	1	Episode Day 2, 2012	20	CO (PPM)	0.44	-9.00	0.44	-9.00	
H_U	1	Episode Day 2, 2012	21	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2012	22	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2012	23	CO (PPM)	0.37	-9.00	0.37	-9.00	
H_U	1	Episode Day 3, 2012	0	CO (PPM)	0.35	-9.00	0.35	-9.00	
H_U	1	Episode Day 3, 2012	1	CO (PPM)	0.33	-9.00	0.33	-9.00	
H_U	1	Episode Day 3, 2012	2	CO (PPM)	0.27	-9.00	0.27	-9.00	
H_U	1	Episode Day 3, 2012	3	CO (PPM)	0.26	-9.00	0.26	-9.00	
H_U	1	Episode Day 3, 2012	4	CO (PPM)	0.26	-9.00	0.26	-9.00	
H_U	1	Episode Day 3, 2012	5	CO (PPM)	0.28	-9.00	0.28	-9.00	
H_U	1	Episode Day 3, 2012	6	CO (PPM)	0.42	-9.00	0.42	-9.00	
H_U	1	Episode Day 3, 2012	7	CO (PPM)	1.09	-9.00	1.09	-9.00	
H_U	1	Episode Day 3, 2012	8	CO (PPM)	0.56	-9.00	0.56	-9.00	
H_U	1	Episode Day 3, 2012	9	CO (PPM)	0.57	-9.00	0.57	-9.00	
H_U	1	Episode Day 3, 2012	10	CO (PPM)	0.61	-9.00	0.61	-9.00	
H_U	1	Episode Day 3, 2012	11	CO (PPM)	0.61	-9.00	0.61	-9.00	
H_U	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
U_A	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2012	22	CO (PPM)	0.29	-9.00	0.29	-9.00	
U_A	1	Episode Day 1, 2012	23	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 2, 2012	0	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 2, 2012	1	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 2, 2012	2	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 2, 2012	3	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 2, 2012	4	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 2, 2012	5	CO (PPM)	0.24	-9.00	0.24	-9.00	
U_A	1	Episode Day 2, 2012	6	CO (PPM)	0.31	-9.00	0.31	-9.00	
U_A	1	Episode Day 2, 2012	7	CO (PPM)	0.44	-9.00	0.44	-9.00	
U_A	1	Episode Day 2, 2012	8	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2012	9	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 2, 2012	10	CO (PPM)	0.24	-9.00	0.24	-9.00	
U_A	1	Episode Day 2, 2012	11	CO (PPM)	0.27	-9.00	0.27	-9.00	
U_A	1	Episode Day 2, 2012	12	CO (PPM)	0.41	-9.00	0.41	-9.00	
U_A	1	Episode Day 2, 2012	13	CO (PPM)	0.48	-9.00	0.48	-9.00	
U_A	1	Episode Day 2, 2012	14	CO (PPM)	0.69	-9.00	0.69	-9.00	
U_A	1	Episode Day 2, 2012	15	CO (PPM)	1.17	-9.00	1.17	-9.00	
U_A	1	Episode Day 2, 2012	16	CO (PPM)	2.90	-9.00	2.90	-9.00	
U_A	1	Episode Day 2, 2012	17	CO (PPM)	3.28	-9.00	3.28	-9.00	
U_A	1	Episode Day 2, 2012	18	CO (PPM)	1.35	-9.00	1.35	-9.00	
U_A	1	Episode Day 2, 2012	19	CO (PPM)	0.46	-9.00	0.46	-9.00	
U_A	1	Episode Day 2, 2012	20	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2012	21	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2012	22	CO (PPM)	0.29	-9.00	0.29	-9.00	
U_A	1	Episode Day 2, 2012	23	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 3, 2012	0	CO (PPM)	0.27	-9.00	0.27	-9.00	
U_A	1	Episode Day 3, 2012	1	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 3, 2012	2	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 3, 2012	3	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 3, 2012	4	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 3, 2012	5	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 3, 2012	6	CO (PPM)	0.34	-9.00	0.34	-9.00	
U_A	1	Episode Day 3, 2012	7	CO (PPM)	0.96	-9.00	0.96	-9.00	
U_A	1	Episode Day 3, 2012	8	CO (PPM)	0.59	-9.00	0.59	-9.00	
U_A	1	Episode Day 3, 2012	9	CO (PPM)	0.63	-9.00	0.63	-9.00	
U_A	1	Episode Day 3, 2012	10	CO (PPM)	0.56	-9.00	0.56	-9.00	
U_A	1	Episode Day 3, 2012	11	CO (PPM)	0.45	-9.00	0.45	-9.00	
U_A	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
P_I	1	Episode Day 1, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2012	22	CO (PPM)	0.71	-9.00	0.71	-9.00	
P_I	1	Episode Day 1, 2012	23	CO (PPM)	0.62	-9.00	0.62	-9.00	
P_I	1	Episode Day 2, 2012	0	CO (PPM)	0.45	-9.00	0.45	-9.00	
P_I	1	Episode Day 2, 2012	1	CO (PPM)	0.35	-9.00	0.35	-9.00	
P_I	1	Episode Day 2, 2012	2	CO (PPM)	0.30	-9.00	0.30	-9.00	
P_I	1	Episode Day 2, 2012	3	CO (PPM)	0.29	-9.00	0.29	-9.00	
P_I	1	Episode Day 2, 2012	4	CO (PPM)	0.31	-9.00	0.31	-9.00	
P_I	1	Episode Day 2, 2012	5	CO (PPM)	0.36	-9.00	0.36	-9.00	
P_I	1	Episode Day 2, 2012	6	CO (PPM)	0.59	-9.00	0.59	-9.00	
P_I	1	Episode Day 2, 2012	7	CO (PPM)	1.28	-9.00	1.28	-9.00	
P_I	1	Episode Day 2, 2012	8	CO (PPM)	0.80	-9.00	0.80	-9.00	
P_I	1	Episode Day 2, 2012	9	CO (PPM)	0.42	-9.00	0.42	-9.00	
P_I	1	Episode Day 2, 2012	10	CO (PPM)	0.34	-9.00	0.34	-9.00	
P_I	1	Episode Day 2, 2012	11	CO (PPM)	0.38	-9.00	0.38	-9.00	
P_I	1	Episode Day 2, 2012	12	CO (PPM)	0.50	-9.00	0.50	-9.00	
P_I	1	Episode Day 2, 2012	13	CO (PPM)	0.56	-9.00	0.56	-9.00	
P_I	1	Episode Day 2, 2012	14	CO (PPM)	0.78	-9.00	0.78	-9.00	
P_I	1	Episode Day 2, 2012	15	CO (PPM)	1.28	-9.00	1.28	-9.00	
P_I	1	Episode Day 2, 2012	16	CO (PPM)	3.05	-9.00	3.05	-9.00	
P_I	1	Episode Day 2, 2012	17	CO (PPM)	4.87	-9.00	4.87	-9.00	
P_I	1	Episode Day 2, 2012	18	CO (PPM)	5.99	-9.00	5.99	-9.00	
P_I	1	Episode Day 2, 2012	19	CO (PPM)	3.08	-9.00	3.08	-9.00	
P_I	1	Episode Day 2, 2012	20	CO (PPM)	1.04	-9.00	1.04	-9.00	
P_I	1	Episode Day 2, 2012	21	CO (PPM)	0.70	-9.00	0.70	-9.00	
P_I	1	Episode Day 2, 2012	22	CO (PPM)	0.67	-9.00	0.67	-9.00	
P_I	1	Episode Day 2, 2012	23	CO (PPM)	0.48	-9.00	0.48	-9.00	
P_I	1	Episode Day 3, 2012	0	CO (PPM)	0.40	-9.00	0.40	-9.00	
P_I	1	Episode Day 3, 2012	1	CO (PPM)	0.36	-9.00	0.36	-9.00	
P_I	1	Episode Day 3, 2012	2	CO (PPM)	0.28	-9.00	0.28	-9.00	
P_I	1	Episode Day 3, 2012	3	CO (PPM)	0.26	-9.00	0.26	-9.00	
P_I	1	Episode Day 3, 2012	4	CO (PPM)	0.27	-9.00	0.27	-9.00	
P_I	1	Episode Day 3, 2012	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
P_I	1	Episode Day 3, 2012	6	CO (PPM)	0.53	-9.00	0.53	-9.00	
P_I	1	Episode Day 3, 2012	7	CO (PPM)	1.28	-9.00	1.28	-9.00	
P_I	1	Episode Day 3, 2012	8	CO (PPM)	0.73	-9.00	0.73	-9.00	
P_I	1	Episode Day 3, 2012	9	CO (PPM)	0.72	-9.00	0.72	-9.00	
P_I	1	Episode Day 3, 2012	10	CO (PPM)	0.64	-9.00	0.64	-9.00	
P_I	1	Episode Day 3, 2012	11	CO (PPM)	0.52	-9.00	0.52	-9.00	
P_I	1	Episode Day 3, 2012	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2012	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

CMP	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CMP	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	2.04	
CMP	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	1.90	
CMP	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	1.84	
CMP	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	1.81	
CMP	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	1.70	
CMP	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	1.59	
CMP	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	1.56	
CMP	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.57	
CMP	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.74	
CMP	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	2.36	
CMP	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	3.15	
CMP	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	3.84	
CMP	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	4.06	
CMP	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	3.96	
CMP	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	3.91	
CMP	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	3.84	
CMP	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	3.69	
CMP	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	3.08	
CMP	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	2.23	
CMP	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	1.38	
CMP	8	Episode Day 2, 2012	3	CO (PPM)	1.45	NA	1.45	0.93	
CMP	8	Episode Day 2, 2012	4	CO (PPM)	1.36	NA	1.36	0.76	
CMP	8	Episode Day 2, 2012	5	CO (PPM)	1.28	NA	1.28	0.65	
CMP	8	Episode Day 2, 2012	6	CO (PPM)	1.24	NA	1.24	0.63	
CMP	8	Episode Day 2, 2012	7	CO (PPM)	1.38	NA	1.38	0.94	
CMP	8	Episode Day 2, 2012	8	CO (PPM)	1.31	NA	1.31	1.43	
CMP	8	Episode Day 2, 2012	9	CO (PPM)	1.23	NA	1.23	1.69	
CMP	8	Episode Day 2, 2012	10	CO (PPM)	1.24	NA	1.24	2.05	
CMP	8	Episode Day 2, 2012	11	CO (PPM)	1.30	NA	1.30	2.61	
CMP	8	Episode Day 2, 2012	12	CO (PPM)	1.37	NA	1.37	3.11	
CMP	8	Episode Day 2, 2012	13	CO (PPM)	1.46	NA	1.46	3.61	
CMP	8	Episode Day 2, 2012	14	CO (PPM)	1.57	NA	1.57	4.08	
CMP	8	Episode Day 2, 2012	15	CO (PPM)	1.59	NA	1.59	4.44	
CMP	8	Episode Day 2, 2012	16	CO (PPM)	2.48	NA	2.48	9.39	
CMP	8	Episode Day 2, 2012	17	CO (PPM)	4.08	NA	4.08	15.34	
CMP	8	Episode Day 2, 2012	18	CO (PPM)	5.79	NA	5.79	18.73	
CMP	8	Episode Day 2, 2012	19	CO (PPM)	7.03	NA	7.03	18.65	
CMP	8	Episode Day 2, 2012	20	CO (PPM)	7.43	NA	7.43	18.41	
CMP	8	Episode Day 2, 2012	21	CO (PPM)	7.68	NA	7.68	18.16	
CMP	8	Episode Day 2, 2012	22	CO (PPM)	7.89	NA	7.89	18.08	
CMP	8	Episode Day 2, 2012	23	CO (PPM)	7.93	NA	7.93	17.70	
CMP	8	Episode Day 3, 2012	0	CO (PPM)	7.12	NA	7.12	12.64	
CMP	8	Episode Day 3, 2012	1	CO (PPM)	5.59	NA	5.59	6.65	
CMP	8	Episode Day 3, 2012	2	CO (PPM)	3.88	NA	3.88	3.04	
CMP	8	Episode Day 3, 2012	3	CO (PPM)	2.56	NA	2.56	2.65	
CMP	8	Episode Day 3, 2012	4	CO (PPM)	2.07	NA	2.07	2.53	
CMP	8	Episode Day 3, 2012	5	CO (PPM)	1.79	NA	1.79	2.54	
CMP	8	Episode Day 3, 2012	6	CO (PPM)	1.61	NA	1.61	2.70	
CMP	8	Episode Day 3, 2012	7	CO (PPM)	1.78	NA	1.78	3.36	
CMP	8	Episode Day 3, 2012	8	CO (PPM)	1.82	NA	1.82	4.14	
CMP	8	Episode Day 3, 2012	9	CO (PPM)	1.91	NA	1.91	4.71	
CMP	8	Episode Day 3, 2012	10	CO (PPM)	2.05	NA	2.05	5.21	
CMP	8	Episode Day 3, 2012	11	CO (PPM)	2.16	NA	2.16	5.56	
CMP	8	Episode Day 3, 2012	12	CO (PPM)	2.38	NA	2.38	5.74	
CMP	8	Episode Day 3, 2012	13	CO (PPM)	2.57	NA	2.57	5.69	
CMP	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	5.35	
CMP	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	4.64	
CMP	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	4.56	
CMP	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	5.28	
CMP	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	5.30	
CMP	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	5.34	
CMP	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	5.69	
CMP	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	5.94	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CMP	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	6.00	
CMP	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	6.11	
WBY	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	2.44	
WBY	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	2.14	
WBY	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	1.73	
WBY	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	1.48	
WBY	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	1.23	
WBY	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	1.16	
WBY	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	1.14	
WBY	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.01	
WBY	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	0.85	
WBY	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	0.75	
WBY	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.14	
WBY	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	1.69	
WBY	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	1.94	
WBY	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	2.41	
WBY	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	2.61	
WBY	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	2.76	
WBY	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	2.95	
WBY	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	3.39	
WBY	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	3.28	
WBY	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	2.88	
WBY	8	Episode Day 2, 2012	3	CO (PPM)	1.32	NA	1.32	2.70	
WBY	8	Episode Day 2, 2012	4	CO (PPM)	1.26	NA	1.26	2.30	
WBY	8	Episode Day 2, 2012	5	CO (PPM)	1.21	NA	1.21	2.21	
WBY	8	Episode Day 2, 2012	6	CO (PPM)	1.19	NA	1.19	2.24	
WBY	8	Episode Day 2, 2012	7	CO (PPM)	1.21	NA	1.21	2.71	
WBY	8	Episode Day 2, 2012	8	CO (PPM)	1.14	NA	1.14	3.04	
WBY	8	Episode Day 2, 2012	9	CO (PPM)	1.08	NA	1.08	3.22	
WBY	8	Episode Day 2, 2012	10	CO (PPM)	1.05	NA	1.05	3.26	
WBY	8	Episode Day 2, 2012	11	CO (PPM)	1.02	NA	1.02	3.24	
WBY	8	Episode Day 2, 2012	12	CO (PPM)	1.00	NA	1.00	3.17	
WBY	8	Episode Day 2, 2012	13	CO (PPM)	0.97	NA	0.97	3.11	
WBY	8	Episode Day 2, 2012	14	CO (PPM)	0.93	NA	0.93	3.02	
WBY	8	Episode Day 2, 2012	15	CO (PPM)	0.84	NA	0.84	2.46	
WBY	8	Episode Day 2, 2012	16	CO (PPM)	0.91	NA	0.91	1.92	
WBY	8	Episode Day 2, 2012	17	CO (PPM)	1.12	NA	1.12	2.50	
WBY	8	Episode Day 2, 2012	18	CO (PPM)	1.44	NA	1.44	3.86	
WBY	8	Episode Day 2, 2012	19	CO (PPM)	1.67	NA	1.67	4.86	
WBY	8	Episode Day 2, 2012	20	CO (PPM)	2.04	NA	2.04	5.71	
WBY	8	Episode Day 2, 2012	21	CO (PPM)	2.61	NA	2.61	6.39	
WBY	8	Episode Day 2, 2012	22	CO (PPM)	3.18	NA	3.18	7.17	
WBY	8	Episode Day 2, 2012	23	CO (PPM)	3.73	NA	3.73	8.09	
WBY	8	Episode Day 3, 2012	0	CO (PPM)	4.09	NA	4.09	8.94	
WBY	8	Episode Day 3, 2012	1	CO (PPM)	4.09	NA	4.09	8.66	
WBY	8	Episode Day 3, 2012	2	CO (PPM)	3.81	NA	3.81	7.36	
WBY	8	Episode Day 3, 2012	3	CO (PPM)	3.56	NA	3.56	6.40	
WBY	8	Episode Day 3, 2012	4	CO (PPM)	3.18	NA	3.18	5.64	
WBY	8	Episode Day 3, 2012	5	CO (PPM)	2.63	NA	2.63	5.06	
WBY	8	Episode Day 3, 2012	6	CO (PPM)	2.08	NA	2.08	4.50	
WBY	8	Episode Day 3, 2012	7	CO (PPM)	1.56	NA	1.56	3.79	
WBY	8	Episode Day 3, 2012	8	CO (PPM)	1.13	NA	1.13	2.99	
WBY	8	Episode Day 3, 2012	9	CO (PPM)	0.94	NA	0.94	2.46	
WBY	8	Episode Day 3, 2012	10	CO (PPM)	0.92	NA	0.92	2.41	
WBY	8	Episode Day 3, 2012	11	CO (PPM)	0.93	NA	0.93	2.26	
WBY	8	Episode Day 3, 2012	12	CO (PPM)	0.97	NA	0.97	2.09	
WBY	8	Episode Day 3, 2012	13	CO (PPM)	1.02	NA	1.02	1.89	
WBY	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.53	
WBY	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.17	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
WBY	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.13	
WBY	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	0.88	
WBY	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	0.70	
WBY	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	1.01	
WBY	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	1.73	
WBY	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	2.44	
WBY	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	3.08	
WBY	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	3.59	
CRG	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	2.91	
CRG	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	2.54	
CRG	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	2.14	
CRG	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	1.85	
CRG	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	1.55	
CRG	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	1.51	
CRG	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	1.45	
CRG	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.30	
CRG	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.10	
CRG	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.19	
CRG	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.86	
CRG	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	2.77	
CRG	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	4.16	
CRG	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	4.51	
CRG	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	4.94	
CRG	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	5.37	
CRG	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	5.11	
CRG	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	5.28	
CRG	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	5.14	
CRG	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	4.58	
CRG	8	Episode Day 2, 2012	3	CO (PPM)	1.72	NA	1.72	3.54	
CRG	8	Episode Day 2, 2012	4	CO (PPM)	1.56	NA	1.56	3.43	
CRG	8	Episode Day 2, 2012	5	CO (PPM)	1.44	NA	1.44	3.34	
CRG	8	Episode Day 2, 2012	6	CO (PPM)	1.34	NA	1.34	3.63	
CRG	8	Episode Day 2, 2012	7	CO (PPM)	1.32	NA	1.32	4.48	
CRG	8	Episode Day 2, 2012	8	CO (PPM)	1.16	NA	1.16	5.33	
CRG	8	Episode Day 2, 2012	9	CO (PPM)	0.99	NA	0.99	5.21	
CRG	8	Episode Day 2, 2012	10	CO (PPM)	0.91	NA	0.91	5.01	
CRG	8	Episode Day 2, 2012	11	CO (PPM)	0.92	NA	0.92	4.85	
CRG	8	Episode Day 2, 2012	12	CO (PPM)	0.98	NA	0.98	4.71	
CRG	8	Episode Day 2, 2012	13	CO (PPM)	1.05	NA	1.05	4.54	
CRG	8	Episode Day 2, 2012	14	CO (PPM)	1.12	NA	1.12	4.01	
CRG	8	Episode Day 2, 2012	15	CO (PPM)	1.12	NA	1.12	2.85	
CRG	8	Episode Day 2, 2012	16	CO (PPM)	1.49	NA	1.49	2.34	
CRG	8	Episode Day 2, 2012	17	CO (PPM)	2.00	NA	2.00	3.03	
CRG	8	Episode Day 2, 2012	18	CO (PPM)	2.56	NA	2.56	4.50	
CRG	8	Episode Day 2, 2012	19	CO (PPM)	3.10	NA	3.10	6.39	
CRG	8	Episode Day 2, 2012	20	CO (PPM)	3.50	NA	3.50	7.80	
CRG	8	Episode Day 2, 2012	21	CO (PPM)	3.78	NA	3.78	8.52	
CRG	8	Episode Day 2, 2012	22	CO (PPM)	3.94	NA	3.94	8.94	
CRG	8	Episode Day 2, 2012	23	CO (PPM)	3.96	NA	3.96	9.91	
CRG	8	Episode Day 3, 2012	0	CO (PPM)	3.68	NA	3.68	10.38	
CRG	8	Episode Day 3, 2012	1	CO (PPM)	3.24	NA	3.24	9.73	
CRG	8	Episode Day 3, 2012	2	CO (PPM)	2.71	NA	2.71	8.69	
CRG	8	Episode Day 3, 2012	3	CO (PPM)	2.17	NA	2.17	7.14	
CRG	8	Episode Day 3, 2012	4	CO (PPM)	1.70	NA	1.70	5.78	
CRG	8	Episode Day 3, 2012	5	CO (PPM)	1.37	NA	1.37	5.26	
CRG	8	Episode Day 3, 2012	6	CO (PPM)	1.21	NA	1.21	5.04	
CRG	8	Episode Day 3, 2012	7	CO (PPM)	1.31	NA	1.31	4.73	
CRG	8	Episode Day 3, 2012	8	CO (PPM)	1.27	NA	1.27	4.10	
CRG	8	Episode Day 3, 2012	9	CO (PPM)	1.24	NA	1.24	4.08	

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High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CRG	8	Episode Day 3, 2012	10	CO (PPM)	1.22	NA	1.22	3.59	
CRG	8	Episode Day 3, 2012	11	CO (PPM)	1.23	NA	1.23	3.54	
CRG	8	Episode Day 3, 2012	12	CO (PPM)	1.33	NA	1.33	3.37	
CRG	8	Episode Day 3, 2012	13	CO (PPM)	1.43	NA	1.43	3.00	
CRG	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	2.60	
CRG	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.74	
CRG	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.30	
CRG	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.71	
CRG	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	2.86	
CRG	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	4.05	
CRG	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	5.23	
CRG	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	6.16	
CRG	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	7.05	
CRG	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	8.00	
NJH	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	2.08	
NJH	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	2.04	
NJH	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	2.13	
NJH	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	2.21	
NJH	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	2.25	
NJH	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	2.10	
NJH	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	1.98	
NJH	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.74	
NJH	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.49	
NJH	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.60	
NJH	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	2.43	
NJH	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	2.66	
NJH	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	2.85	
NJH	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	3.08	
NJH	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	3.28	
NJH	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	3.46	
NJH	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	3.58	
NJH	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	3.50	
NJH	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	2.56	
NJH	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	2.21	
NJH	8	Episode Day 2, 2012	3	CO (PPM)	0.88	NA	0.88	1.96	
NJH	8	Episode Day 2, 2012	4	CO (PPM)	0.82	NA	0.82	1.73	
NJH	8	Episode Day 2, 2012	5	CO (PPM)	0.78	NA	0.78	1.60	
NJH	8	Episode Day 2, 2012	6	CO (PPM)	0.73	NA	0.73	1.71	
NJH	8	Episode Day 2, 2012	7	CO (PPM)	0.80	NA	0.80	2.26	
NJH	8	Episode Day 2, 2012	8	CO (PPM)	0.82	NA	0.82	2.74	
NJH	8	Episode Day 2, 2012	9	CO (PPM)	0.85	NA	0.85	2.97	
NJH	8	Episode Day 2, 2012	10	CO (PPM)	0.87	NA	0.87	3.17	
NJH	8	Episode Day 2, 2012	11	CO (PPM)	0.89	NA	0.89	3.29	
NJH	8	Episode Day 2, 2012	12	CO (PPM)	0.91	NA	0.91	3.42	
NJH	8	Episode Day 2, 2012	13	CO (PPM)	0.94	NA	0.94	3.56	
NJH	8	Episode Day 2, 2012	14	CO (PPM)	0.99	NA	0.99	3.55	
NJH	8	Episode Day 2, 2012	15	CO (PPM)	0.98	NA	0.98	3.32	
NJH	8	Episode Day 2, 2012	16	CO (PPM)	1.25	NA	1.25	5.03	
NJH	8	Episode Day 2, 2012	17	CO (PPM)	1.71	NA	1.71	7.49	
NJH	8	Episode Day 2, 2012	18	CO (PPM)	2.29	NA	2.29	9.60	
NJH	8	Episode Day 2, 2012	19	CO (PPM)	3.01	NA	3.01	10.43	
NJH	8	Episode Day 2, 2012	20	CO (PPM)	3.26	NA	3.26	10.95	
NJH	8	Episode Day 2, 2012	21	CO (PPM)	3.34	NA	3.34	11.16	
NJH	8	Episode Day 2, 2012	22	CO (PPM)	3.37	NA	3.37	11.27	
NJH	8	Episode Day 2, 2012	23	CO (PPM)	3.29	NA	3.29	11.10	
NJH	8	Episode Day 3, 2012	0	CO (PPM)	2.95	NA	2.95	8.92	
NJH	8	Episode Day 3, 2012	1	CO (PPM)	2.46	NA	2.46	6.21	
NJH	8	Episode Day 3, 2012	2	CO (PPM)	1.86	NA	1.86	3.91	
NJH	8	Episode Day 3, 2012	3	CO (PPM)	1.10	NA	1.10	2.94	

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SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
NJH	8	Episode Day 3, 2012	4	CO (PPM)	0.81	NA	0.81	2.25	
NJH	8	Episode Day 3, 2012	5	CO (PPM)	0.70	NA	0.70	1.90	
NJH	8	Episode Day 3, 2012	6	CO (PPM)	0.62	NA	0.62	1.75	
NJH	8	Episode Day 3, 2012	7	CO (PPM)	0.73	NA	0.73	2.22	
NJH	8	Episode Day 3, 2012	8	CO (PPM)	0.79	NA	0.79	2.65	
NJH	8	Episode Day 3, 2012	9	CO (PPM)	0.84	NA	0.84	3.11	
NJH	8	Episode Day 3, 2012	10	CO (PPM)	0.89	NA	0.89	3.40	
NJH	8	Episode Day 3, 2012	11	CO (PPM)	0.95	NA	0.95	3.46	
NJH	8	Episode Day 3, 2012	12	CO (PPM)	1.03	NA	1.03	3.51	
NJH	8	Episode Day 3, 2012	13	CO (PPM)	1.12	NA	1.12	3.79	
NJH	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	3.46	
NJH	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	2.57	
NJH	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	2.39	
NJH	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	2.63	
NJH	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	2.84	
NJH	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	3.64	
NJH	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	4.27	
NJH	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	4.24	
NJH	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	4.61	
NJH	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	4.81	
TIV	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2012	3	CO (PPM)	1.41	NA	1.41	-9.00	
TIV	8	Episode Day 2, 2012	4	CO (PPM)	1.30	NA	1.30	-9.00	
TIV	8	Episode Day 2, 2012	5	CO (PPM)	1.23	NA	1.23	-9.00	
TIV	8	Episode Day 2, 2012	6	CO (PPM)	1.16	NA	1.16	-9.00	
TIV	8	Episode Day 2, 2012	7	CO (PPM)	1.27	NA	1.27	-9.00	
TIV	8	Episode Day 2, 2012	8	CO (PPM)	1.18	NA	1.18	-9.00	
TIV	8	Episode Day 2, 2012	9	CO (PPM)	1.09	NA	1.09	-9.00	
TIV	8	Episode Day 2, 2012	10	CO (PPM)	1.09	NA	1.09	-9.00	
TIV	8	Episode Day 2, 2012	11	CO (PPM)	1.15	NA	1.15	-9.00	
TIV	8	Episode Day 2, 2012	12	CO (PPM)	1.26	NA	1.26	-9.00	
TIV	8	Episode Day 2, 2012	13	CO (PPM)	1.38	NA	1.38	-9.00	
TIV	8	Episode Day 2, 2012	14	CO (PPM)	1.49	NA	1.49	-9.00	
TIV	8	Episode Day 2, 2012	15	CO (PPM)	1.53	NA	1.53	-9.00	
TIV	8	Episode Day 2, 2012	16	CO (PPM)	2.47	NA	2.47	-9.00	
TIV	8	Episode Day 2, 2012	17	CO (PPM)	4.13	NA	4.13	-9.00	
TIV	8	Episode Day 2, 2012	18	CO (PPM)	5.82	NA	5.82	-9.00	
TIV	8	Episode Day 2, 2012	19	CO (PPM)	6.72	NA	6.72	-9.00	
TIV	8	Episode Day 2, 2012	20	CO (PPM)	7.02	NA	7.02	-9.00	
TIV	8	Episode Day 2, 2012	21	CO (PPM)	7.19	NA	7.19	-9.00	

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SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
TIV	8	Episode Day 2, 2012	22	CO (PPM)	7.32	NA	7.32	-9.00	
TIV	8	Episode Day 2, 2012	23	CO (PPM)	7.29	NA	7.29	-9.00	
TIV	8	Episode Day 3, 2012	0	CO (PPM)	6.43	NA	6.43	-9.00	
TIV	8	Episode Day 3, 2012	1	CO (PPM)	4.83	NA	4.83	-9.00	
TIV	8	Episode Day 3, 2012	2	CO (PPM)	3.16	NA	3.16	-9.00	
TIV	8	Episode Day 3, 2012	3	CO (PPM)	2.19	NA	2.19	-9.00	
TIV	8	Episode Day 3, 2012	4	CO (PPM)	1.78	NA	1.78	-9.00	
TIV	8	Episode Day 3, 2012	5	CO (PPM)	1.55	NA	1.55	-9.00	
TIV	8	Episode Day 3, 2012	6	CO (PPM)	1.48	NA	1.48	-9.00	
TIV	8	Episode Day 3, 2012	7	CO (PPM)	1.77	NA	1.77	-9.00	
TIV	8	Episode Day 3, 2012	8	CO (PPM)	1.85	NA	1.85	-9.00	
TIV	8	Episode Day 3, 2012	9	CO (PPM)	1.94	NA	1.94	-9.00	
TIV	8	Episode Day 3, 2012	10	CO (PPM)	2.00	NA	2.00	-9.00	
TIV	8	Episode Day 3, 2012	11	CO (PPM)	2.07	NA	2.07	-9.00	
TIV	8	Episode Day 3, 2012	12	CO (PPM)	2.28	NA	2.28	-9.00	
TIV	8	Episode Day 3, 2012	13	CO (PPM)	2.46	NA	2.46	-9.00	
TIV	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2012	3	CO (PPM)	1.45	NA	1.45	-9.00	
ICMP	8	Episode Day 2, 2012	4	CO (PPM)	1.36	NA	1.36	-9.00	
ICMP	8	Episode Day 2, 2012	5	CO (PPM)	1.28	NA	1.28	-9.00	
ICMP	8	Episode Day 2, 2012	6	CO (PPM)	1.24	NA	1.24	-9.00	
ICMP	8	Episode Day 2, 2012	7	CO (PPM)	1.38	NA	1.38	-9.00	
ICMP	8	Episode Day 2, 2012	8	CO (PPM)	1.31	NA	1.31	-9.00	
ICMP	8	Episode Day 2, 2012	9	CO (PPM)	1.23	NA	1.23	-9.00	
ICMP	8	Episode Day 2, 2012	10	CO (PPM)	1.24	NA	1.24	-9.00	
ICMP	8	Episode Day 2, 2012	11	CO (PPM)	1.30	NA	1.30	-9.00	
ICMP	8	Episode Day 2, 2012	12	CO (PPM)	1.37	NA	1.37	-9.00	
ICMP	8	Episode Day 2, 2012	13	CO (PPM)	1.46	NA	1.46	-9.00	
ICMP	8	Episode Day 2, 2012	14	CO (PPM)	1.57	NA	1.80	-9.00	
ICMP	8	Episode Day 2, 2012	15	CO (PPM)	1.59	NA	1.99	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ICMP	8	Episode Day 2, 2012	16	CO (PPM)	2.48	NA	3.26	-9.00	
ICMP	8	Episode Day 2, 2012	17	CO (PPM)	4.08	NA	5.11	-9.00	
ICMP	8	Episode Day 2, 2012	18	CO (PPM)	5.79	NA	6.97	-9.00	
ICMP	8	Episode Day 2, 2012	19	CO (PPM)	7.03	NA	8.25	-9.00	
ICMP	8	Episode Day 2, 2012	20	CO (PPM)	7.43	NA	8.69	-9.00	
ICMP	8	Episode Day 2, 2012	21	CO (PPM)	7.68	NA	8.94	-9.00	
ICMP	8	Episode Day 2, 2012	22	CO (PPM)	7.89	NA	8.98	-9.00	
ICMP	8	Episode Day 2, 2012	23	CO (PPM)	7.93	NA	8.87	-9.00	
ICMP	8	Episode Day 3, 2012	0	CO (PPM)	7.12	NA	7.68	-9.00	
ICMP	8	Episode Day 3, 2012	1	CO (PPM)	5.59	NA	5.89	-9.00	
ICMP	8	Episode Day 3, 2012	2	CO (PPM)	3.88	NA	4.04	-9.00	
ICMP	8	Episode Day 3, 2012	3	CO (PPM)	2.56	NA	2.68	-9.00	
ICMP	8	Episode Day 3, 2012	4	CO (PPM)	2.07	NA	2.14	-9.00	
ICMP	8	Episode Day 3, 2012	5	CO (PPM)	1.79	NA	1.86	-9.00	
ICMP	8	Episode Day 3, 2012	6	CO (PPM)	1.61	NA	1.62	-9.00	
ICMP	8	Episode Day 3, 2012	7	CO (PPM)	1.78	NA	1.78	-9.00	
ICMP	8	Episode Day 3, 2012	8	CO (PPM)	1.82	NA	1.82	-9.00	
ICMP	8	Episode Day 3, 2012	9	CO (PPM)	1.91	NA	1.91	-9.00	
ICMP	8	Episode Day 3, 2012	10	CO (PPM)	2.05	NA	2.05	-9.00	
ICMP	8	Episode Day 3, 2012	11	CO (PPM)	2.16	NA	2.16	-9.00	
ICMP	8	Episode Day 3, 2012	12	CO (PPM)	2.38	NA	2.38	-9.00	
ICMP	8	Episode Day 3, 2012	13	CO (PPM)	2.57	NA	2.57	-9.00	
ICMP	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ENG	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	1.50	
ENG	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	1.54	
ENG	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	1.54	
ENG	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	1.46	
ENG	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	1.32	
ENG	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	1.19	
ENG	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	1.05	
ENG	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	0.90	
ENG	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	0.76	
ENG	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	0.79	
ENG	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.21	
ENG	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	1.42	
ENG	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	1.52	
ENG	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	1.60	
ENG	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	1.67	
ENG	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	1.80	
ENG	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	1.86	
ENG	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	1.76	
ENG	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	1.30	
ENG	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	1.06	
ENG	8	Episode Day 2, 2012	3	CO (PPM)	0.41	NA	0.41	0.96	
ENG	8	Episode Day 2, 2012	4	CO (PPM)	0.39	NA	0.39	0.88	
ENG	8	Episode Day 2, 2012	5	CO (PPM)	0.38	NA	0.38	0.88	
ENG	8	Episode Day 2, 2012	6	CO (PPM)	0.34	NA	0.34	0.96	
ENG	8	Episode Day 2, 2012	7	CO (PPM)	0.41	NA	0.41	1.40	
ENG	8	Episode Day 2, 2012	8	CO (PPM)	0.44	NA	0.44	1.82	
ENG	8	Episode Day 2, 2012	9	CO (PPM)	0.45	NA	0.45	1.89	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ENG	8	Episode Day 2, 2012	10	CO (PPM)	0.46	NA	0.46	1.91	
ENG	8	Episode Day 2, 2012	11	CO (PPM)	0.47	NA	0.47	1.94	
ENG	8	Episode Day 2, 2012	12	CO (PPM)	0.49	NA	0.49	1.97	
ENG	8	Episode Day 2, 2012	13	CO (PPM)	0.53	NA	0.53	1.96	
ENG	8	Episode Day 2, 2012	14	CO (PPM)	0.58	NA	0.58	1.85	
ENG	8	Episode Day 2, 2012	15	CO (PPM)	0.65	NA	0.65	1.63	
ENG	8	Episode Day 2, 2012	16	CO (PPM)	1.05	NA	1.05	1.89	
ENG	8	Episode Day 2, 2012	17	CO (PPM)	1.47	NA	1.47	2.91	
ENG	8	Episode Day 2, 2012	18	CO (PPM)	1.60	NA	1.60	3.22	
ENG	8	Episode Day 2, 2012	19	CO (PPM)	1.65	NA	1.65	3.38	
ENG	8	Episode Day 2, 2012	20	CO (PPM)	1.64	NA	1.64	3.47	
ENG	8	Episode Day 2, 2012	21	CO (PPM)	1.61	NA	1.61	3.56	
ENG	8	Episode Day 2, 2012	22	CO (PPM)	1.56	NA	1.56	3.66	
ENG	8	Episode Day 2, 2012	23	CO (PPM)	1.42	NA	1.42	3.50	
ENG	8	Episode Day 3, 2012	0	CO (PPM)	1.00	NA	1.00	2.91	
ENG	8	Episode Day 3, 2012	1	CO (PPM)	0.57	NA	0.57	1.86	
ENG	8	Episode Day 3, 2012	2	CO (PPM)	0.43	NA	0.43	1.54	
ENG	8	Episode Day 3, 2012	3	CO (PPM)	0.38	NA	0.38	1.36	
ENG	8	Episode Day 3, 2012	4	CO (PPM)	0.35	NA	0.35	1.22	
ENG	8	Episode Day 3, 2012	5	CO (PPM)	0.33	NA	0.33	1.09	
ENG	8	Episode Day 3, 2012	6	CO (PPM)	0.33	NA	0.33	1.02	
ENG	8	Episode Day 3, 2012	7	CO (PPM)	0.44	NA	0.44	1.26	
ENG	8	Episode Day 3, 2012	8	CO (PPM)	0.46	NA	0.46	1.23	
ENG	8	Episode Day 3, 2012	9	CO (PPM)	0.49	NA	0.49	1.49	
ENG	8	Episode Day 3, 2012	10	CO (PPM)	0.54	NA	0.54	1.69	
ENG	8	Episode Day 3, 2012	11	CO (PPM)	0.59	NA	0.59	1.70	
ENG	8	Episode Day 3, 2012	12	CO (PPM)	0.64	NA	0.64	1.71	
ENG	8	Episode Day 3, 2012	13	CO (PPM)	0.69	NA	0.69	1.70	
ENG	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.53	
ENG	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.11	
ENG	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.17	
ENG	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.30	
ENG	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	1.59	
ENG	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	1.89	
ENG	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	2.07	
ENG	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	2.17	
ENG	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	2.24	
ENG	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	2.35	
BOU	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	0.68	
BOU	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	0.85	
BOU	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	1.19	
BOU	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	1.43	
BOU	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	1.39	
BOU	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.28	
BOU	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	0.99	
BOU	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	0.83	
BOU	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	0.70	
BOU	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	0.61	
BOU	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	0.54	
BOU	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	0.46	
BOU	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	0.34	
BOU	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	0.21	
BOU	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	0.19	
BOU	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	0.16	
BOU	8	Episode Day 2, 2012	3	CO (PPM)	0.39	NA	0.39	0.16	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
BOU	8	Episode Day 2, 2012	4	CO (PPM)	0.37	NA	0.37	0.20	
BOU	8	Episode Day 2, 2012	5	CO (PPM)	0.36	NA	0.36	0.28	
BOU	8	Episode Day 2, 2012	6	CO (PPM)	0.30	NA	0.30	0.40	
BOU	8	Episode Day 2, 2012	7	CO (PPM)	0.36	NA	0.36	0.66	
BOU	8	Episode Day 2, 2012	8	CO (PPM)	0.38	NA	0.38	0.91	
BOU	8	Episode Day 2, 2012	9	CO (PPM)	0.41	NA	0.41	1.41	
BOU	8	Episode Day 2, 2012	10	CO (PPM)	0.46	NA	0.46	1.76	
BOU	8	Episode Day 2, 2012	11	CO (PPM)	0.51	NA	0.51	1.91	
BOU	8	Episode Day 2, 2012	12	CO (PPM)	0.56	NA	0.56	2.05	
BOU	8	Episode Day 2, 2012	13	CO (PPM)	0.60	NA	0.60	2.13	
BOU	8	Episode Day 2, 2012	14	CO (PPM)	0.63	NA	0.63	2.13	
BOU	8	Episode Day 2, 2012	15	CO (PPM)	0.71	NA	0.71	2.04	
BOU	8	Episode Day 2, 2012	16	CO (PPM)	0.80	NA	0.80	2.01	
BOU	8	Episode Day 2, 2012	17	CO (PPM)	0.82	NA	0.82	1.65	
BOU	8	Episode Day 2, 2012	18	CO (PPM)	0.80	NA	0.80	1.42	
BOU	8	Episode Day 2, 2012	19	CO (PPM)	0.78	NA	0.78	2.07	
BOU	8	Episode Day 2, 2012	20	CO (PPM)	0.75	NA	0.75	2.10	
BOU	8	Episode Day 2, 2012	21	CO (PPM)	0.72	NA	0.72	2.11	
BOU	8	Episode Day 2, 2012	22	CO (PPM)	0.66	NA	0.66	2.06	
BOU	8	Episode Day 2, 2012	23	CO (PPM)	0.51	NA	0.51	1.88	
BOU	8	Episode Day 3, 2012	0	CO (PPM)	0.40	NA	0.40	1.63	
BOU	8	Episode Day 3, 2012	1	CO (PPM)	0.35	NA	0.35	1.46	
BOU	8	Episode Day 3, 2012	2	CO (PPM)	0.32	NA	0.32	1.32	
BOU	8	Episode Day 3, 2012	3	CO (PPM)	0.28	NA	0.28	0.51	
BOU	8	Episode Day 3, 2012	4	CO (PPM)	0.26	NA	0.26	0.32	
BOU	8	Episode Day 3, 2012	5	CO (PPM)	0.25	NA	0.25	0.21	
BOU	8	Episode Day 3, 2012	6	CO (PPM)	0.27	NA	0.27	0.21	
BOU	8	Episode Day 3, 2012	7	CO (PPM)	0.35	NA	0.35	0.66	
BOU	8	Episode Day 3, 2012	8	CO (PPM)	0.38	NA	0.38	0.95	
BOU	8	Episode Day 3, 2012	9	CO (PPM)	0.40	NA	0.40	1.31	
BOU	8	Episode Day 3, 2012	10	CO (PPM)	0.41	NA	0.41	1.40	
BOU	8	Episode Day 3, 2012	11	CO (PPM)	0.42	NA	0.42	1.51	
BOU	8	Episode Day 3, 2012	12	CO (PPM)	0.45	NA	0.45	1.61	
BOU	8	Episode Day 3, 2012	13	CO (PPM)	0.48	NA	0.48	1.72	
BOU	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.75	
BOU	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.49	
BOU	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.32	
BOU	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	1.27	
BOU	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	1.26	
BOU	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	1.26	
GRDS	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	2.00	
GRDS	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	2.25	
GRDS	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	2.75	
GRDS	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	3.00	
GRDS	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	3.13	
GRDS	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	3.00	
GRDS	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	2.75	
GRDS	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	2.25	
GRDS	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	2.13	
GRDS	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	2.00	
GRDS	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	2.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
GRDS	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	2.38	
GRDS	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	2.35	
GRDS	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	2.04	
GRDS	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	1.87	
GRDS	8	Episode Day 2, 2012	3	CO (PPM)	0.46	NA	0.46	1.74	
GRDS	8	Episode Day 2, 2012	4	CO (PPM)	0.43	NA	0.43	1.62	
GRDS	8	Episode Day 2, 2012	5	CO (PPM)	0.41	NA	0.41	1.56	
GRDS	8	Episode Day 2, 2012	6	CO (PPM)	0.32	NA	0.32	1.72	
GRDS	8	Episode Day 2, 2012	7	CO (PPM)	0.40	NA	0.40	3.39	
GRDS	8	Episode Day 2, 2012	8	CO (PPM)	0.44	NA	0.44	5.36	
GRDS	8	Episode Day 2, 2012	9	CO (PPM)	0.48	NA	0.48	6.06	
GRDS	8	Episode Day 2, 2012	10	CO (PPM)	0.55	NA	0.55	6.22	
GRDS	8	Episode Day 2, 2012	11	CO (PPM)	0.61	NA	0.61	6.34	
GRDS	8	Episode Day 2, 2012	12	CO (PPM)	0.66	NA	0.66	6.42	
GRDS	8	Episode Day 2, 2012	13	CO (PPM)	0.69	NA	0.69	7.13	
GRDS	8	Episode Day 2, 2012	14	CO (PPM)	0.72	NA	0.72	6.71	
GRDS	8	Episode Day 2, 2012	15	CO (PPM)	0.77	NA	0.77	4.89	
GRDS	8	Episode Day 2, 2012	16	CO (PPM)	0.90	NA	0.90	3.19	
GRDS	8	Episode Day 2, 2012	17	CO (PPM)	0.93	NA	0.93	3.74	
GRDS	8	Episode Day 2, 2012	18	CO (PPM)	0.92	NA	0.92	5.34	
GRDS	8	Episode Day 2, 2012	19	CO (PPM)	0.90	NA	0.90	7.09	
GRDS	8	Episode Day 2, 2012	20	CO (PPM)	0.88	NA	0.88	8.34	
GRDS	8	Episode Day 2, 2012	21	CO (PPM)	0.86	NA	0.86	8.21	
GRDS	8	Episode Day 2, 2012	22	CO (PPM)	0.79	NA	0.79	8.32	
GRDS	8	Episode Day 2, 2012	23	CO (PPM)	0.63	NA	0.63	8.18	
GRDS	8	Episode Day 3, 2012	0	CO (PPM)	0.47	NA	0.47	7.71	
GRDS	8	Episode Day 3, 2012	1	CO (PPM)	0.40	NA	0.40	6.46	
GRDS	8	Episode Day 3, 2012	2	CO (PPM)	0.35	NA	0.35	4.81	
GRDS	8	Episode Day 3, 2012	3	CO (PPM)	0.30	NA	0.30	3.06	
GRDS	8	Episode Day 3, 2012	4	CO (PPM)	0.28	NA	0.28	1.74	
GRDS	8	Episode Day 3, 2012	5	CO (PPM)	0.26	NA	0.26	0.95	
GRDS	8	Episode Day 3, 2012	6	CO (PPM)	0.27	NA	0.27	0.79	
GRDS	8	Episode Day 3, 2012	7	CO (PPM)	0.37	NA	0.37	1.62	
GRDS	8	Episode Day 3, 2012	8	CO (PPM)	0.40	NA	0.40	2.50	
GRDS	8	Episode Day 3, 2012	9	CO (PPM)	0.43	NA	0.43	3.00	
GRDS	8	Episode Day 3, 2012	10	CO (PPM)	0.44	NA	0.44	3.13	
GRDS	8	Episode Day 3, 2012	11	CO (PPM)	0.46	NA	0.46	3.25	
GRDS	8	Episode Day 3, 2012	12	CO (PPM)	0.49	NA	0.49	3.38	
GRDS	8	Episode Day 3, 2012	13	CO (PPM)	0.53	NA	0.53	3.50	
GRDS	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	3.38	
GRDS	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	2.38	
GRDS	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	2.13	
GRDS	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	2.88	
GRDS	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	3.88	
GRDS	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	4.50	
GRDS	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	4.88	
GRDS	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	5.25	
ARV	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	2.01	
ARV	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	2.20	
ARV	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	2.04	
ARV	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	1.94	
ARV	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	1.98	
ARV	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	2.05	
ARV	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	2.05	
ARV	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.98	
ARV	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.83	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ARV	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.58	
ARV	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.80	
ARV	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	2.05	
ARV	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	2.30	
ARV	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	2.68	
ARV	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	3.36	
ARV	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	3.91	
ARV	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	4.05	
ARV	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	3.99	
ARV	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	3.68	
ARV	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	3.40	
ARV	8	Episode Day 2, 2012	3	CO (PPM)	1.42	NA	1.42	3.09	
ARV	8	Episode Day 2, 2012	4	CO (PPM)	1.27	NA	1.27	2.68	
ARV	8	Episode Day 2, 2012	5	CO (PPM)	1.16	NA	1.16	2.09	
ARV	8	Episode Day 2, 2012	6	CO (PPM)	0.87	NA	0.87	1.89	
ARV	8	Episode Day 2, 2012	7	CO (PPM)	0.66	NA	0.66	2.79	
ARV	8	Episode Day 2, 2012	8	CO (PPM)	0.59	NA	0.59	3.95	
ARV	8	Episode Day 2, 2012	9	CO (PPM)	0.60	NA	0.60	4.61	
ARV	8	Episode Day 2, 2012	10	CO (PPM)	0.58	NA	0.58	4.98	
ARV	8	Episode Day 2, 2012	11	CO (PPM)	0.61	NA	0.61	5.08	
ARV	8	Episode Day 2, 2012	12	CO (PPM)	0.68	NA	0.68	5.14	
ARV	8	Episode Day 2, 2012	13	CO (PPM)	0.77	NA	0.77	5.11	
ARV	8	Episode Day 2, 2012	14	CO (PPM)	0.86	NA	0.86	4.85	
ARV	8	Episode Day 2, 2012	15	CO (PPM)	0.96	NA	0.96	3.98	
ARV	8	Episode Day 2, 2012	16	CO (PPM)	1.25	NA	1.25	3.25	
ARV	8	Episode Day 2, 2012	17	CO (PPM)	1.42	NA	1.42	3.21	
ARV	8	Episode Day 2, 2012	18	CO (PPM)	1.45	NA	1.45	3.44	
ARV	8	Episode Day 2, 2012	19	CO (PPM)	1.41	NA	1.41	3.91	
ARV	8	Episode Day 2, 2012	20	CO (PPM)	1.35	NA	1.35	4.34	
ARV	8	Episode Day 2, 2012	21	CO (PPM)	1.27	NA	1.27	4.65	
ARV	8	Episode Day 2, 2012	22	CO (PPM)	1.18	NA	1.18	4.84	
ARV	8	Episode Day 2, 2012	23	CO (PPM)	1.04	NA	1.04	4.80	
ARV	8	Episode Day 3, 2012	0	CO (PPM)	0.71	NA	0.71	4.34	
ARV	8	Episode Day 3, 2012	1	CO (PPM)	0.48	NA	0.48	3.70	
ARV	8	Episode Day 3, 2012	2	CO (PPM)	0.40	NA	0.40	3.06	
ARV	8	Episode Day 3, 2012	3	CO (PPM)	0.36	NA	0.36	2.43	
ARV	8	Episode Day 3, 2012	4	CO (PPM)	0.34	NA	0.34	1.86	
ARV	8	Episode Day 3, 2012	5	CO (PPM)	0.32	NA	0.32	1.49	
ARV	8	Episode Day 3, 2012	6	CO (PPM)	0.34	NA	0.34	1.45	
ARV	8	Episode Day 3, 2012	7	CO (PPM)	0.46	NA	0.46	2.19	
ARV	8	Episode Day 3, 2012	8	CO (PPM)	0.51	NA	0.51	2.91	
ARV	8	Episode Day 3, 2012	9	CO (PPM)	0.57	NA	0.57	3.33	
ARV	8	Episode Day 3, 2012	10	CO (PPM)	0.62	NA	0.62	3.64	
ARV	8	Episode Day 3, 2012	11	CO (PPM)	0.68	NA	0.68	3.66	
ARV	8	Episode Day 3, 2012	12	CO (PPM)	0.74	NA	0.74	3.71	
ARV	8	Episode Day 3, 2012	13	CO (PPM)	0.82	NA	0.82	3.70	
ARV	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	3.41	
ARV	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	2.39	
ARV	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.69	
ARV	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.83	
ARV	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	2.25	
ARV	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	2.72	
ARV	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	3.09	
ARV	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	3.46	
ARV	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	3.89	
ARV	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	4.01	
HLD	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	0.75	
HLD	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	0.71	
HLD	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	0.66	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	0.62	
HLD	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	0.57	
HLD	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	0.52	
HLD	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	0.37	
HLD	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	0.19	
HLD	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	0.11	
HLD	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	0.14	
HLD	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	0.16	
HLD	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	0.19	
HLD	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	0.21	
HLD	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	0.24	
HLD	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	0.26	
HLD	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	0.30	
HLD	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	0.31	
HLD	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	0.27	
HLD	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	0.25	
HLD	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	0.21	
HLD	8	Episode Day 2, 2012	3	CO (PPM)	0.23	NA	0.23	0.20	
HLD	8	Episode Day 2, 2012	4	CO (PPM)	0.23	NA	0.23	0.19	
HLD	8	Episode Day 2, 2012	5	CO (PPM)	0.23	NA	0.23	0.17	
HLD	8	Episode Day 2, 2012	6	CO (PPM)	0.23	NA	0.23	0.15	
HLD	8	Episode Day 2, 2012	7	CO (PPM)	0.25	NA	0.25	0.14	
HLD	8	Episode Day 2, 2012	8	CO (PPM)	0.25	NA	0.25	0.11	
HLD	8	Episode Day 2, 2012	9	CO (PPM)	0.26	NA	0.26	0.09	
HLD	8	Episode Day 2, 2012	10	CO (PPM)	0.26	NA	0.26	0.07	
HLD	8	Episode Day 2, 2012	11	CO (PPM)	0.26	NA	0.26	0.05	
HLD	8	Episode Day 2, 2012	12	CO (PPM)	0.28	NA	0.28	0.04	
HLD	8	Episode Day 2, 2012	13	CO (PPM)	0.31	NA	0.31	0.02	
HLD	8	Episode Day 2, 2012	14	CO (PPM)	0.36	NA	0.36	0.01	
HLD	8	Episode Day 2, 2012	15	CO (PPM)	0.44	NA	0.44	0.09	
HLD	8	Episode Day 2, 2012	16	CO (PPM)	0.72	NA	0.72	0.59	
HLD	8	Episode Day 2, 2012	17	CO (PPM)	1.10	NA	1.10	1.14	
HLD	8	Episode Day 2, 2012	18	CO (PPM)	1.20	NA	1.20	1.34	
HLD	8	Episode Day 2, 2012	19	CO (PPM)	1.22	NA	1.22	1.42	
HLD	8	Episode Day 2, 2012	20	CO (PPM)	1.21	NA	1.21	1.49	
HLD	8	Episode Day 2, 2012	21	CO (PPM)	1.18	NA	1.18	1.52	
HLD	8	Episode Day 2, 2012	22	CO (PPM)	1.14	NA	1.14	1.56	
HLD	8	Episode Day 2, 2012	23	CO (PPM)	1.04	NA	1.04	1.52	
HLD	8	Episode Day 3, 2012	0	CO (PPM)	0.75	NA	0.75	1.07	
HLD	8	Episode Day 3, 2012	1	CO (PPM)	0.38	NA	0.38	0.57	
HLD	8	Episode Day 3, 2012	2	CO (PPM)	0.27	NA	0.27	0.44	
HLD	8	Episode Day 3, 2012	3	CO (PPM)	0.25	NA	0.25	0.41	
HLD	8	Episode Day 3, 2012	4	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2012	5	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2012	6	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2012	7	CO (PPM)	0.32	NA	0.32	0.59	
HLD	8	Episode Day 3, 2012	8	CO (PPM)	0.38	NA	0.38	0.79	
HLD	8	Episode Day 3, 2012	9	CO (PPM)	0.44	NA	0.44	0.87	
HLD	8	Episode Day 3, 2012	10	CO (PPM)	0.47	NA	0.47	0.81	
HLD	8	Episode Day 3, 2012	11	CO (PPM)	0.49	NA	0.49	0.75	
HLD	8	Episode Day 3, 2012	12	CO (PPM)	0.53	NA	0.53	0.70	
HLD	8	Episode Day 3, 2012	13	CO (PPM)	0.58	NA	0.58	0.66	
HLD	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	0.62	
HLD	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	0.39	
HLD	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	0.22	
HLD	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	0.17	
HLD	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	0.20	
HLD	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	0.22	
HLD	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	0.32	
HLD	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	0.36	
HLD	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	0.41	
HLD	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	0.64	
AUR	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AUR	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2012	3	CO (PPM)	0.56	NA	0.56	-9.00	
AUR	8	Episode Day 2, 2012	4	CO (PPM)	0.53	NA	0.53	-9.00	
AUR	8	Episode Day 2, 2012	5	CO (PPM)	0.51	NA	0.51	-9.00	
AUR	8	Episode Day 2, 2012	6	CO (PPM)	0.48	NA	0.48	-9.00	
AUR	8	Episode Day 2, 2012	7	CO (PPM)	0.52	NA	0.52	-9.00	
AUR	8	Episode Day 2, 2012	8	CO (PPM)	0.55	NA	0.55	-9.00	
AUR	8	Episode Day 2, 2012	9	CO (PPM)	0.57	NA	0.57	-9.00	
AUR	8	Episode Day 2, 2012	10	CO (PPM)	0.58	NA	0.58	-9.00	
AUR	8	Episode Day 2, 2012	11	CO (PPM)	0.59	NA	0.59	-9.00	
AUR	8	Episode Day 2, 2012	12	CO (PPM)	0.61	NA	0.61	-9.00	
AUR	8	Episode Day 2, 2012	13	CO (PPM)	0.63	NA	0.63	-9.00	
AUR	8	Episode Day 2, 2012	14	CO (PPM)	0.66	NA	0.66	-9.00	
AUR	8	Episode Day 2, 2012	15	CO (PPM)	0.67	NA	0.67	-9.00	
AUR	8	Episode Day 2, 2012	16	CO (PPM)	0.85	NA	0.85	-9.00	
AUR	8	Episode Day 2, 2012	17	CO (PPM)	1.14	NA	1.14	-9.00	
AUR	8	Episode Day 2, 2012	18	CO (PPM)	1.49	NA	1.49	-9.00	
AUR	8	Episode Day 2, 2012	19	CO (PPM)	1.95	NA	1.95	-9.00	
AUR	8	Episode Day 2, 2012	20	CO (PPM)	2.39	NA	2.39	-9.00	
AUR	8	Episode Day 2, 2012	21	CO (PPM)	2.48	NA	2.48	-9.00	
AUR	8	Episode Day 2, 2012	22	CO (PPM)	2.50	NA	2.50	-9.00	
AUR	8	Episode Day 2, 2012	23	CO (PPM)	2.44	NA	2.44	-9.00	
AUR	8	Episode Day 3, 2012	0	CO (PPM)	2.20	NA	2.20	-9.00	
AUR	8	Episode Day 3, 2012	1	CO (PPM)	1.88	NA	1.88	-9.00	
AUR	8	Episode Day 3, 2012	2	CO (PPM)	1.52	NA	1.52	-9.00	
AUR	8	Episode Day 3, 2012	3	CO (PPM)	1.04	NA	1.04	-9.00	
AUR	8	Episode Day 3, 2012	4	CO (PPM)	0.58	NA	0.58	-9.00	
AUR	8	Episode Day 3, 2012	5	CO (PPM)	0.46	NA	0.46	-9.00	
AUR	8	Episode Day 3, 2012	6	CO (PPM)	0.40	NA	0.40	-9.00	
AUR	8	Episode Day 3, 2012	7	CO (PPM)	0.45	NA	0.45	-9.00	
AUR	8	Episode Day 3, 2012	8	CO (PPM)	0.47	NA	0.47	-9.00	
AUR	8	Episode Day 3, 2012	9	CO (PPM)	0.49	NA	0.49	-9.00	
AUR	8	Episode Day 3, 2012	10	CO (PPM)	0.53	NA	0.53	-9.00	
AUR	8	Episode Day 3, 2012	11	CO (PPM)	0.56	NA	0.56	-9.00	
AUR	8	Episode Day 3, 2012	12	CO (PPM)	0.60	NA	0.60	-9.00	
AUR	8	Episode Day 3, 2012	13	CO (PPM)	0.65	NA	0.65	-9.00	
AUR	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AUR	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
AURS	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
AURS	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	1.00	
AURS	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	1.09	
AURS	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	1.21	
AURS	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	1.32	
AURS	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	1.46	
AURS	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	1.51	
AURS	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	1.54	
AURS	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	1.31	
AURS	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.10	
AURS	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.07	
AURS	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.34	
AURS	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	1.36	
AURS	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	1.34	
AURS	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	1.35	
AURS	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	1.34	
AURS	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	1.38	
AURS	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	1.42	
AURS	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	1.38	
AURS	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	0.98	
AURS	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	0.81	
AURS	8	Episode Day 2, 2012	3	CO (PPM)	0.39	NA	0.39	0.69	
AURS	8	Episode Day 2, 2012	4	CO (PPM)	0.37	NA	0.37	0.61	
AURS	8	Episode Day 2, 2012	5	CO (PPM)	0.37	NA	0.37	0.63	
AURS	8	Episode Day 2, 2012	6	CO (PPM)	0.36	NA	0.36	0.85	
AURS	8	Episode Day 2, 2012	7	CO (PPM)	0.43	NA	0.43	1.23	
AURS	8	Episode Day 2, 2012	8	CO (PPM)	0.46	NA	0.46	1.46	
AURS	8	Episode Day 2, 2012	9	CO (PPM)	0.47	NA	0.47	1.69	
AURS	8	Episode Day 2, 2012	10	CO (PPM)	0.48	NA	0.48	1.91	
AURS	8	Episode Day 2, 2012	11	CO (PPM)	0.49	NA	0.49	2.21	
AURS	8	Episode Day 2, 2012	12	CO (PPM)	0.51	NA	0.51	2.46	
AURS	8	Episode Day 2, 2012	13	CO (PPM)	0.55	NA	0.55	2.66	
AURS	8	Episode Day 2, 2012	14	CO (PPM)	0.59	NA	0.59	2.53	
AURS	8	Episode Day 2, 2012	15	CO (PPM)	0.62	NA	0.62	2.36	
AURS	8	Episode Day 2, 2012	16	CO (PPM)	0.98	NA	0.98	2.69	
AURS	8	Episode Day 2, 2012	17	CO (PPM)	1.65	NA	1.65	3.80	
AURS	8	Episode Day 2, 2012	18	CO (PPM)	2.39	NA	2.39	4.24	
AURS	8	Episode Day 2, 2012	19	CO (PPM)	2.83	NA	2.83	4.28	
AURS	8	Episode Day 2, 2012	20	CO (PPM)	2.88	NA	2.88	4.26	
AURS	8	Episode Day 2, 2012	21	CO (PPM)	2.88	NA	2.88	4.18	
AURS	8	Episode Day 2, 2012	22	CO (PPM)	2.85	NA	2.85	4.18	
AURS	8	Episode Day 2, 2012	23	CO (PPM)	2.73	NA	2.73	4.01	
AURS	8	Episode Day 3, 2012	0	CO (PPM)	2.33	NA	2.33	3.45	
AURS	8	Episode Day 3, 2012	1	CO (PPM)	1.66	NA	1.66	2.11	
AURS	8	Episode Day 3, 2012	2	CO (PPM)	0.92	NA	0.92	1.48	
AURS	8	Episode Day 3, 2012	3	CO (PPM)	0.47	NA	0.47	1.16	
AURS	8	Episode Day 3, 2012	4	CO (PPM)	0.39	NA	0.39	0.98	
AURS	8	Episode Day 3, 2012	5	CO (PPM)	0.35	NA	0.35	0.90	
AURS	8	Episode Day 3, 2012	6	CO (PPM)	0.34	NA	0.34	1.36	
AURS	8	Episode Day 3, 2012	7	CO (PPM)	0.42	NA	0.42	2.06	
AURS	8	Episode Day 3, 2012	8	CO (PPM)	0.44	NA	0.44	2.59	
AURS	8	Episode Day 3, 2012	9	CO (PPM)	0.47	NA	0.47	2.94	
AURS	8	Episode Day 3, 2012	10	CO (PPM)	0.50	NA	0.50	2.99	
AURS	8	Episode Day 3, 2012	11	CO (PPM)	0.52	NA	0.52	3.04	
AURS	8	Episode Day 3, 2012	12	CO (PPM)	0.56	NA	0.56	3.04	
AURS	8	Episode Day 3, 2012	13	CO (PPM)	0.60	NA	0.60	2.99	
AURS	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	2.41	
AURS	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	1.65	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AURS	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	1.25	
AURS	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	1.26	
AURS	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	1.64	
AURS	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	1.86	
AURS	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	2.15	
AURS	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	2.36	
AURS	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	2.45	
AURS	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	2.49	
PLM	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2012	3	CO (PPM)	0.73	NA	0.73	-9.00	
PLM	8	Episode Day 2, 2012	4	CO (PPM)	0.68	NA	0.68	-9.00	
PLM	8	Episode Day 2, 2012	5	CO (PPM)	0.65	NA	0.65	-9.00	
PLM	8	Episode Day 2, 2012	6	CO (PPM)	0.59	NA	0.59	-9.00	
PLM	8	Episode Day 2, 2012	7	CO (PPM)	0.65	NA	0.65	-9.00	
PLM	8	Episode Day 2, 2012	8	CO (PPM)	0.68	NA	0.68	-9.00	
PLM	8	Episode Day 2, 2012	9	CO (PPM)	0.72	NA	0.72	-9.00	
PLM	8	Episode Day 2, 2012	10	CO (PPM)	0.73	NA	0.73	-9.00	
PLM	8	Episode Day 2, 2012	11	CO (PPM)	0.75	NA	0.75	-9.00	
PLM	8	Episode Day 2, 2012	12	CO (PPM)	0.77	NA	0.77	-9.00	
PLM	8	Episode Day 2, 2012	13	CO (PPM)	0.80	NA	0.80	-9.00	
PLM	8	Episode Day 2, 2012	14	CO (PPM)	0.84	NA	0.84	-9.00	
PLM	8	Episode Day 2, 2012	15	CO (PPM)	0.83	NA	0.83	-9.00	
PLM	8	Episode Day 2, 2012	16	CO (PPM)	1.09	NA	1.09	-9.00	
PLM	8	Episode Day 2, 2012	17	CO (PPM)	1.49	NA	1.49	-9.00	
PLM	8	Episode Day 2, 2012	18	CO (PPM)	2.01	NA	2.01	-9.00	
PLM	8	Episode Day 2, 2012	19	CO (PPM)	2.69	NA	2.69	-9.00	
PLM	8	Episode Day 2, 2012	20	CO (PPM)	2.86	NA	2.86	-9.00	
PLM	8	Episode Day 2, 2012	21	CO (PPM)	2.91	NA	2.91	-9.00	
PLM	8	Episode Day 2, 2012	22	CO (PPM)	2.92	NA	2.92	-9.00	
PLM	8	Episode Day 2, 2012	23	CO (PPM)	2.84	NA	2.84	-9.00	
PLM	8	Episode Day 3, 2012	0	CO (PPM)	2.52	NA	2.52	-9.00	
PLM	8	Episode Day 3, 2012	1	CO (PPM)	2.07	NA	2.07	-9.00	
PLM	8	Episode Day 3, 2012	2	CO (PPM)	1.53	NA	1.53	-9.00	
PLM	8	Episode Day 3, 2012	3	CO (PPM)	0.83	NA	0.83	-9.00	
PLM	8	Episode Day 3, 2012	4	CO (PPM)	0.62	NA	0.62	-9.00	
PLM	8	Episode Day 3, 2012	5	CO (PPM)	0.54	NA	0.54	-9.00	
PLM	8	Episode Day 3, 2012	6	CO (PPM)	0.47	NA	0.47	-9.00	
PLM	8	Episode Day 3, 2012	7	CO (PPM)	0.56	NA	0.56	-9.00	
PLM	8	Episode Day 3, 2012	8	CO (PPM)	0.60	NA	0.60	-9.00	
PLM	8	Episode Day 3, 2012	9	CO (PPM)	0.63	NA	0.63	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
PLM	8	Episode Day 3, 2012	10	CO (PPM)	0.67	NA	0.67	-9.00	
PLM	8	Episode Day 3, 2012	11	CO (PPM)	0.73	NA	0.73	-9.00	
PLM	8	Episode Day 3, 2012	12	CO (PPM)	0.79	NA	0.79	-9.00	
PLM	8	Episode Day 3, 2012	13	CO (PPM)	0.86	NA	0.86	-9.00	
PLM	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2012	3	CO (PPM)	0.41	NA	0.41	-9.00	
BTN	8	Episode Day 2, 2012	4	CO (PPM)	0.40	NA	0.40	-9.00	
BTN	8	Episode Day 2, 2012	5	CO (PPM)	0.39	NA	0.39	-9.00	
BTN	8	Episode Day 2, 2012	6	CO (PPM)	0.40	NA	0.40	-9.00	
BTN	8	Episode Day 2, 2012	7	CO (PPM)	0.42	NA	0.42	-9.00	
BTN	8	Episode Day 2, 2012	8	CO (PPM)	0.43	NA	0.43	-9.00	
BTN	8	Episode Day 2, 2012	9	CO (PPM)	0.43	NA	0.43	-9.00	
BTN	8	Episode Day 2, 2012	10	CO (PPM)	0.45	NA	0.45	-9.00	
BTN	8	Episode Day 2, 2012	11	CO (PPM)	0.49	NA	0.49	-9.00	
BTN	8	Episode Day 2, 2012	12	CO (PPM)	0.54	NA	0.54	-9.00	
BTN	8	Episode Day 2, 2012	13	CO (PPM)	0.59	NA	0.59	-9.00	
BTN	8	Episode Day 2, 2012	14	CO (PPM)	0.65	NA	0.65	-9.00	
BTN	8	Episode Day 2, 2012	15	CO (PPM)	0.70	NA	0.70	-9.00	
BTN	8	Episode Day 2, 2012	16	CO (PPM)	0.80	NA	0.80	-9.00	
BTN	8	Episode Day 2, 2012	17	CO (PPM)	0.91	NA	0.91	-9.00	
BTN	8	Episode Day 2, 2012	18	CO (PPM)	1.02	NA	1.02	-9.00	
BTN	8	Episode Day 2, 2012	19	CO (PPM)	1.08	NA	1.08	-9.00	
BTN	8	Episode Day 2, 2012	20	CO (PPM)	1.08	NA	1.08	-9.00	
BTN	8	Episode Day 2, 2012	21	CO (PPM)	1.09	NA	1.09	-9.00	
BTN	8	Episode Day 2, 2012	22	CO (PPM)	1.17	NA	1.17	-9.00	
BTN	8	Episode Day 2, 2012	23	CO (PPM)	1.26	NA	1.26	-9.00	
BTN	8	Episode Day 3, 2012	0	CO (PPM)	1.24	NA	1.24	-9.00	
BTN	8	Episode Day 3, 2012	1	CO (PPM)	1.16	NA	1.16	-9.00	
BTN	8	Episode Day 3, 2012	2	CO (PPM)	1.05	NA	1.05	-9.00	
BTN	8	Episode Day 3, 2012	3	CO (PPM)	0.94	NA	0.94	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
BTN	8	Episode Day 3, 2012	4	CO (PPM)	0.89	NA	0.89	-9.00	
BTN	8	Episode Day 3, 2012	5	CO (PPM)	0.83	NA	0.83	-9.00	
BTN	8	Episode Day 3, 2012	6	CO (PPM)	0.70	NA	0.70	-9.00	
BTN	8	Episode Day 3, 2012	7	CO (PPM)	0.54	NA	0.54	-9.00	
BTN	8	Episode Day 3, 2012	8	CO (PPM)	0.45	NA	0.45	-9.00	
BTN	8	Episode Day 3, 2012	9	CO (PPM)	0.40	NA	0.40	-9.00	
BTN	8	Episode Day 3, 2012	10	CO (PPM)	0.37	NA	0.37	-9.00	
BTN	8	Episode Day 3, 2012	11	CO (PPM)	0.35	NA	0.35	-9.00	
BTN	8	Episode Day 3, 2012	12	CO (PPM)	0.35	NA	0.35	-9.00	
BTN	8	Episode Day 3, 2012	13	CO (PPM)	0.36	NA	0.36	-9.00	
BTN	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2012	3	CO (PPM)	0.74	NA	0.74	-9.00	
U_1	8	Episode Day 2, 2012	4	CO (PPM)	0.70	NA	0.70	-9.00	
U_1	8	Episode Day 2, 2012	5	CO (PPM)	0.67	NA	0.67	-9.00	
U_1	8	Episode Day 2, 2012	6	CO (PPM)	0.62	NA	0.62	-9.00	
U_1	8	Episode Day 2, 2012	7	CO (PPM)	0.71	NA	0.71	-9.00	
U_1	8	Episode Day 2, 2012	8	CO (PPM)	0.76	NA	0.76	-9.00	
U_1	8	Episode Day 2, 2012	9	CO (PPM)	0.79	NA	0.79	-9.00	
U_1	8	Episode Day 2, 2012	10	CO (PPM)	0.79	NA	0.79	-9.00	
U_1	8	Episode Day 2, 2012	11	CO (PPM)	0.81	NA	0.81	-9.00	
U_1	8	Episode Day 2, 2012	12	CO (PPM)	0.85	NA	0.85	-9.00	
U_1	8	Episode Day 2, 2012	13	CO (PPM)	0.91	NA	0.91	-9.00	
U_1	8	Episode Day 2, 2012	14	CO (PPM)	1.01	NA	1.01	-9.00	
U_1	8	Episode Day 2, 2012	15	CO (PPM)	1.04	NA	1.04	-9.00	
U_1	8	Episode Day 2, 2012	16	CO (PPM)	1.52	NA	1.52	-9.00	
U_1	8	Episode Day 2, 2012	17	CO (PPM)	2.51	NA	2.51	-9.00	
U_1	8	Episode Day 2, 2012	18	CO (PPM)	3.52	NA	3.52	-9.00	
U_1	8	Episode Day 2, 2012	19	CO (PPM)	3.79	NA	3.79	-9.00	
U_1	8	Episode Day 2, 2012	20	CO (PPM)	3.84	NA	3.84	-9.00	
U_1	8	Episode Day 2, 2012	21	CO (PPM)	3.85	NA	3.85	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
U_1	8	Episode Day 2, 2012	22	CO (PPM)	3.79	NA	3.79	-9.00	
U_1	8	Episode Day 2, 2012	23	CO (PPM)	3.63	NA	3.63	-9.00	
U_1	8	Episode Day 3, 2012	0	CO (PPM)	3.09	NA	3.09	-9.00	
U_1	8	Episode Day 3, 2012	1	CO (PPM)	2.08	NA	2.08	-9.00	
U_1	8	Episode Day 3, 2012	2	CO (PPM)	1.05	NA	1.05	-9.00	
U_1	8	Episode Day 3, 2012	3	CO (PPM)	0.75	NA	0.75	-9.00	
U_1	8	Episode Day 3, 2012	4	CO (PPM)	0.65	NA	0.65	-9.00	
U_1	8	Episode Day 3, 2012	5	CO (PPM)	0.58	NA	0.58	-9.00	
U_1	8	Episode Day 3, 2012	6	CO (PPM)	0.56	NA	0.56	-9.00	
U_1	8	Episode Day 3, 2012	7	CO (PPM)	0.75	NA	0.75	-9.00	
U_1	8	Episode Day 3, 2012	8	CO (PPM)	0.85	NA	0.85	-9.00	
U_1	8	Episode Day 3, 2012	9	CO (PPM)	0.91	NA	0.91	-9.00	
U_1	8	Episode Day 3, 2012	10	CO (PPM)	0.97	NA	0.97	-9.00	
U_1	8	Episode Day 3, 2012	11	CO (PPM)	1.03	NA	1.03	-9.00	
U_1	8	Episode Day 3, 2012	12	CO (PPM)	1.13	NA	1.13	-9.00	
U_1	8	Episode Day 3, 2012	13	CO (PPM)	1.24	NA	1.24	-9.00	
U_1	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2012	3	CO (PPM)	0.51	NA	0.51	-9.00	
F_A	8	Episode Day 2, 2012	4	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 2, 2012	5	CO (PPM)	0.46	NA	0.46	-9.00	
F_A	8	Episode Day 2, 2012	6	CO (PPM)	0.37	NA	0.37	-9.00	
F_A	8	Episode Day 2, 2012	7	CO (PPM)	0.45	NA	0.45	-9.00	
F_A	8	Episode Day 2, 2012	8	CO (PPM)	0.49	NA	0.49	-9.00	
F_A	8	Episode Day 2, 2012	9	CO (PPM)	0.54	NA	0.54	-9.00	
F_A	8	Episode Day 2, 2012	10	CO (PPM)	0.58	NA	0.58	-9.00	
F_A	8	Episode Day 2, 2012	11	CO (PPM)	0.61	NA	0.61	-9.00	
F_A	8	Episode Day 2, 2012	12	CO (PPM)	0.64	NA	0.64	-9.00	
F_A	8	Episode Day 2, 2012	13	CO (PPM)	0.66	NA	0.66	-9.00	
F_A	8	Episode Day 2, 2012	14	CO (PPM)	0.67	NA	0.67	-9.00	
F_A	8	Episode Day 2, 2012	15	CO (PPM)	0.65	NA	0.65	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
F_A	8	Episode Day 2, 2012	16	CO (PPM)	0.79	NA	0.79	-9.00	
F_A	8	Episode Day 2, 2012	17	CO (PPM)	0.84	NA	0.84	-9.00	
F_A	8	Episode Day 2, 2012	18	CO (PPM)	0.86	NA	0.86	-9.00	
F_A	8	Episode Day 2, 2012	19	CO (PPM)	0.89	NA	0.89	-9.00	
F_A	8	Episode Day 2, 2012	20	CO (PPM)	0.91	NA	0.91	-9.00	
F_A	8	Episode Day 2, 2012	21	CO (PPM)	0.91	NA	0.91	-9.00	
F_A	8	Episode Day 2, 2012	22	CO (PPM)	0.87	NA	0.87	-9.00	
F_A	8	Episode Day 2, 2012	23	CO (PPM)	0.76	NA	0.76	-9.00	
F_A	8	Episode Day 3, 2012	0	CO (PPM)	0.57	NA	0.57	-9.00	
F_A	8	Episode Day 3, 2012	1	CO (PPM)	0.48	NA	0.48	-9.00	
F_A	8	Episode Day 3, 2012	2	CO (PPM)	0.42	NA	0.42	-9.00	
F_A	8	Episode Day 3, 2012	3	CO (PPM)	0.36	NA	0.36	-9.00	
F_A	8	Episode Day 3, 2012	4	CO (PPM)	0.31	NA	0.31	-9.00	
F_A	8	Episode Day 3, 2012	5	CO (PPM)	0.29	NA	0.29	-9.00	
F_A	8	Episode Day 3, 2012	6	CO (PPM)	0.30	NA	0.30	-9.00	
F_A	8	Episode Day 3, 2012	7	CO (PPM)	0.40	NA	0.40	-9.00	
F_A	8	Episode Day 3, 2012	8	CO (PPM)	0.44	NA	0.44	-9.00	
F_A	8	Episode Day 3, 2012	9	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 3, 2012	10	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 3, 2012	11	CO (PPM)	0.49	NA	0.49	-9.00	
F_A	8	Episode Day 3, 2012	12	CO (PPM)	0.51	NA	0.51	-9.00	
F_A	8	Episode Day 3, 2012	13	CO (PPM)	0.56	NA	0.56	-9.00	
F_A	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2012	3	CO (PPM)	0.37	NA	0.37	-9.00	
H_U	8	Episode Day 2, 2012	4	CO (PPM)	0.36	NA	0.36	-9.00	
H_U	8	Episode Day 2, 2012	5	CO (PPM)	0.35	NA	0.35	-9.00	
H_U	8	Episode Day 2, 2012	6	CO (PPM)	0.33	NA	0.33	-9.00	
H_U	8	Episode Day 2, 2012	7	CO (PPM)	0.37	NA	0.37	-9.00	
H_U	8	Episode Day 2, 2012	8	CO (PPM)	0.40	NA	0.40	-9.00	
H_U	8	Episode Day 2, 2012	9	CO (PPM)	0.40	NA	0.40	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
H_U	8	Episode Day 2, 2012	10	CO (PPM)	0.40	NA	0.40	-9.00	
H_U	8	Episode Day 2, 2012	11	CO (PPM)	0.41	NA	0.41	-9.00	
H_U	8	Episode Day 2, 2012	12	CO (PPM)	0.42	NA	0.42	-9.00	
H_U	8	Episode Day 2, 2012	13	CO (PPM)	0.46	NA	0.46	-9.00	
H_U	8	Episode Day 2, 2012	14	CO (PPM)	0.53	NA	0.53	-9.00	
H_U	8	Episode Day 2, 2012	15	CO (PPM)	0.67	NA	0.67	-9.00	
H_U	8	Episode Day 2, 2012	16	CO (PPM)	1.12	NA	1.12	-9.00	
H_U	8	Episode Day 2, 2012	17	CO (PPM)	1.63	NA	1.63	-9.00	
H_U	8	Episode Day 2, 2012	18	CO (PPM)	1.81	NA	1.81	-9.00	
H_U	8	Episode Day 2, 2012	19	CO (PPM)	1.87	NA	1.87	-9.00	
H_U	8	Episode Day 2, 2012	20	CO (PPM)	1.88	NA	1.88	-9.00	
H_U	8	Episode Day 2, 2012	21	CO (PPM)	1.85	NA	1.85	-9.00	
H_U	8	Episode Day 2, 2012	22	CO (PPM)	1.78	NA	1.78	-9.00	
H_U	8	Episode Day 2, 2012	23	CO (PPM)	1.59	NA	1.59	-9.00	
H_U	8	Episode Day 3, 2012	0	CO (PPM)	1.12	NA	1.12	-9.00	
H_U	8	Episode Day 3, 2012	1	CO (PPM)	0.61	NA	0.61	-9.00	
H_U	8	Episode Day 3, 2012	2	CO (PPM)	0.42	NA	0.42	-9.00	
H_U	8	Episode Day 3, 2012	3	CO (PPM)	0.35	NA	0.35	-9.00	
H_U	8	Episode Day 3, 2012	4	CO (PPM)	0.33	NA	0.33	-9.00	
H_U	8	Episode Day 3, 2012	5	CO (PPM)	0.32	NA	0.32	-9.00	
H_U	8	Episode Day 3, 2012	6	CO (PPM)	0.32	NA	0.32	-9.00	
H_U	8	Episode Day 3, 2012	7	CO (PPM)	0.41	NA	0.41	-9.00	
H_U	8	Episode Day 3, 2012	8	CO (PPM)	0.43	NA	0.43	-9.00	
H_U	8	Episode Day 3, 2012	9	CO (PPM)	0.46	NA	0.46	-9.00	
H_U	8	Episode Day 3, 2012	10	CO (PPM)	0.51	NA	0.51	-9.00	
H_U	8	Episode Day 3, 2012	11	CO (PPM)	0.55	NA	0.55	-9.00	
H_U	8	Episode Day 3, 2012	12	CO (PPM)	0.59	NA	0.59	-9.00	
H_U	8	Episode Day 3, 2012	13	CO (PPM)	0.64	NA	0.64	-9.00	
H_U	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2012	3	CO (PPM)	0.25	NA	0.25	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
U_A	8	Episode Day 2, 2012	4	CO (PPM)	0.24	NA	0.24	-9.00	
U_A	8	Episode Day 2, 2012	5	CO (PPM)	0.24	NA	0.24	-9.00	
U_A	8	Episode Day 2, 2012	6	CO (PPM)	0.25	NA	0.25	-9.00	
U_A	8	Episode Day 2, 2012	7	CO (PPM)	0.27	NA	0.27	-9.00	
U_A	8	Episode Day 2, 2012	8	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2012	9	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2012	10	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2012	11	CO (PPM)	0.29	NA	0.29	-9.00	
U_A	8	Episode Day 2, 2012	12	CO (PPM)	0.31	NA	0.31	-9.00	
U_A	8	Episode Day 2, 2012	13	CO (PPM)	0.34	NA	0.34	-9.00	
U_A	8	Episode Day 2, 2012	14	CO (PPM)	0.39	NA	0.39	-9.00	
U_A	8	Episode Day 2, 2012	15	CO (PPM)	0.48	NA	0.48	-9.00	
U_A	8	Episode Day 2, 2012	16	CO (PPM)	0.80	NA	0.80	-9.00	
U_A	8	Episode Day 2, 2012	17	CO (PPM)	1.18	NA	1.18	-9.00	
U_A	8	Episode Day 2, 2012	18	CO (PPM)	1.32	NA	1.32	-9.00	
U_A	8	Episode Day 2, 2012	19	CO (PPM)	1.34	NA	1.34	-9.00	
U_A	8	Episode Day 2, 2012	20	CO (PPM)	1.33	NA	1.33	-9.00	
U_A	8	Episode Day 2, 2012	21	CO (PPM)	1.31	NA	1.31	-9.00	
U_A	8	Episode Day 2, 2012	22	CO (PPM)	1.26	NA	1.26	-9.00	
U_A	8	Episode Day 2, 2012	23	CO (PPM)	1.15	NA	1.15	-9.00	
U_A	8	Episode Day 3, 2012	0	CO (PPM)	0.82	NA	0.82	-9.00	
U_A	8	Episode Day 3, 2012	1	CO (PPM)	0.44	NA	0.44	-9.00	
U_A	8	Episode Day 3, 2012	2	CO (PPM)	0.30	NA	0.30	-9.00	
U_A	8	Episode Day 3, 2012	3	CO (PPM)	0.27	NA	0.27	-9.00	
U_A	8	Episode Day 3, 2012	4	CO (PPM)	0.26	NA	0.26	-9.00	
U_A	8	Episode Day 3, 2012	5	CO (PPM)	0.25	NA	0.25	-9.00	
U_A	8	Episode Day 3, 2012	6	CO (PPM)	0.26	NA	0.26	-9.00	
U_A	8	Episode Day 3, 2012	7	CO (PPM)	0.34	NA	0.34	-9.00	
U_A	8	Episode Day 3, 2012	8	CO (PPM)	0.38	NA	0.38	-9.00	
U_A	8	Episode Day 3, 2012	9	CO (PPM)	0.43	NA	0.43	-9.00	
U_A	8	Episode Day 3, 2012	10	CO (PPM)	0.47	NA	0.47	-9.00	
U_A	8	Episode Day 3, 2012	11	CO (PPM)	0.50	NA	0.50	-9.00	
U_A	8	Episode Day 3, 2012	12	CO (PPM)	0.54	NA	0.54	-9.00	
U_A	8	Episode Day 3, 2012	13	CO (PPM)	0.59	NA	0.59	-9.00	
U_A	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	0	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2012	1	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2012	2	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2012	3	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2012	4	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2012	5	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2012	6	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2012	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2012 PREDICTED (UAM)	2012 PREDICTED (CAL3QHC)	2012 PREDICTED (UAM+CAL3)	1988 OBSERVED	
P_I	8	Episode Day 1, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2012	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2012	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2012	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2012	3	CO (PPM)	0.45	NA	0.45	-9.00	
P_I	8	Episode Day 2, 2012	4	CO (PPM)	0.43	NA	0.43	-9.00	
P_I	8	Episode Day 2, 2012	5	CO (PPM)	0.42	NA	0.42	-9.00	
P_I	8	Episode Day 2, 2012	6	CO (PPM)	0.41	NA	0.41	-9.00	
P_I	8	Episode Day 2, 2012	7	CO (PPM)	0.49	NA	0.49	-9.00	
P_I	8	Episode Day 2, 2012	8	CO (PPM)	0.53	NA	0.53	-9.00	
P_I	8	Episode Day 2, 2012	9	CO (PPM)	0.54	NA	0.54	-9.00	
P_I	8	Episode Day 2, 2012	10	CO (PPM)	0.55	NA	0.55	-9.00	
P_I	8	Episode Day 2, 2012	11	CO (PPM)	0.56	NA	0.56	-9.00	
P_I	8	Episode Day 2, 2012	12	CO (PPM)	0.58	NA	0.58	-9.00	
P_I	8	Episode Day 2, 2012	13	CO (PPM)	0.61	NA	0.61	-9.00	
P_I	8	Episode Day 2, 2012	14	CO (PPM)	0.63	NA	0.63	-9.00	
P_I	8	Episode Day 2, 2012	15	CO (PPM)	0.63	NA	0.63	-9.00	
P_I	8	Episode Day 2, 2012	16	CO (PPM)	0.91	NA	0.91	-9.00	
P_I	8	Episode Day 2, 2012	17	CO (PPM)	1.47	NA	1.47	-9.00	
P_I	8	Episode Day 2, 2012	18	CO (PPM)	2.18	NA	2.18	-9.00	
P_I	8	Episode Day 2, 2012	19	CO (PPM)	2.51	NA	2.51	-9.00	
P_I	8	Episode Day 2, 2012	20	CO (PPM)	2.58	NA	2.58	-9.00	
P_I	8	Episode Day 2, 2012	21	CO (PPM)	2.60	NA	2.60	-9.00	
P_I	8	Episode Day 2, 2012	22	CO (PPM)	2.59	NA	2.59	-9.00	
P_I	8	Episode Day 2, 2012	23	CO (PPM)	2.49	NA	2.49	-9.00	
P_I	8	Episode Day 3, 2012	0	CO (PPM)	2.15	NA	2.15	-9.00	
P_I	8	Episode Day 3, 2012	1	CO (PPM)	1.59	NA	1.59	-9.00	
P_I	8	Episode Day 3, 2012	2	CO (PPM)	0.88	NA	0.88	-9.00	
P_I	8	Episode Day 3, 2012	3	CO (PPM)	0.52	NA	0.52	-9.00	
P_I	8	Episode Day 3, 2012	4	CO (PPM)	0.43	NA	0.43	-9.00	
P_I	8	Episode Day 3, 2012	5	CO (PPM)	0.38	NA	0.38	-9.00	
P_I	8	Episode Day 3, 2012	6	CO (PPM)	0.36	NA	0.36	-9.00	
P_I	8	Episode Day 3, 2012	7	CO (PPM)	0.46	NA	0.46	-9.00	
P_I	8	Episode Day 3, 2012	8	CO (PPM)	0.50	NA	0.50	-9.00	
P_I	8	Episode Day 3, 2012	9	CO (PPM)	0.55	NA	0.55	-9.00	
P_I	8	Episode Day 3, 2012	10	CO (PPM)	0.59	NA	0.59	-9.00	
P_I	8	Episode Day 3, 2012	11	CO (PPM)	0.63	NA	0.63	-9.00	
P_I	8	Episode Day 3, 2012	12	CO (PPM)	0.68	NA	0.68	-9.00	
P_I	8	Episode Day 3, 2012	13	CO (PPM)	0.74	NA	0.74	-9.00	
P_I	8	Episode Day 3, 2012	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2012	23	CO (PPM)	-9.00	NA	-9.00	-9.00	

NOTE:
 NA in THIS report appears for ALL 8-hr avg CAL3QHC values since 8-hr running averages for CAL3QHC results are NOT computed; 1-hr averages for UAM and CAL3QHC are summed and then 8-hour running averages are computed.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

MET A7, 08-30-99 EI, 01-11-94 PT, 09-09-99 CAL, 08-30-99 UAM
 High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;

TIME AND MAGNITUDE OF MAXIMUM CONCENTRATION
 FOR 8-HR AVERAGING PERIOD:

station	max concentration (1988 observed)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	18.7	43	18
WBY	8.9	49	0
CRG	10.4	49	0
NJH	11.3	47	22
TIV	0.0	0	0
ICMP	0.0	0	0
ENG	3.7	47	22
BOU	2.1	38	13
GRDS	8.3	45	20
ARV	5.1	37	12
HLD	1.6	47	22
AUR	0.0	0	0
AURS	4.3	44	19
PLM	0.0	0	0
BTN	0.0	0	0
U_1	0.0	0	0
F_A	0.0	0	0
H_U	0.0	0	0
U_A	0.0	0	0
P_I	0.0	0	0

station	max concentration (2012 predicted)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	7.9	48	23
WBY	4.1	50	1
CRG	4.0	48	23
NJH	3.4	47	22
TIV	7.3	47	22
ICMP	9.0	47	22
ENG	1.6	44	19
BOU	0.8	42	17
GRDS	0.9	42	17
ARV	1.4	43	18
HLD	1.2	44	19
AUR	2.5	47	22
AURS	2.9	45	20
PLM	2.9	47	22
BTN	1.3	48	23
U_1	3.9	46	21
F_A	0.9	45	20
H_U	1.9	45	20
U_A	1.3	44	19
P_I	2.6	46	21

NOTE: The "performance statistics hour" refers to a unique hour for the entire simulation that is used to determine when the maximum concentration occurred. It is based on the system where HOUR 1 is ALWAYS the period from "midnight to 1am" on the FIRST day of the simulation; if there are three calendar days in the simulation; this hour counter increments from 1 to 72.

The "hour of day" refers to the actual hour of the day where HOUR 0 is the period from "midnight to 1am;" this hour counter increments from 0 to 23 for each day.

 MET A7, 08-30-99 EI, 01-11-94 PT, 09-09-99 CAL, 08-30-99 UAM
 High: 2012 mob=868.8tpd;1.5;80;I/M 240 w/newest 4myr exempt;

TIME AND MAGNITUDE OF MAXIMUM CONCENTRATION
 FOR 1-HR AVERAGING PERIOD:

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

station	max concentration (1988 observed)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	50.5	42	17
WBY	13.4	43	18
CRG	16.3	44	19
NJH	22.9	42	17
TIV	0.0	0	0
ICMP	0.0	0	0
ENG	9.4	42	17
BOU	6.5	44	19
GRDS	16.6	33	8
ARV	11.0	33	8
HLD	4.4	42	17
AUR	0.0	0	0
AURS	11.2	42	17
PLM	0.0	0	0
BTN	0.0	0	0
U_1	0.0	0	0
F_A	0.0	0	0
H_U	0.0	0	0
U_A	0.0	0	0
P_I	0.0	0	0

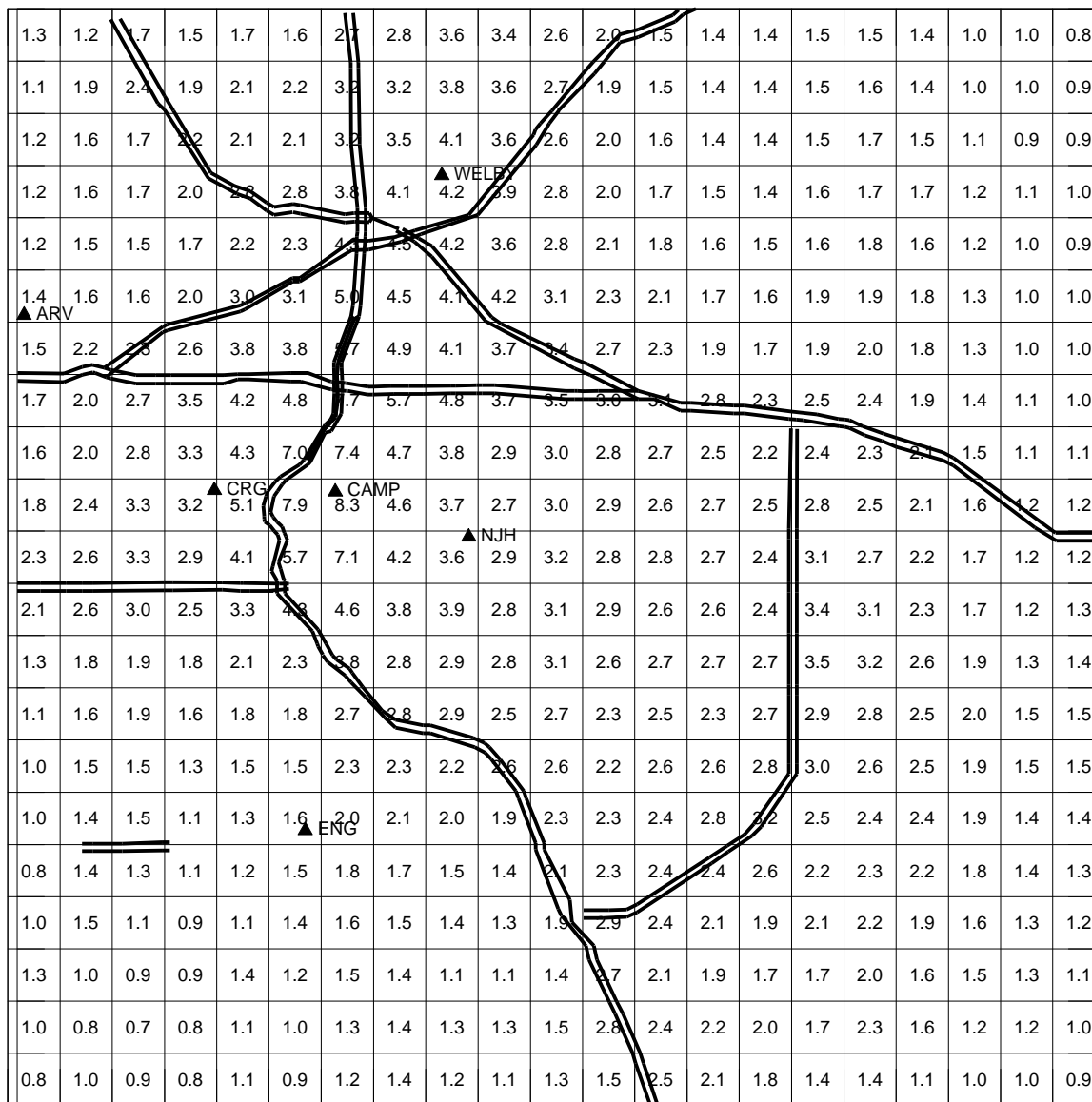
station	max concentration (2012 predicted)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	14.7	43	18
WBY	5.2	48	23
CRG	5.3	43	18
NJH	6.4	44	19
TIV	14.4	43	18
ICMP	15.9	42	17
ENG	3.8	41	16
BOU	1.5	40	15
GRDS	1.6	41	16
ARV	2.9	41	16
HLD	3.2	42	17
AUR	4.1	44	19
AURS	6.2	43	18
PLM	5.9	44	19
BTN	1.7	48	23
U_1	8.6	43	18
F_A	1.8	41	16
H_U	4.4	42	17
U_A	3.3	42	17
P_I	6.0	43	18

NOTE: The "performance statistics hour" refers to a unique hour for the entire simulation that is used to determine when the maximum concentration occurred. It is based on the system where HOUR 1 is ALWAYS the period from "midnight to 1am" on the FIRST day of the simulation; if there are three calendar days in the simulation; this hour counter increments from 1 to 72.

The "hour of day" refers to the actual hour of the day where HOUR 0 is the period from "midnight to 1am;" this hour counter increments from 0 to 23 for each day.

Appendix G – Urban Airshed Modeling: High Episode 2013 Results (Run O)

Maximum 8-hr Average Carbon Monoxide Concentration Estimates (ppm)
from the Urban Airshed Model for Denver Colorado
2013 Projection for the "High" Episode (05DEC88)
Control Strategy: 1.7%oxyFuels; 80%RemoteSensing;4yrExempt I/M240
On-Road Mobile Emission Inventory Total = 867 tons/day



One Grid is One Square Mile

The value in each grid cell shows the maximum CO 8-hr running average for the entire simulation

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

URBAN AIRHSED MODEL OUTPUT - RUNNING 8-HOUR AVERAGES FOR ENTIRE DOMAIN

```
\ FILENAME: c:\den_co\graphix\o\tmap8_o.max
\ UAM Level 1
\ CO SIP for Denver, Colorado
\ Episode code processed: o
\ Base episode code:      a (05DEC88)
\ O: 2013 mobile=867.2 tpd 1sept99 13aoxy17.prn
\ 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;27aug99PTS
\ MET A7: DWMZ=12,UAMZ=5,DB=40-225,SimDrainJet,ModEC, 11-01-93
\ QA Check - select files used in 2nd day of simulation:
\   c:\den_co\inputs\o\ar_o2.b??, 09-01-99 (EI year: 2013)
\   c:\den_co\inputs\o\pt_o2.bin, 01-11-94
\   c:\den_co\inputs\a\uw_a2.bin, 11-01-93
\   c:\den_co\outputs\o\avg_o2.out, 09-01-99
\
\ TMAP run dated: 09:07:44 09-02-99
\ 8-Hr Averaging Period
\ Time, magnitude, and location of max/min predicted concentration
\
Ending time 600.
UAM Maximum 8-hr average: 2.11 cell (21,47)
UAM Minimum 8-hr average: 0.17 cell ( 9,44)
```

```
Ending time 700.
UAM Maximum 8-hr average: 2.02 cell (21,47)
UAM Minimum 8-hr average: 0.17 cell ( 9,44)
```

```
Ending time 800.
UAM Maximum 8-hr average: 1.95 cell (21,47)
UAM Minimum 8-hr average: 0.16 cell ( 9,44)
```

```
Ending time 900.
UAM Maximum 8-hr average: 1.72 cell (21,47)
UAM Minimum 8-hr average: 0.16 cell ( 9,44)
```

```
Ending time 1000.
UAM Maximum 8-hr average: 1.46 cell (21,47)
UAM Minimum 8-hr average: 0.18 cell ( 9,44)
```

```
Ending time 1100.
UAM Maximum 8-hr average: 1.38 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

```
Ending time 1200.
UAM Maximum 8-hr average: 1.40 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

```
Ending time 1300.
UAM Maximum 8-hr average: 1.44 cell (23,45)
UAM Minimum 8-hr average: 0.18 cell (28,16)
```

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Ending time 1400.
UAM Maximum 8-hr average: 1.51 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (3,37)

Ending time 1500.
UAM Maximum 8-hr average: 1.64 cell (23,43)
UAM Minimum 8-hr average: 0.19 cell (3,37)

Ending time 1600.
UAM Maximum 8-hr average: 1.67 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (3,37)

Ending time 1700.
UAM Maximum 8-hr average: 2.70 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (3,37)

Ending time 1800.
UAM Maximum 8-hr average: 4.79 cell (23,42)
UAM Minimum 8-hr average: 0.18 cell (27,11)

Ending time 1900.
UAM Maximum 8-hr average: 6.63 cell (23,42)
UAM Minimum 8-hr average: 0.18 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	6.633
22	43	6.336
23	43	6.456

Ending time 2000.
UAM Maximum 8-hr average: 7.70 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.079
22	43	7.308
23	43	7.695

Ending time 2100.
UAM Maximum 8-hr average: 7.97 cell (23,43)

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

UAM Minimum 8-hr average: 0.17 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.095
22	43	7.582
23	43	7.965
22	44	6.073
23	44	6.428
23	45	6.593

Ending time 2200.

UAM Maximum 8-hr average: 8.16 cell (23,43)

UAM Minimum 8-hr average: 0.17 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	7.064
22	43	7.753
23	43	8.157
22	44	6.462
23	44	6.831
23	45	7.107

Ending time 2300.

UAM Maximum 8-hr average: 8.32 cell (23,43)

UAM Minimum 8-hr average: 0.17 cell (28,15)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	6.980
22	43	7.879
23	43	8.324
22	44	6.790
23	44	7.170
23	45	7.463

Ending time 0.

UAM Maximum 8-hr average: 8.28 cell (23,43)

UAM Minimum 8-hr average: 0.16 cell (28,16)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	42	6.711
22	43	7.848
23	43	8.285
22	44	7.020
23	44	7.382
23	45	7.721

Ending time 100.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

UAM Maximum 8-hr average: 7.36 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (28,16)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
22	43	6.914
23	43	7.283
22	44	6.680
23	44	6.966
23	45	7.363

Ending time 200.
UAM Maximum 8-hr average: 6.43 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Predicted UAM concentration for select grid cells: 8-hr averaging period.
(Only grid cells with a concentration > 6.0 ppm are printed.)

X	Y	Predicted (ppm)
23	44	6.020
23	45	6.434

Ending time 300.
UAM Maximum 8-hr average: 5.39 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 400.
UAM Maximum 8-hr average: 4.15 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 500.
UAM Maximum 8-hr average: 3.29 cell (25,49)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 600.
UAM Maximum 8-hr average: 2.71 cell (25,50)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 700.
UAM Maximum 8-hr average: 2.29 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 800.
UAM Maximum 8-hr average: 2.29 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Ending time 900.
UAM Maximum 8-hr average: 2.06 cell (23,45)
UAM Minimum 8-hr average: 0.17 cell (9,44)

Ending time 1000.
UAM Maximum 8-hr average: 2.04 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (16,28)

Ending time 1100.
UAM Maximum 8-hr average: 2.20 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (16,28)

Ending time 1200.
UAM Maximum 8-hr average: 2.30 cell (23,43)
UAM Minimum 8-hr average: 0.18 cell (16,28)

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

File: ar_o_tot.qa0

Daily emissions for each source category as input to the Urban Airshed Model

CO: TOTAL EMISSIONS FOR CATEGORY	AMP	BEFORE HRLY SCALARS APPLIED	=	185.641949	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	185.641955	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	185.641949	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	PMP	BEFORE HRLY SCALARS APPLIED	=	249.026747	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	249.026747	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	434.668697	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	OFP	BEFORE HRLY SCALARS APPLIED	=	432.477055	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	432.390563	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	867.145751	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	RR	BEFORE HRLY SCALARS APPLIED	=	0.333074	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	0.333074	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	867.478826	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	HLI	BEFORE HRLY SCALARS APPLIED	=	0.370857	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	0.370857	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	867.849683	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	AC	BEFORE HRLY SCALARS APPLIED	=	24.383800	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	24.554486	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	892.233483	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	ACS	BEFORE HRLY SCALARS APPLIED	=	7.770000	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	7.824390	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	900.003483	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	AG	BEFORE HRLY SCALARS APPLIED	=	0.254016	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	0.254016	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	900.257499	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	CST	BEFORE HRLY SCALARS APPLIED	=	8.098400	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	8.098400	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	908.355899	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	IND	BEFORE HRLY SCALARS APPLIED	=	23.655000	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	23.655000	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	932.010899	TOI

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CO: TOTAL EMISSIONS FOR CATEGORY	LTC	BEFORE HRLY SCALARS APPLIED	=	131.261000	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	131.261002	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1063.271899	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	FP	BEFORE HRLY SCALARS APPLIED	=	9.515282	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	9.515282	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1072.787181	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	STV	BEFORE HRLY SCALARS APPLIED	=	16.251068	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	16.251068	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1089.038249	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	SFR	BEFORE HRLY SCALARS APPLIED	=	5.520765	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	5.521206	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1094.559014	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	NG	BEFORE HRLY SCALARS APPLIED	=	10.023500	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	10.023500	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1104.582514	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	MIN	BEFORE HRLY SCALARS APPLIED	=	21.075900	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	21.077585	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1125.658414	TOI

CO: TOTAL EMISSIONS FOR CATEGORY	MJA	BEFORE HRLY SCALARS APPLIED	=	0.000000	TOI
INVENTORY CODE: O		AFTER HRLY SCALARS APPLIED	=	0.000000	TOI
		...RUNNING SUBTOTAL BEFORE SCALARS	=	1125.658414	TOI

QA check of	CO EMISSIONS total in UAM binary file (NOTES: 1. hourly scalars applied; 2. MJE e				
INVENTORY CODE: O				= 1125.799133	TOI
				= 36475278.4	GRAM-MOLI

CO: TOTAL EMISSIONS FROM ALL CATEGORIES INCLUDING ELEVATED POINTS					
INVENTORY CODE: O					
		BEFORE HRLY SCALARS APPLIED	=	1151.223314	TOI
		AFTER HRLY SCALARS APPLIED	=	1151.364033	TOI

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

File: ar_omax.qa0

Maximum emission rate and corresponding UAM grid cell for each source category

CATEGORY=	AMP: MAXIMUM VALUE=	0.988000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	PMP: MAXIMUM VALUE=	2.090000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	OFP: MAXIMUM VALUE=	2.840000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	RR: MAXIMUM VALUE=	0.029800	TPD @GRID CELL (X,Y): (22, 47)
CATEGORY=	HLI: MAXIMUM VALUE=	0.008990	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	AC: MAXIMUM VALUE=	3.130000	TPD @GRID CELL (X,Y): (39, 50)
CATEGORY=	ACS: MAXIMUM VALUE=	1.110000	TPD @GRID CELL (X,Y): (28, 44)
CATEGORY=	AG: MAXIMUM VALUE=	0.000147	TPD @GRID CELL (X,Y): (7, 69)
CATEGORY=	CST: MAXIMUM VALUE=	0.021200	TPD @GRID CELL (X,Y): (3, 26)
CATEGORY=	IND: MAXIMUM VALUE=	0.415000	TPD @GRID CELL (X,Y): (8, 61)
CATEGORY=	LTC: MAXIMUM VALUE=	0.598000	TPD @GRID CELL (X,Y): (8, 61)
CATEGORY=	FP: MAXIMUM VALUE=	0.051600	TPD @GRID CELL (X,Y): (24, 42)
CATEGORY=	STV: MAXIMUM VALUE=	0.125000	TPD @GRID CELL (X,Y): (17, 35)
CATEGORY=	SFR: MAXIMUM VALUE=	0.034000	TPD @GRID CELL (X,Y): (23, 42)
CATEGORY=	NG: MAXIMUM VALUE=	0.220000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	MIN: MAXIMUM VALUE=	2.560000	TPD @GRID CELL (X,Y): (28, 67)
CATEGORY=	MJA: MAXIMUM VALUE=	0.000000	TPD @GRID CELL (X,Y): (28, 67)
CATEGORY=	MJE: MAXIMUM VALUE=	5.950000	TPD @GRID CELL (X,Y): (24, 47)
CATEGORY=	TOT: MAXIMUM VALUE=	7.470000	TPD @GRID CELL (X,Y): (23, 43)
CATEGORY=	SUM: MAXIMUM VALUE=	7.467039	TPD @GRID CELL (X,Y): (23, 43)

Air Quality Modeling Results for the Denver Carbon Monoxide Maintenance Plan UAM and CAL3QHC Estimates at Monitoring Sites and Roadway Intersections

The attached report is one of several files generated by a the Colorado Department of Public Health and Environment's postprocessing batch program "DPLOT.BTM." This particular report, which presents 1-hour and 8-hour average UAM and CAL3QHC estimates for each monitoring site and roadway intersection, was generated by the FORTRAN program "P_STATS." Strings of text at the beginning of the report uniquely identify the modeling scenario. These ID's (see example on page 2) are auto-built by DPLOT.BTM. Automated title generation for each modeling run streamlines postprocessing while enhancing QA procedures.

P_STATS reads SAI's DPLOT format data files which contain hourly concentration estimates from the Urban Airshed Model and observed concentrations from various monitoring sites. In addition, P_STATS reads another set of DPLOT format files containing hourly concentration estimates from the CAL3QHC model. While there are UAM estimates for every monitoring site and roadway intersection, CAL3QHC estimates are available only at intersections where refined modeling was performed. Please note that all "observed" values are from the historic episode on which the modeling is based. The "DATE" column indicates the year of the MODELED estimates; all observed estimates are for the base year (e.g., 1988 for the "high" and "2nd-high" episodes).

A "-9.00" entry indicates that values were not generated. "NA" is used for all 8-hour CAL3QHC entries because 8-hour average values are not computed; instead, hourly CAL3QHC and UAM estimates are summed before 8-hour average UAM/CAL3QHC values are computed. A key to site abbreviations follows:

Monitoring Sites

CMP
WBY
CRG
TIV
FED
NJH
PLM
ARV
ENG
BOU
GRDS
HLD
AUR
AURS
BTN

Description

CAMP
Welby
Carriage
Tivoli
Roof of Federal Bldg (downtown) - inlet 72 meters above ground
NJH-E
Palmer School (inlet on top of 2 story bldg)
Arvada
Englewood
Boulder (Marine St)
Boulder Grandy's Special Study Site
Highland
Aurora
Aurora Special Study Site
Brighton

Intersections

ICMP
U_1
F_A
H_U
U_A
P_I

Broadway & Champa (CAMP intersection)
University & 1st
Foothills & Arapahoe (Boulder)
Hampden & University
University & Arapahoe
Parker & Iliff

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;
 MET A7, 09-01-99 EI, 01-11-94 PT, 09-09-99 CAL, 09-01-99 UAM

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CMP	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	2.50	
CMP	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	1.80	
CMP	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	1.50	
CMP	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	2.70	
CMP	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	3.00	
CMP	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	1.80	
CMP	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	1.50	
CMP	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	1.50	
CMP	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	1.40	
CMP	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CMP	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CMP	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	1.80	
CMP	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	2.10	
CMP	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	1.60	
CMP	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	1.60	
CMP	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	2.80	
CMP	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	6.40	
CMP	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	7.60	
CMP	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	6.80	
CMP	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	3.60	
CMP	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CMP	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	1.20	
CMP	1	Episode Day 1, 2013	22	CO (PPM)	1.29	-9.00	1.29	1.00	
CMP	1	Episode Day 1, 2013	23	CO (PPM)	1.81	-9.00	1.81	1.60	
CMP	1	Episode Day 2, 2013	0	CO (PPM)	2.17	-9.00	2.17	1.50	
CMP	1	Episode Day 2, 2013	1	CO (PPM)	1.76	-9.00	1.76	0.80	
CMP	1	Episode Day 2, 2013	2	CO (PPM)	0.89	-9.00	0.89	0.00	
CMP	1	Episode Day 2, 2013	3	CO (PPM)	0.78	-9.00	0.78	0.00	
CMP	1	Episode Day 2, 2013	4	CO (PPM)	0.80	-9.00	0.80	0.00	
CMP	1	Episode Day 2, 2013	5	CO (PPM)	0.74	-9.00	0.74	0.30	
CMP	1	Episode Day 2, 2013	6	CO (PPM)	0.95	-9.00	0.95	0.80	
CMP	1	Episode Day 2, 2013	7	CO (PPM)	2.91	-9.00	2.91	4.10	
CMP	1	Episode Day 2, 2013	8	CO (PPM)	1.63	-9.00	1.63	5.40	
CMP	1	Episode Day 2, 2013	9	CO (PPM)	1.12	-9.00	1.12	2.90	
CMP	1	Episode Day 2, 2013	10	CO (PPM)	0.98	-9.00	0.98	2.90	
CMP	1	Episode Day 2, 2013	11	CO (PPM)	1.26	-9.00	1.26	4.50	
CMP	1	Episode Day 2, 2013	12	CO (PPM)	1.35	-9.00	1.35	4.00	
CMP	1	Episode Day 2, 2013	13	CO (PPM)	1.46	-9.00	1.46	4.30	
CMP	1	Episode Day 2, 2013	14	CO (PPM)	1.89	-9.00	1.89	4.50	
CMP	1	Episode Day 2, 2013	15	CO (PPM)	3.03	-9.00	3.03	7.00	
CMP	1	Episode Day 2, 2013	16	CO (PPM)	8.78	-9.00	8.78	45.00	
CMP	1	Episode Day 2, 2013	17	CO (PPM)	13.85	-9.00	13.85	50.50	
CMP	1	Episode Day 2, 2013	18	CO (PPM)	14.65	-9.00	14.65	30.00	
CMP	1	Episode Day 2, 2013	19	CO (PPM)	11.12	-9.00	11.12	3.90	
CMP	1	Episode Day 2, 2013	20	CO (PPM)	4.55	-9.00	4.55	2.10	
CMP	1	Episode Day 2, 2013	21	CO (PPM)	3.47	-9.00	3.47	2.30	
CMP	1	Episode Day 2, 2013	22	CO (PPM)	3.58	-9.00	3.58	3.80	
CMP	1	Episode Day 2, 2013	23	CO (PPM)	3.34	-9.00	3.34	4.00	
CMP	1	Episode Day 3, 2013	0	CO (PPM)	2.31	-9.00	2.31	4.50	
CMP	1	Episode Day 3, 2013	1	CO (PPM)	1.61	-9.00	1.61	2.60	
CMP	1	Episode Day 3, 2013	2	CO (PPM)	1.04	-9.00	1.04	1.10	
CMP	1	Episode Day 3, 2013	3	CO (PPM)	0.58	-9.00	0.58	0.80	
CMP	1	Episode Day 3, 2013	4	CO (PPM)	0.62	-9.00	0.62	1.10	
CMP	1	Episode Day 3, 2013	5	CO (PPM)	1.20	-9.00	1.20	2.40	
CMP	1	Episode Day 3, 2013	6	CO (PPM)	2.16	-9.00	2.16	5.10	
CMP	1	Episode Day 3, 2013	7	CO (PPM)	4.74	-9.00	4.74	9.30	
CMP	1	Episode Day 3, 2013	8	CO (PPM)	2.56	-9.00	2.56	10.70	
CMP	1	Episode Day 3, 2013	9	CO (PPM)	2.37	-9.00	2.37	7.20	
CMP	1	Episode Day 3, 2013	10	CO (PPM)	2.15	-9.00	2.15	5.10	
CMP	1	Episode Day 3, 2013	11	CO (PPM)	1.46	-9.00	1.46	3.60	
CMP	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	2.50	
CMP	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	2.00	
CMP	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	2.40	

Technical Support Document (DRAFT)
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High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CMP	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	3.60	
CMP	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	10.10	
CMP	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	12.90	
CMP	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	5.30	
CMP	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	3.90	
CMP	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	5.30	
CMP	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
CMP	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	2.90	
CMP	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	4.50	
WBY	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	4.00	
WBY	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	4.50	
WBY	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	0.70	
WBY	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	1.70	
WBY	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	1.60	
WBY	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	1.20	
WBY	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	1.00	
WBY	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	1.00	
WBY	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.50	
WBY	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.40	
WBY	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	4.30	
WBY	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	5.40	
WBY	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	3.00	
WBY	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	4.60	
WBY	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	2.10	
WBY	1	Episode Day 1, 2013	22	CO (PPM)	1.13	-9.00	1.13	1.50	
WBY	1	Episode Day 1, 2013	23	CO (PPM)	1.36	-9.00	1.36	1.90	
WBY	1	Episode Day 2, 2013	0	CO (PPM)	1.52	-9.00	1.52	4.30	
WBY	1	Episode Day 2, 2013	1	CO (PPM)	1.42	-9.00	1.42	3.40	
WBY	1	Episode Day 2, 2013	2	CO (PPM)	1.33	-9.00	1.33	2.20	
WBY	1	Episode Day 2, 2013	3	CO (PPM)	1.14	-9.00	1.14	1.60	
WBY	1	Episode Day 2, 2013	4	CO (PPM)	0.90	-9.00	0.90	1.40	
WBY	1	Episode Day 2, 2013	5	CO (PPM)	0.84	-9.00	0.84	1.40	
WBY	1	Episode Day 2, 2013	6	CO (PPM)	0.98	-9.00	0.98	1.70	
WBY	1	Episode Day 2, 2013	7	CO (PPM)	1.51	-9.00	1.51	5.70	
WBY	1	Episode Day 2, 2013	8	CO (PPM)	1.00	-9.00	1.00	6.90	
WBY	1	Episode Day 2, 2013	9	CO (PPM)	0.95	-9.00	0.95	4.90	
WBY	1	Episode Day 2, 2013	10	CO (PPM)	1.08	-9.00	1.08	2.50	
WBY	1	Episode Day 2, 2013	11	CO (PPM)	0.90	-9.00	0.90	1.40	
WBY	1	Episode Day 2, 2013	12	CO (PPM)	0.75	-9.00	0.75	0.90	
WBY	1	Episode Day 2, 2013	13	CO (PPM)	0.61	-9.00	0.61	0.90	
WBY	1	Episode Day 2, 2013	14	CO (PPM)	0.60	-9.00	0.60	1.00	
WBY	1	Episode Day 2, 2013	15	CO (PPM)	0.82	-9.00	0.82	1.20	
WBY	1	Episode Day 2, 2013	16	CO (PPM)	1.56	-9.00	1.56	2.60	
WBY	1	Episode Day 2, 2013	17	CO (PPM)	2.60	-9.00	2.60	9.50	
WBY	1	Episode Day 2, 2013	18	CO (PPM)	3.64	-9.00	3.64	13.40	
WBY	1	Episode Day 2, 2013	19	CO (PPM)	2.77	-9.00	2.77	9.40	
WBY	1	Episode Day 2, 2013	20	CO (PPM)	3.73	-9.00	3.73	7.70	
WBY	1	Episode Day 2, 2013	21	CO (PPM)	5.11	-9.00	5.11	6.30	
WBY	1	Episode Day 2, 2013	22	CO (PPM)	5.16	-9.00	5.16	7.30	
WBY	1	Episode Day 2, 2013	23	CO (PPM)	5.20	-9.00	5.20	8.50	
WBY	1	Episode Day 3, 2013	0	CO (PPM)	4.46	-9.00	4.46	9.40	
WBY	1	Episode Day 3, 2013	1	CO (PPM)	2.63	-9.00	2.63	7.30	
WBY	1	Episode Day 3, 2013	2	CO (PPM)	1.34	-9.00	1.34	3.00	
WBY	1	Episode Day 3, 2013	3	CO (PPM)	0.81	-9.00	0.81	1.70	
WBY	1	Episode Day 3, 2013	4	CO (PPM)	0.65	-9.00	0.65	1.60	
WBY	1	Episode Day 3, 2013	5	CO (PPM)	0.71	-9.00	0.71	1.70	
WBY	1	Episode Day 3, 2013	6	CO (PPM)	0.80	-9.00	0.80	2.80	
WBY	1	Episode Day 3, 2013	7	CO (PPM)	1.04	-9.00	1.04	2.80	
WBY	1	Episode Day 3, 2013	8	CO (PPM)	1.02	-9.00	1.02	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
WBY	1	Episode Day 3, 2013	9	CO (PPM)	1.16	-9.00	1.16	3.60	
WBY	1	Episode Day 3, 2013	10	CO (PPM)	1.15	-9.00	1.15	2.70	
WBY	1	Episode Day 3, 2013	11	CO (PPM)	0.92	-9.00	0.92	0.60	
WBY	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.40	
WBY	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.30	
WBY	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	0.80	
WBY	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	1.60	
WBY	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	1.30	
WBY	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	3.10	
WBY	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	6.10	
WBY	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	6.00	
WBY	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	5.40	
WBY	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	4.40	
CRG	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	4.80	
CRG	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	4.50	
CRG	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	3.90	
CRG	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	3.50	
CRG	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CRG	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	0.90	
CRG	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	1.70	
CRG	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	2.70	
CRG	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	1.80	
CRG	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	1.30	
CRG	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	1.60	
CRG	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	1.10	
CRG	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
CRG	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.40	
CRG	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.50	
CRG	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
CRG	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	2.40	
CRG	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	6.00	
CRG	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	8.00	
CRG	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	10.80	
CRG	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	3.50	
CRG	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	3.40	
CRG	1	Episode Day 1, 2013	22	CO (PPM)	1.68	-9.00	1.68	3.50	
CRG	1	Episode Day 1, 2013	23	CO (PPM)	1.92	-9.00	1.92	3.30	
CRG	1	Episode Day 2, 2013	0	CO (PPM)	2.28	-9.00	2.28	3.70	
CRG	1	Episode Day 2, 2013	1	CO (PPM)	2.28	-9.00	2.28	4.90	
CRG	1	Episode Day 2, 2013	2	CO (PPM)	1.43	-9.00	1.43	3.50	
CRG	1	Episode Day 2, 2013	3	CO (PPM)	0.75	-9.00	0.75	2.50	
CRG	1	Episode Day 2, 2013	4	CO (PPM)	0.58	-9.00	0.58	2.60	
CRG	1	Episode Day 2, 2013	5	CO (PPM)	0.63	-9.00	0.63	2.70	
CRG	1	Episode Day 2, 2013	6	CO (PPM)	0.81	-9.00	0.81	5.80	
CRG	1	Episode Day 2, 2013	7	CO (PPM)	1.75	-9.00	1.75	10.10	
CRG	1	Episode Day 2, 2013	8	CO (PPM)	1.05	-9.00	1.05	10.50	
CRG	1	Episode Day 2, 2013	9	CO (PPM)	0.90	-9.00	0.90	4.00	
CRG	1	Episode Day 2, 2013	10	CO (PPM)	0.79	-9.00	0.79	1.90	
CRG	1	Episode Day 2, 2013	11	CO (PPM)	0.81	-9.00	0.81	1.20	
CRG	1	Episode Day 2, 2013	12	CO (PPM)	1.08	-9.00	1.08	1.50	
CRG	1	Episode Day 2, 2013	13	CO (PPM)	1.20	-9.00	1.20	1.30	
CRG	1	Episode Day 2, 2013	14	CO (PPM)	1.37	-9.00	1.37	1.60	
CRG	1	Episode Day 2, 2013	15	CO (PPM)	1.79	-9.00	1.79	0.80	
CRG	1	Episode Day 2, 2013	16	CO (PPM)	3.93	-9.00	3.93	6.40	
CRG	1	Episode Day 2, 2013	17	CO (PPM)	4.97	-9.00	4.97	9.50	
CRG	1	Episode Day 2, 2013	18	CO (PPM)	5.32	-9.00	5.32	13.70	
CRG	1	Episode Day 2, 2013	19	CO (PPM)	5.10	-9.00	5.10	16.30	
CRG	1	Episode Day 2, 2013	20	CO (PPM)	4.30	-9.00	4.30	12.80	
CRG	1	Episode Day 2, 2013	21	CO (PPM)	3.36	-9.00	3.36	7.10	
CRG	1	Episode Day 2, 2013	22	CO (PPM)	2.64	-9.00	2.64	4.90	
CRG	1	Episode Day 2, 2013	23	CO (PPM)	2.01	-9.00	2.01	8.60	
CRG	1	Episode Day 3, 2013	0	CO (PPM)	1.65	-9.00	1.65	10.10	
CRG	1	Episode Day 3, 2013	1	CO (PPM)	1.47	-9.00	1.47	4.30	
CRG	1	Episode Day 3, 2013	2	CO (PPM)	1.13	-9.00	1.13	5.40	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CRG	1	Episode Day 3, 2013	3	CO (PPM)	0.72	-9.00	0.72	3.90	
CRG	1	Episode Day 3, 2013	4	CO (PPM)	0.56	-9.00	0.56	1.90	
CRG	1	Episode Day 3, 2013	5	CO (PPM)	0.72	-9.00	0.72	3.00	
CRG	1	Episode Day 3, 2013	6	CO (PPM)	1.41	-9.00	1.41	3.10	
CRG	1	Episode Day 3, 2013	7	CO (PPM)	2.81	-9.00	2.81	6.10	
CRG	1	Episode Day 3, 2013	8	CO (PPM)	1.36	-9.00	1.36	5.10	
CRG	1	Episode Day 3, 2013	9	CO (PPM)	1.23	-9.00	1.23	4.10	
CRG	1	Episode Day 3, 2013	10	CO (PPM)	0.94	-9.00	0.94	1.50	
CRG	1	Episode Day 3, 2013	11	CO (PPM)	0.84	-9.00	0.84	-9.00	
CRG	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
CRG	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.40	
CRG	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.30	
CRG	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.10	
CRG	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	2.00	
CRG	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	7.00	
CRG	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	9.50	
CRG	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	12.40	
CRG	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	10.10	
CRG	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	7.90	
CRG	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	7.40	
CRG	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	7.70	
NJH	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	2.30	
NJH	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	1.50	
NJH	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	1.40	
NJH	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	1.30	
NJH	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	2.20	
NJH	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	2.00	
NJH	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	2.80	
NJH	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	3.10	
NJH	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	2.00	
NJH	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	2.20	
NJH	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	2.10	
NJH	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	1.60	
NJH	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
NJH	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
NJH	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.90	
NJH	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	1.10	
NJH	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	2.90	
NJH	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	8.80	
NJH	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	4.00	
NJH	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	3.10	
NJH	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	2.80	
NJH	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	2.60	
NJH	1	Episode Day 1, 2013	22	CO (PPM)	1.16	-9.00	1.16	2.40	
NJH	1	Episode Day 1, 2013	23	CO (PPM)	1.30	-9.00	1.30	2.00	
NJH	1	Episode Day 2, 2013	0	CO (PPM)	1.15	-9.00	1.15	2.30	
NJH	1	Episode Day 2, 2013	1	CO (PPM)	0.70	-9.00	0.70	1.30	
NJH	1	Episode Day 2, 2013	2	CO (PPM)	0.48	-9.00	0.48	1.20	
NJH	1	Episode Day 2, 2013	3	CO (PPM)	0.47	-9.00	0.47	1.10	
NJH	1	Episode Day 2, 2013	4	CO (PPM)	0.50	-9.00	0.50	0.90	
NJH	1	Episode Day 2, 2013	5	CO (PPM)	0.51	-9.00	0.51	1.60	
NJH	1	Episode Day 2, 2013	6	CO (PPM)	0.73	-9.00	0.73	3.30	
NJH	1	Episode Day 2, 2013	7	CO (PPM)	1.86	-9.00	1.86	6.40	
NJH	1	Episode Day 2, 2013	8	CO (PPM)	1.28	-9.00	1.28	6.10	
NJH	1	Episode Day 2, 2013	9	CO (PPM)	0.95	-9.00	0.95	3.20	
NJH	1	Episode Day 2, 2013	10	CO (PPM)	0.62	-9.00	0.62	2.80	
NJH	1	Episode Day 2, 2013	11	CO (PPM)	0.64	-9.00	0.64	2.00	
NJH	1	Episode Day 2, 2013	12	CO (PPM)	0.70	-9.00	0.70	2.00	
NJH	1	Episode Day 2, 2013	13	CO (PPM)	0.75	-9.00	0.75	2.70	
NJH	1	Episode Day 2, 2013	14	CO (PPM)	1.14	-9.00	1.14	3.20	
NJH	1	Episode Day 2, 2013	15	CO (PPM)	1.72	-9.00	1.72	4.60	
NJH	1	Episode Day 2, 2013	16	CO (PPM)	3.50	-9.00	3.50	19.70	
NJH	1	Episode Day 2, 2013	17	CO (PPM)	4.57	-9.00	4.57	22.90	
NJH	1	Episode Day 2, 2013	18	CO (PPM)	5.27	-9.00	5.27	19.70	
NJH	1	Episode Day 2, 2013	19	CO (PPM)	6.38	-9.00	6.38	8.60	
NJH	1	Episode Day 2, 2013	20	CO (PPM)	2.70	-9.00	2.70	6.20	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
NJH	1	Episode Day 2, 2013	21	CO (PPM)	1.36	-9.00	1.36	4.40	
NJH	1	Episode Day 2, 2013	22	CO (PPM)	1.38	-9.00	1.38	4.10	
NJH	1	Episode Day 2, 2013	23	CO (PPM)	1.12	-9.00	1.12	3.20	
NJH	1	Episode Day 3, 2013	0	CO (PPM)	0.79	-9.00	0.79	2.30	
NJH	1	Episode Day 3, 2013	1	CO (PPM)	0.63	-9.00	0.63	1.20	
NJH	1	Episode Day 3, 2013	2	CO (PPM)	0.48	-9.00	0.48	1.30	
NJH	1	Episode Day 3, 2013	3	CO (PPM)	0.34	-9.00	0.34	0.80	
NJH	1	Episode Day 3, 2013	4	CO (PPM)	0.36	-9.00	0.36	0.70	
NJH	1	Episode Day 3, 2013	5	CO (PPM)	0.48	-9.00	0.48	1.60	
NJH	1	Episode Day 3, 2013	6	CO (PPM)	0.78	-9.00	0.78	2.90	
NJH	1	Episode Day 3, 2013	7	CO (PPM)	2.00	-9.00	2.00	7.00	
NJH	1	Episode Day 3, 2013	8	CO (PPM)	1.26	-9.00	1.26	5.70	
NJH	1	Episode Day 3, 2013	9	CO (PPM)	1.01	-9.00	1.01	4.90	
NJH	1	Episode Day 3, 2013	10	CO (PPM)	0.86	-9.00	0.86	3.60	
NJH	1	Episode Day 3, 2013	11	CO (PPM)	0.83	-9.00	0.83	1.30	
NJH	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	1.10	
NJH	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
NJH	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.60	
NJH	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.80	
NJH	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	4.40	
NJH	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	6.60	
NJH	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	5.10	
NJH	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	6.90	
NJH	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	5.50	
NJH	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
NJH	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	3.60	
NJH	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	2.40	
TIV	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 1, 2013	22	CO (PPM)	1.41	-9.00	1.41	-9.00	
TIV	1	Episode Day 1, 2013	23	CO (PPM)	1.72	-9.00	1.72	-9.00	
TIV	1	Episode Day 2, 2013	0	CO (PPM)	2.07	-9.00	2.07	-9.00	
TIV	1	Episode Day 2, 2013	1	CO (PPM)	1.76	-9.00	1.76	-9.00	
TIV	1	Episode Day 2, 2013	2	CO (PPM)	0.88	-9.00	0.88	-9.00	
TIV	1	Episode Day 2, 2013	3	CO (PPM)	0.64	-9.00	0.64	-9.00	
TIV	1	Episode Day 2, 2013	4	CO (PPM)	0.64	-9.00	0.64	-9.00	
TIV	1	Episode Day 2, 2013	5	CO (PPM)	0.69	-9.00	0.69	-9.00	
TIV	1	Episode Day 2, 2013	6	CO (PPM)	0.90	-9.00	0.90	-9.00	
TIV	1	Episode Day 2, 2013	7	CO (PPM)	2.56	-9.00	2.56	-9.00	
TIV	1	Episode Day 2, 2013	8	CO (PPM)	1.40	-9.00	1.40	-9.00	
TIV	1	Episode Day 2, 2013	9	CO (PPM)	0.99	-9.00	0.99	-9.00	
TIV	1	Episode Day 2, 2013	10	CO (PPM)	0.87	-9.00	0.87	-9.00	
TIV	1	Episode Day 2, 2013	11	CO (PPM)	1.13	-9.00	1.13	-9.00	
TIV	1	Episode Day 2, 2013	12	CO (PPM)	1.51	-9.00	1.51	-9.00	
TIV	1	Episode Day 2, 2013	13	CO (PPM)	1.64	-9.00	1.64	-9.00	
TIV	1	Episode Day 2, 2013	14	CO (PPM)	1.86	-9.00	1.86	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
TIV	1	Episode Day 2, 2013	15	CO (PPM)	2.87	-9.00	2.87	-9.00	
TIV	1	Episode Day 2, 2013	16	CO (PPM)	8.89	-9.00	8.89	-9.00	
TIV	1	Episode Day 2, 2013	17	CO (PPM)	14.28	-9.00	14.28	-9.00	
TIV	1	Episode Day 2, 2013	18	CO (PPM)	14.36	-9.00	14.36	-9.00	
TIV	1	Episode Day 2, 2013	19	CO (PPM)	8.32	-9.00	8.32	-9.00	
TIV	1	Episode Day 2, 2013	20	CO (PPM)	3.84	-9.00	3.84	-9.00	
TIV	1	Episode Day 2, 2013	21	CO (PPM)	3.05	-9.00	3.05	-9.00	
TIV	1	Episode Day 2, 2013	22	CO (PPM)	2.83	-9.00	2.83	-9.00	
TIV	1	Episode Day 2, 2013	23	CO (PPM)	2.65	-9.00	2.65	-9.00	
TIV	1	Episode Day 3, 2013	0	CO (PPM)	2.00	-9.00	2.00	-9.00	
TIV	1	Episode Day 3, 2013	1	CO (PPM)	1.49	-9.00	1.49	-9.00	
TIV	1	Episode Day 3, 2013	2	CO (PPM)	1.03	-9.00	1.03	-9.00	
TIV	1	Episode Day 3, 2013	3	CO (PPM)	0.58	-9.00	0.58	-9.00	
TIV	1	Episode Day 3, 2013	4	CO (PPM)	0.58	-9.00	0.58	-9.00	
TIV	1	Episode Day 3, 2013	5	CO (PPM)	1.19	-9.00	1.19	-9.00	
TIV	1	Episode Day 3, 2013	6	CO (PPM)	2.29	-9.00	2.29	-9.00	
TIV	1	Episode Day 3, 2013	7	CO (PPM)	4.97	-9.00	4.97	-9.00	
TIV	1	Episode Day 3, 2013	8	CO (PPM)	2.65	-9.00	2.65	-9.00	
TIV	1	Episode Day 3, 2013	9	CO (PPM)	2.22	-9.00	2.22	-9.00	
TIV	1	Episode Day 3, 2013	10	CO (PPM)	1.51	-9.00	1.51	-9.00	
TIV	1	Episode Day 3, 2013	11	CO (PPM)	1.12	-9.00	1.12	-9.00	
TIV	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
TIV	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 1, 2013	22	CO (PPM)	1.29	-9.00	1.29	-9.00	
ICMP	1	Episode Day 1, 2013	23	CO (PPM)	1.81	-9.00	1.81	-9.00	
ICMP	1	Episode Day 2, 2013	0	CO (PPM)	2.17	-9.00	2.17	-9.00	
ICMP	1	Episode Day 2, 2013	1	CO (PPM)	1.76	-9.00	1.76	-9.00	
ICMP	1	Episode Day 2, 2013	2	CO (PPM)	0.89	-9.00	0.89	-9.00	
ICMP	1	Episode Day 2, 2013	3	CO (PPM)	0.78	-9.00	0.78	-9.00	
ICMP	1	Episode Day 2, 2013	4	CO (PPM)	0.80	-9.00	0.80	-9.00	
ICMP	1	Episode Day 2, 2013	5	CO (PPM)	0.74	-9.00	0.74	-9.00	
ICMP	1	Episode Day 2, 2013	6	CO (PPM)	0.95	-9.00	0.95	-9.00	
ICMP	1	Episode Day 2, 2013	7	CO (PPM)	2.91	-9.00	2.91	-9.00	
ICMP	1	Episode Day 2, 2013	8	CO (PPM)	1.63	-9.00	1.63	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ICMP	1	Episode Day 2, 2013	9	CO (PPM)	1.12	-9.00	1.12	-9.00	
ICMP	1	Episode Day 2, 2013	10	CO (PPM)	0.98	-9.00	0.98	-9.00	
ICMP	1	Episode Day 2, 2013	11	CO (PPM)	1.26	-9.00	1.26	-9.00	
ICMP	1	Episode Day 2, 2013	12	CO (PPM)	1.35	-9.00	1.35	-9.00	
ICMP	1	Episode Day 2, 2013	13	CO (PPM)	1.46	-9.00	1.46	-9.00	
ICMP	1	Episode Day 2, 2013	14	CO (PPM)	1.89	1.84	3.73	-9.00	
ICMP	1	Episode Day 2, 2013	15	CO (PPM)	3.03	1.38	4.41	-9.00	
ICMP	1	Episode Day 2, 2013	16	CO (PPM)	8.78	2.88	11.66	-9.00	
ICMP	1	Episode Day 2, 2013	17	CO (PPM)	13.85	2.07	15.92	-9.00	
ICMP	1	Episode Day 2, 2013	18	CO (PPM)	14.65	1.15	15.80	-9.00	
ICMP	1	Episode Day 2, 2013	19	CO (PPM)	11.12	0.35	11.47	-9.00	
ICMP	1	Episode Day 2, 2013	20	CO (PPM)	4.55	0.35	4.90	-9.00	
ICMP	1	Episode Day 2, 2013	21	CO (PPM)	3.47	0.00	3.47	-9.00	
ICMP	1	Episode Day 2, 2013	22	CO (PPM)	3.58	0.46	4.04	-9.00	
ICMP	1	Episode Day 2, 2013	23	CO (PPM)	3.34	0.12	3.46	-9.00	
ICMP	1	Episode Day 3, 2013	0	CO (PPM)	2.31	-9.00	2.31	-9.00	
ICMP	1	Episode Day 3, 2013	1	CO (PPM)	1.61	-9.00	1.61	-9.00	
ICMP	1	Episode Day 3, 2013	2	CO (PPM)	1.04	-9.00	1.04	-9.00	
ICMP	1	Episode Day 3, 2013	3	CO (PPM)	0.58	-9.00	0.58	-9.00	
ICMP	1	Episode Day 3, 2013	4	CO (PPM)	0.62	-9.00	0.62	-9.00	
ICMP	1	Episode Day 3, 2013	5	CO (PPM)	1.20	-9.00	1.20	-9.00	
ICMP	1	Episode Day 3, 2013	6	CO (PPM)	2.16	-9.00	2.16	-9.00	
ICMP	1	Episode Day 3, 2013	7	CO (PPM)	4.74	-9.00	4.74	-9.00	
ICMP	1	Episode Day 3, 2013	8	CO (PPM)	2.56	-9.00	2.56	-9.00	
ICMP	1	Episode Day 3, 2013	9	CO (PPM)	2.37	-9.00	2.37	-9.00	
ICMP	1	Episode Day 3, 2013	10	CO (PPM)	2.15	-9.00	2.15	-9.00	
ICMP	1	Episode Day 3, 2013	11	CO (PPM)	1.46	-9.00	1.46	-9.00	
ICMP	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ICMP	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
ENG	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ENG	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ENG	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ENG	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	1.90	
ENG	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	1.80	
ENG	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ENG	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	0.50	
ENG	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.70	
ENG	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	1.50	
ENG	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	4.40	
ENG	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	2.40	
ENG	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ENG	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	1.20	
ENG	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	1.20	
ENG	1	Episode Day 1, 2013	22	CO (PPM)	0.74	-9.00	0.74	1.70	
ENG	1	Episode Day 1, 2013	23	CO (PPM)	0.46	-9.00	0.46	1.20	
ENG	1	Episode Day 2, 2013	0	CO (PPM)	0.34	-9.00	0.34	0.70	
ENG	1	Episode Day 2, 2013	1	CO (PPM)	0.32	-9.00	0.32	0.70	
ENG	1	Episode Day 2, 2013	2	CO (PPM)	0.29	-9.00	0.29	0.50	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ENG	1	Episode Day 2, 2013	3	CO (PPM)	0.28	-9.00	0.28	0.50	
ENG	1	Episode Day 2, 2013	4	CO (PPM)	0.30	-9.00	0.30	0.50	
ENG	1	Episode Day 2, 2013	5	CO (PPM)	0.33	-9.00	0.33	1.20	
ENG	1	Episode Day 2, 2013	6	CO (PPM)	0.44	-9.00	0.44	2.40	
ENG	1	Episode Day 2, 2013	7	CO (PPM)	1.00	-9.00	1.00	4.70	
ENG	1	Episode Day 2, 2013	8	CO (PPM)	0.60	-9.00	0.60	4.10	
ENG	1	Episode Day 2, 2013	9	CO (PPM)	0.38	-9.00	0.38	1.20	
ENG	1	Episode Day 2, 2013	10	CO (PPM)	0.32	-9.00	0.32	0.70	
ENG	1	Episode Day 2, 2013	11	CO (PPM)	0.37	-9.00	0.37	0.70	
ENG	1	Episode Day 2, 2013	12	CO (PPM)	0.51	-9.00	0.51	0.80	
ENG	1	Episode Day 2, 2013	13	CO (PPM)	0.66	-9.00	0.66	1.10	
ENG	1	Episode Day 2, 2013	14	CO (PPM)	0.82	-9.00	0.82	1.50	
ENG	1	Episode Day 2, 2013	15	CO (PPM)	1.53	-9.00	1.53	2.90	
ENG	1	Episode Day 2, 2013	16	CO (PPM)	3.81	-9.00	3.81	6.20	
ENG	1	Episode Day 2, 2013	17	CO (PPM)	3.73	-9.00	3.73	9.40	
ENG	1	Episode Day 2, 2013	18	CO (PPM)	1.39	-9.00	1.39	3.20	
ENG	1	Episode Day 2, 2013	19	CO (PPM)	0.70	-9.00	0.70	1.90	
ENG	1	Episode Day 2, 2013	20	CO (PPM)	0.45	-9.00	0.45	1.60	
ENG	1	Episode Day 2, 2013	21	CO (PPM)	0.44	-9.00	0.44	1.80	
ENG	1	Episode Day 2, 2013	22	CO (PPM)	0.44	-9.00	0.44	2.30	
ENG	1	Episode Day 2, 2013	23	CO (PPM)	0.42	-9.00	0.42	1.60	
ENG	1	Episode Day 3, 2013	0	CO (PPM)	0.39	-9.00	0.39	1.50	
ENG	1	Episode Day 3, 2013	1	CO (PPM)	0.35	-9.00	0.35	1.00	
ENG	1	Episode Day 3, 2013	2	CO (PPM)	0.28	-9.00	0.28	0.60	
ENG	1	Episode Day 3, 2013	3	CO (PPM)	0.26	-9.00	0.26	0.50	
ENG	1	Episode Day 3, 2013	4	CO (PPM)	0.26	-9.00	0.26	0.50	
ENG	1	Episode Day 3, 2013	5	CO (PPM)	0.28	-9.00	0.28	0.70	
ENG	1	Episode Day 3, 2013	6	CO (PPM)	0.43	-9.00	0.43	1.80	
ENG	1	Episode Day 3, 2013	7	CO (PPM)	1.25	-9.00	1.25	3.50	
ENG	1	Episode Day 3, 2013	8	CO (PPM)	0.58	-9.00	0.58	-9.00	
ENG	1	Episode Day 3, 2013	9	CO (PPM)	0.61	-9.00	0.61	2.80	
ENG	1	Episode Day 3, 2013	10	CO (PPM)	0.62	-9.00	0.62	2.00	
ENG	1	Episode Day 3, 2013	11	CO (PPM)	0.68	-9.00	0.68	0.60	
ENG	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.60	
ENG	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ENG	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	3.80	
ENG	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	4.30	
ENG	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	3.00	
ENG	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	2.10	
ENG	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	1.40	
ENG	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	1.10	
ENG	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	1.50	
BOU	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	0.40	
BOU	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	0.00	
BOU	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	0.30	
BOU	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	0.50	
BOU	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	1.00	
BOU	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	1.40	
BOU	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	1.80	
BOU	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	2.70	
BOU	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	1.60	
BOU	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	1.10	
BOU	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
BOU	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.60	
BOU	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	1.50	
BOU	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	1.20	
BOU	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	0.40	
BOU	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	0.30	
BOU	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	0.10	
BOU	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	0.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
BOU	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	0.00	
BOU	1	Episode Day 1, 2013	22	CO (PPM)	0.97	-9.00	0.97	0.20	
BOU	1	Episode Day 1, 2013	23	CO (PPM)	0.41	-9.00	0.41	0.50	
BOU	1	Episode Day 2, 2013	0	CO (PPM)	0.25	-9.00	0.25	0.20	
BOU	1	Episode Day 2, 2013	1	CO (PPM)	0.23	-9.00	0.23	0.20	
BOU	1	Episode Day 2, 2013	2	CO (PPM)	0.23	-9.00	0.23	0.10	
BOU	1	Episode Day 2, 2013	3	CO (PPM)	0.23	-9.00	0.23	0.10	
BOU	1	Episode Day 2, 2013	4	CO (PPM)	0.24	-9.00	0.24	0.30	
BOU	1	Episode Day 2, 2013	5	CO (PPM)	0.30	-9.00	0.30	0.60	
BOU	1	Episode Day 2, 2013	6	CO (PPM)	0.52	-9.00	0.52	1.20	
BOU	1	Episode Day 2, 2013	7	CO (PPM)	0.84	-9.00	0.84	2.60	
BOU	1	Episode Day 2, 2013	8	CO (PPM)	0.41	-9.00	0.41	2.20	
BOU	1	Episode Day 2, 2013	9	CO (PPM)	0.50	-9.00	0.50	4.20	
BOU	1	Episode Day 2, 2013	10	CO (PPM)	0.65	-9.00	0.65	2.90	
BOU	1	Episode Day 2, 2013	11	CO (PPM)	0.65	-9.00	0.65	1.30	
BOU	1	Episode Day 2, 2013	12	CO (PPM)	0.63	-9.00	0.63	1.40	
BOU	1	Episode Day 2, 2013	13	CO (PPM)	0.57	-9.00	0.57	1.20	
BOU	1	Episode Day 2, 2013	14	CO (PPM)	0.78	-9.00	0.78	1.20	
BOU	1	Episode Day 2, 2013	15	CO (PPM)	1.47	-9.00	1.47	1.90	
BOU	1	Episode Day 2, 2013	16	CO (PPM)	1.15	-9.00	1.15	2.00	
BOU	1	Episode Day 2, 2013	17	CO (PPM)	0.63	-9.00	0.63	1.30	
BOU	1	Episode Day 2, 2013	18	CO (PPM)	0.49	-9.00	0.49	1.10	
BOU	1	Episode Day 2, 2013	19	CO (PPM)	0.51	-9.00	0.51	6.50	
BOU	1	Episode Day 2, 2013	20	CO (PPM)	0.40	-9.00	0.40	1.60	
BOU	1	Episode Day 2, 2013	21	CO (PPM)	0.35	-9.00	0.35	1.30	
BOU	1	Episode Day 2, 2013	22	CO (PPM)	0.28	-9.00	0.28	0.80	
BOU	1	Episode Day 2, 2013	23	CO (PPM)	0.26	-9.00	0.26	0.40	
BOU	1	Episode Day 3, 2013	0	CO (PPM)	0.25	-9.00	0.25	0.00	
BOU	1	Episode Day 3, 2013	1	CO (PPM)	0.24	-9.00	0.24	0.00	
BOU	1	Episode Day 3, 2013	2	CO (PPM)	0.24	-9.00	0.24	0.00	
BOU	1	Episode Day 3, 2013	3	CO (PPM)	0.25	-9.00	0.25	0.00	
BOU	1	Episode Day 3, 2013	4	CO (PPM)	0.25	-9.00	0.25	0.10	
BOU	1	Episode Day 3, 2013	5	CO (PPM)	0.24	-9.00	0.24	0.40	
BOU	1	Episode Day 3, 2013	6	CO (PPM)	0.45	-9.00	0.45	0.80	
BOU	1	Episode Day 3, 2013	7	CO (PPM)	0.89	-9.00	0.89	4.00	
BOU	1	Episode Day 3, 2013	8	CO (PPM)	0.46	-9.00	0.46	2.30	
BOU	1	Episode Day 3, 2013	9	CO (PPM)	0.40	-9.00	0.40	2.90	
BOU	1	Episode Day 3, 2013	10	CO (PPM)	0.31	-9.00	0.31	0.70	
BOU	1	Episode Day 3, 2013	11	CO (PPM)	0.36	-9.00	0.36	0.90	
BOU	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	1.30	
BOU	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
BOU	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.70	
BOU	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	3.50	
BOU	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	1.60	
BOU	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	0.80	
BOU	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	0.90	
BOU	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	0.70	
GRDS	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
GRDS	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	3.00	
GRDS	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 1, 2013	22	CO (PPM)	1.27	-9.00	1.27	4.00	
GRDS	1	Episode Day 1, 2013	23	CO (PPM)	0.50	-9.00	0.50	3.00	
GRDS	1	Episode Day 2, 2013	0	CO (PPM)	0.26	-9.00	0.26	0.80	
GRDS	1	Episode Day 2, 2013	1	CO (PPM)	0.24	-9.00	0.24	0.50	
GRDS	1	Episode Day 2, 2013	2	CO (PPM)	0.24	-9.00	0.24	0.70	
GRDS	1	Episode Day 2, 2013	3	CO (PPM)	0.24	-9.00	0.24	0.90	
GRDS	1	Episode Day 2, 2013	4	CO (PPM)	0.25	-9.00	0.25	1.10	
GRDS	1	Episode Day 2, 2013	5	CO (PPM)	0.30	-9.00	0.30	1.50	
GRDS	1	Episode Day 2, 2013	6	CO (PPM)	0.57	-9.00	0.57	5.30	
GRDS	1	Episode Day 2, 2013	7	CO (PPM)	1.14	-9.00	1.14	16.30	
GRDS	1	Episode Day 2, 2013	8	CO (PPM)	0.53	-9.00	0.53	16.60	
GRDS	1	Episode Day 2, 2013	9	CO (PPM)	0.58	-9.00	0.58	6.10	
GRDS	1	Episode Day 2, 2013	10	CO (PPM)	0.76	-9.00	0.76	2.00	
GRDS	1	Episode Day 2, 2013	11	CO (PPM)	0.74	-9.00	0.74	1.80	
GRDS	1	Episode Day 2, 2013	12	CO (PPM)	0.63	-9.00	0.63	1.80	
GRDS	1	Episode Day 2, 2013	13	CO (PPM)	0.58	-9.00	0.58	-9.00	
GRDS	1	Episode Day 2, 2013	14	CO (PPM)	0.81	-9.00	0.81	2.40	
GRDS	1	Episode Day 2, 2013	15	CO (PPM)	1.56	-9.00	1.56	3.50	
GRDS	1	Episode Day 2, 2013	16	CO (PPM)	1.57	-9.00	1.57	4.70	
GRDS	1	Episode Day 2, 2013	17	CO (PPM)	0.81	-9.00	0.81	10.00	
GRDS	1	Episode Day 2, 2013	18	CO (PPM)	0.62	-9.00	0.62	13.20	
GRDS	1	Episode Day 2, 2013	19	CO (PPM)	0.61	-9.00	0.61	14.00	
GRDS	1	Episode Day 2, 2013	20	CO (PPM)	0.47	-9.00	0.47	10.60	
GRDS	1	Episode Day 2, 2013	21	CO (PPM)	0.39	-9.00	0.39	7.30	
GRDS	1	Episode Day 2, 2013	22	CO (PPM)	0.30	-9.00	0.30	3.30	
GRDS	1	Episode Day 2, 2013	23	CO (PPM)	0.27	-9.00	0.27	2.30	
GRDS	1	Episode Day 3, 2013	0	CO (PPM)	0.26	-9.00	0.26	1.00	
GRDS	1	Episode Day 3, 2013	1	CO (PPM)	0.24	-9.00	0.24	0.00	
GRDS	1	Episode Day 3, 2013	2	CO (PPM)	0.24	-9.00	0.24	0.00	
GRDS	1	Episode Day 3, 2013	3	CO (PPM)	0.25	-9.00	0.25	0.00	
GRDS	1	Episode Day 3, 2013	4	CO (PPM)	0.26	-9.00	0.26	0.00	
GRDS	1	Episode Day 3, 2013	5	CO (PPM)	0.24	-9.00	0.24	1.00	
GRDS	1	Episode Day 3, 2013	6	CO (PPM)	0.43	-9.00	0.43	2.00	
GRDS	1	Episode Day 3, 2013	7	CO (PPM)	1.00	-9.00	1.00	9.00	
GRDS	1	Episode Day 3, 2013	8	CO (PPM)	0.53	-9.00	0.53	8.00	
GRDS	1	Episode Day 3, 2013	9	CO (PPM)	0.49	-9.00	0.49	4.00	
GRDS	1	Episode Day 3, 2013	10	CO (PPM)	0.32	-9.00	0.32	1.00	
GRDS	1	Episode Day 3, 2013	11	CO (PPM)	0.37	-9.00	0.37	1.00	
GRDS	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	2.00	
GRDS	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	1.00	
GRDS	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	6.00	
GRDS	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	9.00	
GRDS	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	7.00	
GRDS	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	4.00	
GRDS	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	4.00	
ARV	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	2.70	
ARV	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	3.30	
ARV	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	2.50	
ARV	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ARV	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	0.90	
ARV	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	1.60	
ARV	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	2.50	
ARV	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	4.20	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ARV	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	2.00	
ARV	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	1.70	
ARV	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	1.90	
ARV	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	1.50	
ARV	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	1.30	
ARV	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	2.20	
ARV	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	3.80	
ARV	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	3.70	
ARV	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	3.90	
ARV	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	4.50	
ARV	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	6.50	
ARV	1	Episode Day 1, 2013	22	CO (PPM)	2.70	-9.00	2.70	5.40	
ARV	1	Episode Day 1, 2013	23	CO (PPM)	2.42	-9.00	2.42	2.40	
ARV	1	Episode Day 2, 2013	0	CO (PPM)	1.19	-9.00	1.19	1.70	
ARV	1	Episode Day 2, 2013	1	CO (PPM)	0.69	-9.00	0.69	1.30	
ARV	1	Episode Day 2, 2013	2	CO (PPM)	0.90	-9.00	0.90	1.50	
ARV	1	Episode Day 2, 2013	3	CO (PPM)	0.62	-9.00	0.62	1.40	
ARV	1	Episode Day 2, 2013	4	CO (PPM)	0.37	-9.00	0.37	1.20	
ARV	1	Episode Day 2, 2013	5	CO (PPM)	0.36	-9.00	0.36	1.80	
ARV	1	Episode Day 2, 2013	6	CO (PPM)	0.43	-9.00	0.43	3.80	
ARV	1	Episode Day 2, 2013	7	CO (PPM)	0.73	-9.00	0.73	9.60	
ARV	1	Episode Day 2, 2013	8	CO (PPM)	0.63	-9.00	0.63	11.00	
ARV	1	Episode Day 2, 2013	9	CO (PPM)	0.76	-9.00	0.76	6.60	
ARV	1	Episode Day 2, 2013	10	CO (PPM)	0.75	-9.00	0.75	4.40	
ARV	1	Episode Day 2, 2013	11	CO (PPM)	0.83	-9.00	0.83	2.20	
ARV	1	Episode Day 2, 2013	12	CO (PPM)	0.96	-9.00	0.96	1.70	
ARV	1	Episode Day 2, 2013	13	CO (PPM)	1.03	-9.00	1.03	1.60	
ARV	1	Episode Day 2, 2013	14	CO (PPM)	1.18	-9.00	1.18	1.70	
ARV	1	Episode Day 2, 2013	15	CO (PPM)	1.52	-9.00	1.52	2.60	
ARV	1	Episode Day 2, 2013	16	CO (PPM)	2.92	-9.00	2.92	5.20	
ARV	1	Episode Day 2, 2013	17	CO (PPM)	2.17	-9.00	2.17	6.30	
ARV	1	Episode Day 2, 2013	18	CO (PPM)	0.95	-9.00	0.95	6.20	
ARV	1	Episode Day 2, 2013	19	CO (PPM)	0.53	-9.00	0.53	6.00	
ARV	1	Episode Day 2, 2013	20	CO (PPM)	0.44	-9.00	0.44	5.10	
ARV	1	Episode Day 2, 2013	21	CO (PPM)	0.45	-9.00	0.45	4.10	
ARV	1	Episode Day 2, 2013	22	CO (PPM)	0.42	-9.00	0.42	3.20	
ARV	1	Episode Day 2, 2013	23	CO (PPM)	0.37	-9.00	0.37	2.30	
ARV	1	Episode Day 3, 2013	0	CO (PPM)	0.33	-9.00	0.33	1.50	
ARV	1	Episode Day 3, 2013	1	CO (PPM)	0.31	-9.00	0.31	1.20	
ARV	1	Episode Day 3, 2013	2	CO (PPM)	0.30	-9.00	0.30	1.10	
ARV	1	Episode Day 3, 2013	3	CO (PPM)	0.28	-9.00	0.28	0.90	
ARV	1	Episode Day 3, 2013	4	CO (PPM)	0.25	-9.00	0.25	0.60	
ARV	1	Episode Day 3, 2013	5	CO (PPM)	0.28	-9.00	0.28	1.10	
ARV	1	Episode Day 3, 2013	6	CO (PPM)	0.58	-9.00	0.58	2.90	
ARV	1	Episode Day 3, 2013	7	CO (PPM)	1.33	-9.00	1.33	8.20	
ARV	1	Episode Day 3, 2013	8	CO (PPM)	0.74	-9.00	0.74	7.30	
ARV	1	Episode Day 3, 2013	9	CO (PPM)	0.75	-9.00	0.75	4.50	
ARV	1	Episode Day 3, 2013	10	CO (PPM)	0.73	-9.00	0.73	-9.00	
ARV	1	Episode Day 3, 2013	11	CO (PPM)	0.76	-9.00	0.76	1.00	
ARV	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.90	
ARV	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	1.00	
ARV	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	2.40	
ARV	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	5.50	
ARV	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	5.20	
ARV	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	4.80	
ARV	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	3.90	
ARV	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	4.00	
ARV	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	4.30	
ARV	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	2.00	
HLD	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	0.60	
HLD	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	0.60	
HLD	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	0.50	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	0.50	
HLD	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	1.20	
HLD	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	1.50	
HLD	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	0.10	
HLD	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.10	
HLD	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	0.50	
HLD	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 1, 2013	22	CO (PPM)	0.25	-9.00	0.25	0.30	
HLD	1	Episode Day 1, 2013	23	CO (PPM)	0.24	-9.00	0.24	0.20	
HLD	1	Episode Day 2, 2013	0	CO (PPM)	0.23	-9.00	0.23	0.20	
HLD	1	Episode Day 2, 2013	1	CO (PPM)	0.22	-9.00	0.22	0.20	
HLD	1	Episode Day 2, 2013	2	CO (PPM)	0.21	-9.00	0.21	0.10	
HLD	1	Episode Day 2, 2013	3	CO (PPM)	0.21	-9.00	0.21	0.20	
HLD	1	Episode Day 2, 2013	4	CO (PPM)	0.22	-9.00	0.22	0.10	
HLD	1	Episode Day 2, 2013	5	CO (PPM)	0.23	-9.00	0.23	0.10	
HLD	1	Episode Day 2, 2013	6	CO (PPM)	0.28	-9.00	0.28	0.10	
HLD	1	Episode Day 2, 2013	7	CO (PPM)	0.39	-9.00	0.39	0.10	
HLD	1	Episode Day 2, 2013	8	CO (PPM)	0.27	-9.00	0.27	0.00	
HLD	1	Episode Day 2, 2013	9	CO (PPM)	0.23	-9.00	0.23	0.00	
HLD	1	Episode Day 2, 2013	10	CO (PPM)	0.23	-9.00	0.23	0.00	
HLD	1	Episode Day 2, 2013	11	CO (PPM)	0.24	-9.00	0.24	0.00	
HLD	1	Episode Day 2, 2013	12	CO (PPM)	0.40	-9.00	0.40	0.00	
HLD	1	Episode Day 2, 2013	13	CO (PPM)	0.47	-9.00	0.47	0.00	
HLD	1	Episode Day 2, 2013	14	CO (PPM)	0.62	-9.00	0.62	0.00	
HLD	1	Episode Day 2, 2013	15	CO (PPM)	1.05	-9.00	1.05	0.70	
HLD	1	Episode Day 2, 2013	16	CO (PPM)	2.55	-9.00	2.55	4.00	
HLD	1	Episode Day 2, 2013	17	CO (PPM)	3.20	-9.00	3.20	4.40	
HLD	1	Episode Day 2, 2013	18	CO (PPM)	1.09	-9.00	1.09	1.60	
HLD	1	Episode Day 2, 2013	19	CO (PPM)	0.39	-9.00	0.39	0.70	
HLD	1	Episode Day 2, 2013	20	CO (PPM)	0.30	-9.00	0.30	0.50	
HLD	1	Episode Day 2, 2013	21	CO (PPM)	0.28	-9.00	0.28	0.30	
HLD	1	Episode Day 2, 2013	22	CO (PPM)	0.26	-9.00	0.26	0.30	
HLD	1	Episode Day 2, 2013	23	CO (PPM)	0.24	-9.00	0.24	0.40	
HLD	1	Episode Day 3, 2013	0	CO (PPM)	0.25	-9.00	0.25	0.40	
HLD	1	Episode Day 3, 2013	1	CO (PPM)	0.24	-9.00	0.24	0.40	
HLD	1	Episode Day 3, 2013	2	CO (PPM)	0.22	-9.00	0.22	0.50	
HLD	1	Episode Day 3, 2013	3	CO (PPM)	0.22	-9.00	0.22	0.50	
HLD	1	Episode Day 3, 2013	4	CO (PPM)	0.22	-9.00	0.22	0.40	
HLD	1	Episode Day 3, 2013	5	CO (PPM)	0.24	-9.00	0.24	0.30	
HLD	1	Episode Day 3, 2013	6	CO (PPM)	0.31	-9.00	0.31	0.30	
HLD	1	Episode Day 3, 2013	7	CO (PPM)	0.89	-9.00	0.89	1.90	
HLD	1	Episode Day 3, 2013	8	CO (PPM)	0.71	-9.00	0.71	2.00	
HLD	1	Episode Day 3, 2013	9	CO (PPM)	0.68	-9.00	0.68	1.10	
HLD	1	Episode Day 3, 2013	10	CO (PPM)	0.47	-9.00	0.47	0.00	
HLD	1	Episode Day 3, 2013	11	CO (PPM)	0.39	-9.00	0.39	0.00	
HLD	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.00	
HLD	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	0.70	
HLD	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	0.20	
HLD	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	0.80	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	0.30	
HLD	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	0.40	
HLD	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	1.80	
AUR	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 1, 2013	22	CO (PPM)	0.78	-9.00	0.78	-9.00	
AUR	1	Episode Day 1, 2013	23	CO (PPM)	0.79	-9.00	0.79	-9.00	
AUR	1	Episode Day 2, 2013	0	CO (PPM)	0.69	-9.00	0.69	-9.00	
AUR	1	Episode Day 2, 2013	1	CO (PPM)	0.44	-9.00	0.44	-9.00	
AUR	1	Episode Day 2, 2013	2	CO (PPM)	0.34	-9.00	0.34	-9.00	
AUR	1	Episode Day 2, 2013	3	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 2, 2013	4	CO (PPM)	0.33	-9.00	0.33	-9.00	
AUR	1	Episode Day 2, 2013	5	CO (PPM)	0.37	-9.00	0.37	-9.00	
AUR	1	Episode Day 2, 2013	6	CO (PPM)	0.54	-9.00	0.54	-9.00	
AUR	1	Episode Day 2, 2013	7	CO (PPM)	1.16	-9.00	1.16	-9.00	
AUR	1	Episode Day 2, 2013	8	CO (PPM)	0.90	-9.00	0.90	-9.00	
AUR	1	Episode Day 2, 2013	9	CO (PPM)	0.63	-9.00	0.63	-9.00	
AUR	1	Episode Day 2, 2013	10	CO (PPM)	0.41	-9.00	0.41	-9.00	
AUR	1	Episode Day 2, 2013	11	CO (PPM)	0.41	-9.00	0.41	-9.00	
AUR	1	Episode Day 2, 2013	12	CO (PPM)	0.46	-9.00	0.46	-9.00	
AUR	1	Episode Day 2, 2013	13	CO (PPM)	0.55	-9.00	0.55	-9.00	
AUR	1	Episode Day 2, 2013	14	CO (PPM)	0.77	-9.00	0.77	-9.00	
AUR	1	Episode Day 2, 2013	15	CO (PPM)	1.23	-9.00	1.23	-9.00	
AUR	1	Episode Day 2, 2013	16	CO (PPM)	2.36	-9.00	2.36	-9.00	
AUR	1	Episode Day 2, 2013	17	CO (PPM)	2.96	-9.00	2.96	-9.00	
AUR	1	Episode Day 2, 2013	18	CO (PPM)	3.22	-9.00	3.22	-9.00	
AUR	1	Episode Day 2, 2013	19	CO (PPM)	4.08	-9.00	4.08	-9.00	
AUR	1	Episode Day 2, 2013	20	CO (PPM)	3.95	-9.00	3.95	-9.00	
AUR	1	Episode Day 2, 2013	21	CO (PPM)	1.27	-9.00	1.27	-9.00	
AUR	1	Episode Day 2, 2013	22	CO (PPM)	0.93	-9.00	0.93	-9.00	
AUR	1	Episode Day 2, 2013	23	CO (PPM)	0.70	-9.00	0.70	-9.00	
AUR	1	Episode Day 3, 2013	0	CO (PPM)	0.50	-9.00	0.50	-9.00	
AUR	1	Episode Day 3, 2013	1	CO (PPM)	0.38	-9.00	0.38	-9.00	
AUR	1	Episode Day 3, 2013	2	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 3, 2013	3	CO (PPM)	0.27	-9.00	0.27	-9.00	
AUR	1	Episode Day 3, 2013	4	CO (PPM)	0.28	-9.00	0.28	-9.00	
AUR	1	Episode Day 3, 2013	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
AUR	1	Episode Day 3, 2013	6	CO (PPM)	0.47	-9.00	0.47	-9.00	
AUR	1	Episode Day 3, 2013	7	CO (PPM)	1.06	-9.00	1.06	-9.00	
AUR	1	Episode Day 3, 2013	8	CO (PPM)	0.66	-9.00	0.66	-9.00	
AUR	1	Episode Day 3, 2013	9	CO (PPM)	0.59	-9.00	0.59	-9.00	
AUR	1	Episode Day 3, 2013	10	CO (PPM)	0.58	-9.00	0.58	-9.00	
AUR	1	Episode Day 3, 2013	11	CO (PPM)	0.53	-9.00	0.53	-9.00	
AUR	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AUR	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AUR	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
AURS	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	0.60	
AURS	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	0.50	
AURS	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	0.40	
AURS	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	0.40	
AURS	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	2.50	
AURS	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	2.20	
AURS	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	1.40	
AURS	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	1.60	
AURS	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	1.40	
AURS	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	1.50	
AURS	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.90	
AURS	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.50	
AURS	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	1.20	
AURS	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	3.70	
AURS	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	1.60	
AURS	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	1.30	
AURS	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	0.90	
AURS	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 1, 2013	22	CO (PPM)	0.56	-9.00	0.56	1.00	
AURS	1	Episode Day 1, 2013	23	CO (PPM)	0.53	-9.00	0.53	0.90	
AURS	1	Episode Day 2, 2013	0	CO (PPM)	0.40	-9.00	0.40	0.80	
AURS	1	Episode Day 2, 2013	1	CO (PPM)	0.31	-9.00	0.31	0.50	
AURS	1	Episode Day 2, 2013	2	CO (PPM)	0.27	-9.00	0.27	0.30	
AURS	1	Episode Day 2, 2013	3	CO (PPM)	0.26	-9.00	0.26	0.30	
AURS	1	Episode Day 2, 2013	4	CO (PPM)	0.28	-9.00	0.28	0.30	
AURS	1	Episode Day 2, 2013	5	CO (PPM)	0.32	-9.00	0.32	0.90	
AURS	1	Episode Day 2, 2013	6	CO (PPM)	0.54	-9.00	0.54	2.80	
AURS	1	Episode Day 2, 2013	7	CO (PPM)	1.09	-9.00	1.09	3.90	
AURS	1	Episode Day 2, 2013	8	CO (PPM)	0.65	-9.00	0.65	2.70	
AURS	1	Episode Day 2, 2013	9	CO (PPM)	0.37	-9.00	0.37	2.30	
AURS	1	Episode Day 2, 2013	10	CO (PPM)	0.31	-9.00	0.31	2.10	
AURS	1	Episode Day 2, 2013	11	CO (PPM)	0.35	-9.00	0.35	2.70	
AURS	1	Episode Day 2, 2013	12	CO (PPM)	0.48	-9.00	0.48	2.30	
AURS	1	Episode Day 2, 2013	13	CO (PPM)	0.62	-9.00	0.62	2.50	
AURS	1	Episode Day 2, 2013	14	CO (PPM)	0.83	-9.00	0.83	1.70	
AURS	1	Episode Day 2, 2013	15	CO (PPM)	1.34	-9.00	1.34	2.60	
AURS	1	Episode Day 2, 2013	16	CO (PPM)	3.54	-9.00	3.54	5.30	
AURS	1	Episode Day 2, 2013	17	CO (PPM)	5.75	-9.00	5.75	11.20	
AURS	1	Episode Day 2, 2013	18	CO (PPM)	6.19	-9.00	6.19	5.60	
AURS	1	Episode Day 2, 2013	19	CO (PPM)	3.82	-9.00	3.82	3.00	
AURS	1	Episode Day 2, 2013	20	CO (PPM)	0.93	-9.00	0.93	2.20	
AURS	1	Episode Day 2, 2013	21	CO (PPM)	0.62	-9.00	0.62	1.80	
AURS	1	Episode Day 2, 2013	22	CO (PPM)	0.54	-9.00	0.54	1.70	
AURS	1	Episode Day 2, 2013	23	CO (PPM)	0.41	-9.00	0.41	1.30	
AURS	1	Episode Day 3, 2013	0	CO (PPM)	0.36	-9.00	0.36	0.80	
AURS	1	Episode Day 3, 2013	1	CO (PPM)	0.35	-9.00	0.35	0.50	
AURS	1	Episode Day 3, 2013	2	CO (PPM)	0.28	-9.00	0.28	0.50	
AURS	1	Episode Day 3, 2013	3	CO (PPM)	0.25	-9.00	0.25	0.50	
AURS	1	Episode Day 3, 2013	4	CO (PPM)	0.26	-9.00	0.26	0.70	
AURS	1	Episode Day 3, 2013	5	CO (PPM)	0.30	-9.00	0.30	1.20	
AURS	1	Episode Day 3, 2013	6	CO (PPM)	0.48	-9.00	0.48	5.40	
AURS	1	Episode Day 3, 2013	7	CO (PPM)	1.08	-9.00	1.08	6.90	
AURS	1	Episode Day 3, 2013	8	CO (PPM)	0.54	-9.00	0.54	5.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AURS	1	Episode Day 3, 2013	9	CO (PPM)	0.55	-9.00	0.55	3.30	
AURS	1	Episode Day 3, 2013	10	CO (PPM)	0.50	-9.00	0.50	0.90	
AURS	1	Episode Day 3, 2013	11	CO (PPM)	0.45	-9.00	0.45	0.90	
AURS	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	0.70	
AURS	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	0.80	
AURS	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	1.80	
AURS	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	3.40	
AURS	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	3.90	
AURS	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	2.70	
AURS	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	3.00	
AURS	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	2.50	
AURS	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	1.50	
AURS	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	1.10	
PLM	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 1, 2013	22	CO (PPM)	1.09	-9.00	1.09	-9.00	
PLM	1	Episode Day 1, 2013	23	CO (PPM)	1.13	-9.00	1.13	-9.00	
PLM	1	Episode Day 2, 2013	0	CO (PPM)	0.86	-9.00	0.86	-9.00	
PLM	1	Episode Day 2, 2013	1	CO (PPM)	0.49	-9.00	0.49	-9.00	
PLM	1	Episode Day 2, 2013	2	CO (PPM)	0.41	-9.00	0.41	-9.00	
PLM	1	Episode Day 2, 2013	3	CO (PPM)	0.38	-9.00	0.38	-9.00	
PLM	1	Episode Day 2, 2013	4	CO (PPM)	0.40	-9.00	0.40	-9.00	
PLM	1	Episode Day 2, 2013	5	CO (PPM)	0.43	-9.00	0.43	-9.00	
PLM	1	Episode Day 2, 2013	6	CO (PPM)	0.64	-9.00	0.64	-9.00	
PLM	1	Episode Day 2, 2013	7	CO (PPM)	1.57	-9.00	1.57	-9.00	
PLM	1	Episode Day 2, 2013	8	CO (PPM)	1.06	-9.00	1.06	-9.00	
PLM	1	Episode Day 2, 2013	9	CO (PPM)	0.82	-9.00	0.82	-9.00	
PLM	1	Episode Day 2, 2013	10	CO (PPM)	0.52	-9.00	0.52	-9.00	
PLM	1	Episode Day 2, 2013	11	CO (PPM)	0.51	-9.00	0.51	-9.00	
PLM	1	Episode Day 2, 2013	12	CO (PPM)	0.59	-9.00	0.59	-9.00	
PLM	1	Episode Day 2, 2013	13	CO (PPM)	0.65	-9.00	0.65	-9.00	
PLM	1	Episode Day 2, 2013	14	CO (PPM)	0.95	-9.00	0.95	-9.00	
PLM	1	Episode Day 2, 2013	15	CO (PPM)	1.54	-9.00	1.54	-9.00	
PLM	1	Episode Day 2, 2013	16	CO (PPM)	3.13	-9.00	3.13	-9.00	
PLM	1	Episode Day 2, 2013	17	CO (PPM)	4.05	-9.00	4.05	-9.00	
PLM	1	Episode Day 2, 2013	18	CO (PPM)	4.65	-9.00	4.65	-9.00	
PLM	1	Episode Day 2, 2013	19	CO (PPM)	5.91	-9.00	5.91	-9.00	
PLM	1	Episode Day 2, 2013	20	CO (PPM)	1.97	-9.00	1.97	-9.00	
PLM	1	Episode Day 2, 2013	21	CO (PPM)	1.04	-9.00	1.04	-9.00	
PLM	1	Episode Day 2, 2013	22	CO (PPM)	1.07	-9.00	1.07	-9.00	
PLM	1	Episode Day 2, 2013	23	CO (PPM)	0.82	-9.00	0.82	-9.00	
PLM	1	Episode Day 3, 2013	0	CO (PPM)	0.57	-9.00	0.57	-9.00	
PLM	1	Episode Day 3, 2013	1	CO (PPM)	0.47	-9.00	0.47	-9.00	
PLM	1	Episode Day 3, 2013	2	CO (PPM)	0.39	-9.00	0.39	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
PLM	1	Episode Day 3, 2013	3	CO (PPM)	0.31	-9.00	0.31	-9.00	
PLM	1	Episode Day 3, 2013	4	CO (PPM)	0.31	-9.00	0.31	-9.00	
PLM	1	Episode Day 3, 2013	5	CO (PPM)	0.37	-9.00	0.37	-9.00	
PLM	1	Episode Day 3, 2013	6	CO (PPM)	0.55	-9.00	0.55	-9.00	
PLM	1	Episode Day 3, 2013	7	CO (PPM)	1.47	-9.00	1.47	-9.00	
PLM	1	Episode Day 3, 2013	8	CO (PPM)	0.91	-9.00	0.91	-9.00	
PLM	1	Episode Day 3, 2013	9	CO (PPM)	0.73	-9.00	0.73	-9.00	
PLM	1	Episode Day 3, 2013	10	CO (PPM)	0.69	-9.00	0.69	-9.00	
PLM	1	Episode Day 3, 2013	11	CO (PPM)	0.78	-9.00	0.78	-9.00	
PLM	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
PLM	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 1, 2013	22	CO (PPM)	0.27	-9.00	0.27	-9.00	
BTN	1	Episode Day 1, 2013	23	CO (PPM)	0.30	-9.00	0.30	-9.00	
BTN	1	Episode Day 2, 2013	0	CO (PPM)	0.42	-9.00	0.42	-9.00	
BTN	1	Episode Day 2, 2013	1	CO (PPM)	0.52	-9.00	0.52	-9.00	
BTN	1	Episode Day 2, 2013	2	CO (PPM)	0.49	-9.00	0.49	-9.00	
BTN	1	Episode Day 2, 2013	3	CO (PPM)	0.44	-9.00	0.44	-9.00	
BTN	1	Episode Day 2, 2013	4	CO (PPM)	0.36	-9.00	0.36	-9.00	
BTN	1	Episode Day 2, 2013	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
BTN	1	Episode Day 2, 2013	6	CO (PPM)	0.32	-9.00	0.32	-9.00	
BTN	1	Episode Day 2, 2013	7	CO (PPM)	0.51	-9.00	0.51	-9.00	
BTN	1	Episode Day 2, 2013	8	CO (PPM)	0.47	-9.00	0.47	-9.00	
BTN	1	Episode Day 2, 2013	9	CO (PPM)	0.54	-9.00	0.54	-9.00	
BTN	1	Episode Day 2, 2013	10	CO (PPM)	0.65	-9.00	0.65	-9.00	
BTN	1	Episode Day 2, 2013	11	CO (PPM)	0.77	-9.00	0.77	-9.00	
BTN	1	Episode Day 2, 2013	12	CO (PPM)	0.76	-9.00	0.76	-9.00	
BTN	1	Episode Day 2, 2013	13	CO (PPM)	0.74	-9.00	0.74	-9.00	
BTN	1	Episode Day 2, 2013	14	CO (PPM)	0.78	-9.00	0.78	-9.00	
BTN	1	Episode Day 2, 2013	15	CO (PPM)	0.91	-9.00	0.91	-9.00	
BTN	1	Episode Day 2, 2013	16	CO (PPM)	1.24	-9.00	1.24	-9.00	
BTN	1	Episode Day 2, 2013	17	CO (PPM)	1.43	-9.00	1.43	-9.00	
BTN	1	Episode Day 2, 2013	18	CO (PPM)	1.53	-9.00	1.53	-9.00	
BTN	1	Episode Day 2, 2013	19	CO (PPM)	1.23	-9.00	1.23	-9.00	
BTN	1	Episode Day 2, 2013	20	CO (PPM)	0.75	-9.00	0.75	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
BTN	1	Episode Day 2, 2013	21	CO (PPM)	0.86	-9.00	0.86	-9.00	
BTN	1	Episode Day 2, 2013	22	CO (PPM)	1.39	-9.00	1.39	-9.00	
BTN	1	Episode Day 2, 2013	23	CO (PPM)	1.67	-9.00	1.67	-9.00	
BTN	1	Episode Day 3, 2013	0	CO (PPM)	1.05	-9.00	1.05	-9.00	
BTN	1	Episode Day 3, 2013	1	CO (PPM)	0.80	-9.00	0.80	-9.00	
BTN	1	Episode Day 3, 2013	2	CO (PPM)	0.61	-9.00	0.61	-9.00	
BTN	1	Episode Day 3, 2013	3	CO (PPM)	0.41	-9.00	0.41	-9.00	
BTN	1	Episode Day 3, 2013	4	CO (PPM)	0.34	-9.00	0.34	-9.00	
BTN	1	Episode Day 3, 2013	5	CO (PPM)	0.33	-9.00	0.33	-9.00	
BTN	1	Episode Day 3, 2013	6	CO (PPM)	0.38	-9.00	0.38	-9.00	
BTN	1	Episode Day 3, 2013	7	CO (PPM)	0.42	-9.00	0.42	-9.00	
BTN	1	Episode Day 3, 2013	8	CO (PPM)	0.35	-9.00	0.35	-9.00	
BTN	1	Episode Day 3, 2013	9	CO (PPM)	0.39	-9.00	0.39	-9.00	
BTN	1	Episode Day 3, 2013	10	CO (PPM)	0.35	-9.00	0.35	-9.00	
BTN	1	Episode Day 3, 2013	11	CO (PPM)	0.26	-9.00	0.26	-9.00	
BTN	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
BTN	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 1, 2013	22	CO (PPM)	1.10	-9.00	1.10	-9.00	
U_1	1	Episode Day 1, 2013	23	CO (PPM)	1.14	-9.00	1.14	-9.00	
U_1	1	Episode Day 2, 2013	0	CO (PPM)	0.84	-9.00	0.84	-9.00	
U_1	1	Episode Day 2, 2013	1	CO (PPM)	0.54	-9.00	0.54	-9.00	
U_1	1	Episode Day 2, 2013	2	CO (PPM)	0.44	-9.00	0.44	-9.00	
U_1	1	Episode Day 2, 2013	3	CO (PPM)	0.41	-9.00	0.41	-9.00	
U_1	1	Episode Day 2, 2013	4	CO (PPM)	0.44	-9.00	0.44	-9.00	
U_1	1	Episode Day 2, 2013	5	CO (PPM)	0.48	-9.00	0.48	-9.00	
U_1	1	Episode Day 2, 2013	6	CO (PPM)	0.70	-9.00	0.70	-9.00	
U_1	1	Episode Day 2, 2013	7	CO (PPM)	1.86	-9.00	1.86	-9.00	
U_1	1	Episode Day 2, 2013	8	CO (PPM)	1.22	-9.00	1.22	-9.00	
U_1	1	Episode Day 2, 2013	9	CO (PPM)	0.74	-9.00	0.74	-9.00	
U_1	1	Episode Day 2, 2013	10	CO (PPM)	0.50	-9.00	0.50	-9.00	
U_1	1	Episode Day 2, 2013	11	CO (PPM)	0.56	-9.00	0.56	-9.00	
U_1	1	Episode Day 2, 2013	12	CO (PPM)	0.75	-9.00	0.75	-9.00	
U_1	1	Episode Day 2, 2013	13	CO (PPM)	0.95	-9.00	0.95	-9.00	
U_1	1	Episode Day 2, 2013	14	CO (PPM)	1.52	-9.00	1.52	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
U_1	1	Episode Day 2, 2013	15	CO (PPM)	2.12	-9.00	2.12	-9.00	
U_1	1	Episode Day 2, 2013	16	CO (PPM)	5.03	-9.00	5.03	-9.00	
U_1	1	Episode Day 2, 2013	17	CO (PPM)	8.60	-9.00	8.60	-9.00	
U_1	1	Episode Day 2, 2013	18	CO (PPM)	8.62	-9.00	8.62	-9.00	
U_1	1	Episode Day 2, 2013	19	CO (PPM)	2.72	-9.00	2.72	-9.00	
U_1	1	Episode Day 2, 2013	20	CO (PPM)	1.15	-9.00	1.15	-9.00	
U_1	1	Episode Day 2, 2013	21	CO (PPM)	1.01	-9.00	1.01	-9.00	
U_1	1	Episode Day 2, 2013	22	CO (PPM)	0.99	-9.00	0.99	-9.00	
U_1	1	Episode Day 2, 2013	23	CO (PPM)	0.86	-9.00	0.86	-9.00	
U_1	1	Episode Day 3, 2013	0	CO (PPM)	0.67	-9.00	0.67	-9.00	
U_1	1	Episode Day 3, 2013	1	CO (PPM)	0.58	-9.00	0.58	-9.00	
U_1	1	Episode Day 3, 2013	2	CO (PPM)	0.41	-9.00	0.41	-9.00	
U_1	1	Episode Day 3, 2013	3	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_1	1	Episode Day 3, 2013	4	CO (PPM)	0.34	-9.00	0.34	-9.00	
U_1	1	Episode Day 3, 2013	5	CO (PPM)	0.47	-9.00	0.47	-9.00	
U_1	1	Episode Day 3, 2013	6	CO (PPM)	0.86	-9.00	0.86	-9.00	
U_1	1	Episode Day 3, 2013	7	CO (PPM)	2.35	-9.00	2.35	-9.00	
U_1	1	Episode Day 3, 2013	8	CO (PPM)	1.47	-9.00	1.47	-9.00	
U_1	1	Episode Day 3, 2013	9	CO (PPM)	1.03	-9.00	1.03	-9.00	
U_1	1	Episode Day 3, 2013	10	CO (PPM)	0.89	-9.00	0.89	-9.00	
U_1	1	Episode Day 3, 2013	11	CO (PPM)	0.86	-9.00	0.86	-9.00	
U_1	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_1	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 1, 2013	22	CO (PPM)	1.34	-9.00	1.34	-9.00	
F_A	1	Episode Day 1, 2013	23	CO (PPM)	0.65	-9.00	0.65	-9.00	
F_A	1	Episode Day 2, 2013	0	CO (PPM)	0.29	-9.00	0.29	-9.00	
F_A	1	Episode Day 2, 2013	1	CO (PPM)	0.25	-9.00	0.25	-9.00	
F_A	1	Episode Day 2, 2013	2	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 2, 2013	3	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 2, 2013	4	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 2, 2013	5	CO (PPM)	0.34	-9.00	0.34	-9.00	
F_A	1	Episode Day 2, 2013	6	CO (PPM)	0.62	-9.00	0.62	-9.00	
F_A	1	Episode Day 2, 2013	7	CO (PPM)	1.30	-9.00	1.30	-9.00	
F_A	1	Episode Day 2, 2013	8	CO (PPM)	0.65	-9.00	0.65	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
F_A	1	Episode Day 2, 2013	9	CO (PPM)	0.60	-9.00	0.60	-9.00	
F_A	1	Episode Day 2, 2013	10	CO (PPM)	0.59	-9.00	0.59	-9.00	
F_A	1	Episode Day 2, 2013	11	CO (PPM)	0.54	-9.00	0.54	-9.00	
F_A	1	Episode Day 2, 2013	12	CO (PPM)	0.51	-9.00	0.51	-9.00	
F_A	1	Episode Day 2, 2013	13	CO (PPM)	0.48	-9.00	0.48	-9.00	
F_A	1	Episode Day 2, 2013	14	CO (PPM)	0.67	-9.00	0.67	-9.00	
F_A	1	Episode Day 2, 2013	15	CO (PPM)	1.19	-9.00	1.19	-9.00	
F_A	1	Episode Day 2, 2013	16	CO (PPM)	1.77	-9.00	1.77	-9.00	
F_A	1	Episode Day 2, 2013	17	CO (PPM)	0.97	-9.00	0.97	-9.00	
F_A	1	Episode Day 2, 2013	18	CO (PPM)	0.74	-9.00	0.74	-9.00	
F_A	1	Episode Day 2, 2013	19	CO (PPM)	0.77	-9.00	0.77	-9.00	
F_A	1	Episode Day 2, 2013	20	CO (PPM)	0.66	-9.00	0.66	-9.00	
F_A	1	Episode Day 2, 2013	21	CO (PPM)	0.48	-9.00	0.48	-9.00	
F_A	1	Episode Day 2, 2013	22	CO (PPM)	0.36	-9.00	0.36	-9.00	
F_A	1	Episode Day 2, 2013	23	CO (PPM)	0.30	-9.00	0.30	-9.00	
F_A	1	Episode Day 3, 2013	0	CO (PPM)	0.28	-9.00	0.28	-9.00	
F_A	1	Episode Day 3, 2013	1	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2013	2	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2013	3	CO (PPM)	0.27	-9.00	0.27	-9.00	
F_A	1	Episode Day 3, 2013	4	CO (PPM)	0.29	-9.00	0.29	-9.00	
F_A	1	Episode Day 3, 2013	5	CO (PPM)	0.26	-9.00	0.26	-9.00	
F_A	1	Episode Day 3, 2013	6	CO (PPM)	0.44	-9.00	0.44	-9.00	
F_A	1	Episode Day 3, 2013	7	CO (PPM)	1.13	-9.00	1.13	-9.00	
F_A	1	Episode Day 3, 2013	8	CO (PPM)	0.64	-9.00	0.64	-9.00	
F_A	1	Episode Day 3, 2013	9	CO (PPM)	0.44	-9.00	0.44	-9.00	
F_A	1	Episode Day 3, 2013	10	CO (PPM)	0.31	-9.00	0.31	-9.00	
F_A	1	Episode Day 3, 2013	11	CO (PPM)	0.38	-9.00	0.38	-9.00	
F_A	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
F_A	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 1, 2013	22	CO (PPM)	0.60	-9.00	0.60	-9.00	
H_U	1	Episode Day 1, 2013	23	CO (PPM)	0.40	-9.00	0.40	-9.00	
H_U	1	Episode Day 2, 2013	0	CO (PPM)	0.34	-9.00	0.34	-9.00	
H_U	1	Episode Day 2, 2013	1	CO (PPM)	0.31	-9.00	0.31	-9.00	
H_U	1	Episode Day 2, 2013	2	CO (PPM)	0.28	-9.00	0.28	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
H_U	1	Episode Day 2, 2013	3	CO (PPM)	0.28	-9.00	0.28	-9.00	
H_U	1	Episode Day 2, 2013	4	CO (PPM)	0.29	-9.00	0.29	-9.00	
H_U	1	Episode Day 2, 2013	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
H_U	1	Episode Day 2, 2013	6	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2013	7	CO (PPM)	0.77	-9.00	0.77	-9.00	
H_U	1	Episode Day 2, 2013	8	CO (PPM)	0.54	-9.00	0.54	-9.00	
H_U	1	Episode Day 2, 2013	9	CO (PPM)	0.33	-9.00	0.33	-9.00	
H_U	1	Episode Day 2, 2013	10	CO (PPM)	0.29	-9.00	0.29	-9.00	
H_U	1	Episode Day 2, 2013	11	CO (PPM)	0.32	-9.00	0.32	-9.00	
H_U	1	Episode Day 2, 2013	12	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2013	13	CO (PPM)	0.59	-9.00	0.59	-9.00	
H_U	1	Episode Day 2, 2013	14	CO (PPM)	1.00	-9.00	1.00	-9.00	
H_U	1	Episode Day 2, 2013	15	CO (PPM)	1.85	-9.00	1.85	-9.00	
H_U	1	Episode Day 2, 2013	16	CO (PPM)	4.14	-9.00	4.14	-9.00	
H_U	1	Episode Day 2, 2013	17	CO (PPM)	4.42	-9.00	4.42	-9.00	
H_U	1	Episode Day 2, 2013	18	CO (PPM)	1.75	-9.00	1.75	-9.00	
H_U	1	Episode Day 2, 2013	19	CO (PPM)	0.80	-9.00	0.80	-9.00	
H_U	1	Episode Day 2, 2013	20	CO (PPM)	0.43	-9.00	0.43	-9.00	
H_U	1	Episode Day 2, 2013	21	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2013	22	CO (PPM)	0.41	-9.00	0.41	-9.00	
H_U	1	Episode Day 2, 2013	23	CO (PPM)	0.37	-9.00	0.37	-9.00	
H_U	1	Episode Day 3, 2013	0	CO (PPM)	0.35	-9.00	0.35	-9.00	
H_U	1	Episode Day 3, 2013	1	CO (PPM)	0.33	-9.00	0.33	-9.00	
H_U	1	Episode Day 3, 2013	2	CO (PPM)	0.27	-9.00	0.27	-9.00	
H_U	1	Episode Day 3, 2013	3	CO (PPM)	0.26	-9.00	0.26	-9.00	
H_U	1	Episode Day 3, 2013	4	CO (PPM)	0.26	-9.00	0.26	-9.00	
H_U	1	Episode Day 3, 2013	5	CO (PPM)	0.28	-9.00	0.28	-9.00	
H_U	1	Episode Day 3, 2013	6	CO (PPM)	0.42	-9.00	0.42	-9.00	
H_U	1	Episode Day 3, 2013	7	CO (PPM)	1.09	-9.00	1.09	-9.00	
H_U	1	Episode Day 3, 2013	8	CO (PPM)	0.56	-9.00	0.56	-9.00	
H_U	1	Episode Day 3, 2013	9	CO (PPM)	0.57	-9.00	0.57	-9.00	
H_U	1	Episode Day 3, 2013	10	CO (PPM)	0.61	-9.00	0.61	-9.00	
H_U	1	Episode Day 3, 2013	11	CO (PPM)	0.61	-9.00	0.61	-9.00	
H_U	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
H_U	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
U_A	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 1, 2013	22	CO (PPM)	0.29	-9.00	0.29	-9.00	
U_A	1	Episode Day 1, 2013	23	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 2, 2013	0	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 2, 2013	1	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 2, 2013	2	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 2, 2013	3	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 2, 2013	4	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 2, 2013	5	CO (PPM)	0.24	-9.00	0.24	-9.00	
U_A	1	Episode Day 2, 2013	6	CO (PPM)	0.30	-9.00	0.30	-9.00	
U_A	1	Episode Day 2, 2013	7	CO (PPM)	0.44	-9.00	0.44	-9.00	
U_A	1	Episode Day 2, 2013	8	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2013	9	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 2, 2013	10	CO (PPM)	0.24	-9.00	0.24	-9.00	
U_A	1	Episode Day 2, 2013	11	CO (PPM)	0.27	-9.00	0.27	-9.00	
U_A	1	Episode Day 2, 2013	12	CO (PPM)	0.41	-9.00	0.41	-9.00	
U_A	1	Episode Day 2, 2013	13	CO (PPM)	0.48	-9.00	0.48	-9.00	
U_A	1	Episode Day 2, 2013	14	CO (PPM)	0.69	-9.00	0.69	-9.00	
U_A	1	Episode Day 2, 2013	15	CO (PPM)	1.17	-9.00	1.17	-9.00	
U_A	1	Episode Day 2, 2013	16	CO (PPM)	2.89	-9.00	2.89	-9.00	
U_A	1	Episode Day 2, 2013	17	CO (PPM)	3.28	-9.00	3.28	-9.00	
U_A	1	Episode Day 2, 2013	18	CO (PPM)	1.35	-9.00	1.35	-9.00	
U_A	1	Episode Day 2, 2013	19	CO (PPM)	0.46	-9.00	0.46	-9.00	
U_A	1	Episode Day 2, 2013	20	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2013	21	CO (PPM)	0.32	-9.00	0.32	-9.00	
U_A	1	Episode Day 2, 2013	22	CO (PPM)	0.29	-9.00	0.29	-9.00	
U_A	1	Episode Day 2, 2013	23	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 3, 2013	0	CO (PPM)	0.27	-9.00	0.27	-9.00	
U_A	1	Episode Day 3, 2013	1	CO (PPM)	0.26	-9.00	0.26	-9.00	
U_A	1	Episode Day 3, 2013	2	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 3, 2013	3	CO (PPM)	0.22	-9.00	0.22	-9.00	
U_A	1	Episode Day 3, 2013	4	CO (PPM)	0.23	-9.00	0.23	-9.00	
U_A	1	Episode Day 3, 2013	5	CO (PPM)	0.25	-9.00	0.25	-9.00	
U_A	1	Episode Day 3, 2013	6	CO (PPM)	0.34	-9.00	0.34	-9.00	
U_A	1	Episode Day 3, 2013	7	CO (PPM)	0.96	-9.00	0.96	-9.00	
U_A	1	Episode Day 3, 2013	8	CO (PPM)	0.59	-9.00	0.59	-9.00	
U_A	1	Episode Day 3, 2013	9	CO (PPM)	0.63	-9.00	0.63	-9.00	
U_A	1	Episode Day 3, 2013	10	CO (PPM)	0.56	-9.00	0.56	-9.00	
U_A	1	Episode Day 3, 2013	11	CO (PPM)	0.45	-9.00	0.45	-9.00	
U_A	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
U_A	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	0	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	1	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	2	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	3	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	4	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	5	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	6	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	7	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	8	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	9	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	10	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	11	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
P_I	1	Episode Day 1, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 1, 2013	22	CO (PPM)	0.71	-9.00	0.71	-9.00	
P_I	1	Episode Day 1, 2013	23	CO (PPM)	0.62	-9.00	0.62	-9.00	
P_I	1	Episode Day 2, 2013	0	CO (PPM)	0.45	-9.00	0.45	-9.00	
P_I	1	Episode Day 2, 2013	1	CO (PPM)	0.35	-9.00	0.35	-9.00	
P_I	1	Episode Day 2, 2013	2	CO (PPM)	0.30	-9.00	0.30	-9.00	
P_I	1	Episode Day 2, 2013	3	CO (PPM)	0.29	-9.00	0.29	-9.00	
P_I	1	Episode Day 2, 2013	4	CO (PPM)	0.31	-9.00	0.31	-9.00	
P_I	1	Episode Day 2, 2013	5	CO (PPM)	0.36	-9.00	0.36	-9.00	
P_I	1	Episode Day 2, 2013	6	CO (PPM)	0.59	-9.00	0.59	-9.00	
P_I	1	Episode Day 2, 2013	7	CO (PPM)	1.28	-9.00	1.28	-9.00	
P_I	1	Episode Day 2, 2013	8	CO (PPM)	0.80	-9.00	0.80	-9.00	
P_I	1	Episode Day 2, 2013	9	CO (PPM)	0.42	-9.00	0.42	-9.00	
P_I	1	Episode Day 2, 2013	10	CO (PPM)	0.34	-9.00	0.34	-9.00	
P_I	1	Episode Day 2, 2013	11	CO (PPM)	0.38	-9.00	0.38	-9.00	
P_I	1	Episode Day 2, 2013	12	CO (PPM)	0.50	-9.00	0.50	-9.00	
P_I	1	Episode Day 2, 2013	13	CO (PPM)	0.56	-9.00	0.56	-9.00	
P_I	1	Episode Day 2, 2013	14	CO (PPM)	0.78	-9.00	0.78	-9.00	
P_I	1	Episode Day 2, 2013	15	CO (PPM)	1.28	-9.00	1.28	-9.00	
P_I	1	Episode Day 2, 2013	16	CO (PPM)	3.05	-9.00	3.05	-9.00	
P_I	1	Episode Day 2, 2013	17	CO (PPM)	4.86	-9.00	4.86	-9.00	
P_I	1	Episode Day 2, 2013	18	CO (PPM)	5.98	-9.00	5.98	-9.00	
P_I	1	Episode Day 2, 2013	19	CO (PPM)	3.07	-9.00	3.07	-9.00	
P_I	1	Episode Day 2, 2013	20	CO (PPM)	1.04	-9.00	1.04	-9.00	
P_I	1	Episode Day 2, 2013	21	CO (PPM)	0.70	-9.00	0.70	-9.00	
P_I	1	Episode Day 2, 2013	22	CO (PPM)	0.67	-9.00	0.67	-9.00	
P_I	1	Episode Day 2, 2013	23	CO (PPM)	0.48	-9.00	0.48	-9.00	
P_I	1	Episode Day 3, 2013	0	CO (PPM)	0.40	-9.00	0.40	-9.00	
P_I	1	Episode Day 3, 2013	1	CO (PPM)	0.36	-9.00	0.36	-9.00	
P_I	1	Episode Day 3, 2013	2	CO (PPM)	0.28	-9.00	0.28	-9.00	
P_I	1	Episode Day 3, 2013	3	CO (PPM)	0.26	-9.00	0.26	-9.00	
P_I	1	Episode Day 3, 2013	4	CO (PPM)	0.27	-9.00	0.27	-9.00	
P_I	1	Episode Day 3, 2013	5	CO (PPM)	0.31	-9.00	0.31	-9.00	
P_I	1	Episode Day 3, 2013	6	CO (PPM)	0.53	-9.00	0.53	-9.00	
P_I	1	Episode Day 3, 2013	7	CO (PPM)	1.28	-9.00	1.28	-9.00	
P_I	1	Episode Day 3, 2013	8	CO (PPM)	0.73	-9.00	0.73	-9.00	
P_I	1	Episode Day 3, 2013	9	CO (PPM)	0.72	-9.00	0.72	-9.00	
P_I	1	Episode Day 3, 2013	10	CO (PPM)	0.64	-9.00	0.64	-9.00	
P_I	1	Episode Day 3, 2013	11	CO (PPM)	0.52	-9.00	0.52	-9.00	
P_I	1	Episode Day 3, 2013	12	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	13	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	14	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	15	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	16	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	17	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	18	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	19	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	20	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	21	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	22	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
P_I	1	Episode Day 3, 2013	23	CO (PPM)	-9.00	-9.00	-9.00	-9.00	
CMP	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
CMP	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CMP	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	2.04	
CMP	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	1.90	
CMP	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	1.84	
CMP	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	1.81	
CMP	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	1.70	
CMP	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	1.59	
CMP	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	1.56	
CMP	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.57	
CMP	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.74	
CMP	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	2.36	
CMP	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	3.15	
CMP	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	3.84	
CMP	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	4.06	
CMP	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	3.96	
CMP	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	3.91	
CMP	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	3.84	
CMP	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	3.69	
CMP	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	3.08	
CMP	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	2.23	
CMP	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	1.38	
CMP	8	Episode Day 2, 2013	3	CO (PPM)	1.45	NA	1.45	0.93	
CMP	8	Episode Day 2, 2013	4	CO (PPM)	1.36	NA	1.36	0.76	
CMP	8	Episode Day 2, 2013	5	CO (PPM)	1.28	NA	1.28	0.65	
CMP	8	Episode Day 2, 2013	6	CO (PPM)	1.24	NA	1.24	0.63	
CMP	8	Episode Day 2, 2013	7	CO (PPM)	1.38	NA	1.38	0.94	
CMP	8	Episode Day 2, 2013	8	CO (PPM)	1.31	NA	1.31	1.43	
CMP	8	Episode Day 2, 2013	9	CO (PPM)	1.23	NA	1.23	1.69	
CMP	8	Episode Day 2, 2013	10	CO (PPM)	1.24	NA	1.24	2.05	
CMP	8	Episode Day 2, 2013	11	CO (PPM)	1.30	NA	1.30	2.61	
CMP	8	Episode Day 2, 2013	12	CO (PPM)	1.37	NA	1.37	3.11	
CMP	8	Episode Day 2, 2013	13	CO (PPM)	1.46	NA	1.46	3.61	
CMP	8	Episode Day 2, 2013	14	CO (PPM)	1.57	NA	1.57	4.08	
CMP	8	Episode Day 2, 2013	15	CO (PPM)	1.59	NA	1.59	4.44	
CMP	8	Episode Day 2, 2013	16	CO (PPM)	2.48	NA	2.48	9.39	
CMP	8	Episode Day 2, 2013	17	CO (PPM)	4.07	NA	4.07	15.34	
CMP	8	Episode Day 2, 2013	18	CO (PPM)	5.78	NA	5.78	18.73	
CMP	8	Episode Day 2, 2013	19	CO (PPM)	7.02	NA	7.02	18.65	
CMP	8	Episode Day 2, 2013	20	CO (PPM)	7.42	NA	7.42	18.41	
CMP	8	Episode Day 2, 2013	21	CO (PPM)	7.67	NA	7.67	18.16	
CMP	8	Episode Day 2, 2013	22	CO (PPM)	7.88	NA	7.88	18.08	
CMP	8	Episode Day 2, 2013	23	CO (PPM)	7.92	NA	7.92	17.70	
CMP	8	Episode Day 3, 2013	0	CO (PPM)	7.11	NA	7.11	12.64	
CMP	8	Episode Day 3, 2013	1	CO (PPM)	5.58	NA	5.58	6.65	
CMP	8	Episode Day 3, 2013	2	CO (PPM)	3.88	NA	3.88	3.04	
CMP	8	Episode Day 3, 2013	3	CO (PPM)	2.56	NA	2.56	2.65	
CMP	8	Episode Day 3, 2013	4	CO (PPM)	2.07	NA	2.07	2.53	
CMP	8	Episode Day 3, 2013	5	CO (PPM)	1.78	NA	1.78	2.54	
CMP	8	Episode Day 3, 2013	6	CO (PPM)	1.61	NA	1.61	2.70	
CMP	8	Episode Day 3, 2013	7	CO (PPM)	1.78	NA	1.78	3.36	
CMP	8	Episode Day 3, 2013	8	CO (PPM)	1.81	NA	1.81	4.14	
CMP	8	Episode Day 3, 2013	9	CO (PPM)	1.91	NA	1.91	4.71	
CMP	8	Episode Day 3, 2013	10	CO (PPM)	2.05	NA	2.05	5.21	
CMP	8	Episode Day 3, 2013	11	CO (PPM)	2.16	NA	2.16	5.56	
CMP	8	Episode Day 3, 2013	12	CO (PPM)	2.38	NA	2.38	5.74	
CMP	8	Episode Day 3, 2013	13	CO (PPM)	2.57	NA	2.57	5.69	
CMP	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	5.35	
CMP	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	4.64	
CMP	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	4.56	
CMP	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	5.28	
CMP	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	5.30	
CMP	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	5.34	
CMP	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	5.69	
CMP	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	5.94	
CMP	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	6.00	
CMP	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	6.11	
WBV	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	

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SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
WBY	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
WBY	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	2.44	
WBY	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	2.14	
WBY	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	1.73	
WBY	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	1.48	
WBY	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	1.23	
WBY	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	1.16	
WBY	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	1.14	
WBY	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.01	
WBY	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	0.85	
WBY	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	0.75	
WBY	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.14	
WBY	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	1.69	
WBY	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	1.94	
WBY	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	2.41	
WBY	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	2.61	
WBY	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	2.76	
WBY	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	2.95	
WBY	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	3.39	
WBY	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	3.28	
WBY	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	2.88	
WBY	8	Episode Day 2, 2013	3	CO (PPM)	1.32	NA	1.32	2.70	
WBY	8	Episode Day 2, 2013	4	CO (PPM)	1.26	NA	1.26	2.30	
WBY	8	Episode Day 2, 2013	5	CO (PPM)	1.21	NA	1.21	2.21	
WBY	8	Episode Day 2, 2013	6	CO (PPM)	1.19	NA	1.19	2.24	
WBY	8	Episode Day 2, 2013	7	CO (PPM)	1.21	NA	1.21	2.71	
WBY	8	Episode Day 2, 2013	8	CO (PPM)	1.14	NA	1.14	3.04	
WBY	8	Episode Day 2, 2013	9	CO (PPM)	1.08	NA	1.08	3.22	
WBY	8	Episode Day 2, 2013	10	CO (PPM)	1.05	NA	1.05	3.26	
WBY	8	Episode Day 2, 2013	11	CO (PPM)	1.02	NA	1.02	3.24	
WBY	8	Episode Day 2, 2013	12	CO (PPM)	1.00	NA	1.00	3.17	
WBY	8	Episode Day 2, 2013	13	CO (PPM)	0.97	NA	0.97	3.11	
WBY	8	Episode Day 2, 2013	14	CO (PPM)	0.93	NA	0.93	3.02	
WBY	8	Episode Day 2, 2013	15	CO (PPM)	0.84	NA	0.84	2.46	
WBY	8	Episode Day 2, 2013	16	CO (PPM)	0.91	NA	0.91	1.92	
WBY	8	Episode Day 2, 2013	17	CO (PPM)	1.12	NA	1.12	2.50	
WBY	8	Episode Day 2, 2013	18	CO (PPM)	1.44	NA	1.44	3.86	
WBY	8	Episode Day 2, 2013	19	CO (PPM)	1.67	NA	1.67	4.86	
WBY	8	Episode Day 2, 2013	20	CO (PPM)	2.04	NA	2.04	5.71	
WBY	8	Episode Day 2, 2013	21	CO (PPM)	2.60	NA	2.60	6.39	
WBY	8	Episode Day 2, 2013	22	CO (PPM)	3.17	NA	3.17	7.17	
WBY	8	Episode Day 2, 2013	23	CO (PPM)	3.72	NA	3.72	8.09	
WBY	8	Episode Day 3, 2013	0	CO (PPM)	4.08	NA	4.08	8.94	
WBY	8	Episode Day 3, 2013	1	CO (PPM)	4.09	NA	4.09	8.66	
WBY	8	Episode Day 3, 2013	2	CO (PPM)	3.80	NA	3.80	7.36	
WBY	8	Episode Day 3, 2013	3	CO (PPM)	3.56	NA	3.56	6.40	
WBY	8	Episode Day 3, 2013	4	CO (PPM)	3.17	NA	3.17	5.64	
WBY	8	Episode Day 3, 2013	5	CO (PPM)	2.62	NA	2.62	5.06	
WBY	8	Episode Day 3, 2013	6	CO (PPM)	2.08	NA	2.08	4.50	
WBY	8	Episode Day 3, 2013	7	CO (PPM)	1.56	NA	1.56	3.79	
WBY	8	Episode Day 3, 2013	8	CO (PPM)	1.13	NA	1.13	2.99	
WBY	8	Episode Day 3, 2013	9	CO (PPM)	0.94	NA	0.94	2.46	
WBY	8	Episode Day 3, 2013	10	CO (PPM)	0.92	NA	0.92	2.41	
WBY	8	Episode Day 3, 2013	11	CO (PPM)	0.93	NA	0.93	2.26	
WBY	8	Episode Day 3, 2013	12	CO (PPM)	0.97	NA	0.97	2.09	
WBY	8	Episode Day 3, 2013	13	CO (PPM)	1.02	NA	1.02	1.89	
WBY	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.53	
WBY	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.17	
WBY	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.13	
WBY	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	0.88	
WBY	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	0.70	

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SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
WBY	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	1.01	
WBY	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	1.73	
WBY	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	2.44	
WBY	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	3.08	
WBY	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	3.59	
CRG	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
CRG	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	2.91	
CRG	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	2.54	
CRG	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	2.14	
CRG	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	1.85	
CRG	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	1.55	
CRG	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	1.51	
CRG	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	1.45	
CRG	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.30	
CRG	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.10	
CRG	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.19	
CRG	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.86	
CRG	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	2.77	
CRG	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	4.16	
CRG	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	4.51	
CRG	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	4.94	
CRG	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	5.37	
CRG	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	5.11	
CRG	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	5.28	
CRG	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	5.14	
CRG	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	4.58	
CRG	8	Episode Day 2, 2013	3	CO (PPM)	1.72	NA	1.72	3.54	
CRG	8	Episode Day 2, 2013	4	CO (PPM)	1.56	NA	1.56	3.43	
CRG	8	Episode Day 2, 2013	5	CO (PPM)	1.44	NA	1.44	3.34	
CRG	8	Episode Day 2, 2013	6	CO (PPM)	1.34	NA	1.34	3.63	
CRG	8	Episode Day 2, 2013	7	CO (PPM)	1.31	NA	1.31	4.48	
CRG	8	Episode Day 2, 2013	8	CO (PPM)	1.16	NA	1.16	5.33	
CRG	8	Episode Day 2, 2013	9	CO (PPM)	0.99	NA	0.99	5.21	
CRG	8	Episode Day 2, 2013	10	CO (PPM)	0.91	NA	0.91	5.01	
CRG	8	Episode Day 2, 2013	11	CO (PPM)	0.92	NA	0.92	4.85	
CRG	8	Episode Day 2, 2013	12	CO (PPM)	0.98	NA	0.98	4.71	
CRG	8	Episode Day 2, 2013	13	CO (PPM)	1.05	NA	1.05	4.54	
CRG	8	Episode Day 2, 2013	14	CO (PPM)	1.12	NA	1.12	4.01	
CRG	8	Episode Day 2, 2013	15	CO (PPM)	1.12	NA	1.12	2.85	
CRG	8	Episode Day 2, 2013	16	CO (PPM)	1.48	NA	1.48	2.34	
CRG	8	Episode Day 2, 2013	17	CO (PPM)	1.99	NA	1.99	3.03	
CRG	8	Episode Day 2, 2013	18	CO (PPM)	2.56	NA	2.56	4.50	
CRG	8	Episode Day 2, 2013	19	CO (PPM)	3.10	NA	3.10	6.39	
CRG	8	Episode Day 2, 2013	20	CO (PPM)	3.50	NA	3.50	7.80	
CRG	8	Episode Day 2, 2013	21	CO (PPM)	3.77	NA	3.77	8.52	
CRG	8	Episode Day 2, 2013	22	CO (PPM)	3.93	NA	3.93	8.94	
CRG	8	Episode Day 2, 2013	23	CO (PPM)	3.95	NA	3.95	9.91	
CRG	8	Episode Day 3, 2013	0	CO (PPM)	3.67	NA	3.67	10.38	
CRG	8	Episode Day 3, 2013	1	CO (PPM)	3.23	NA	3.23	9.73	
CRG	8	Episode Day 3, 2013	2	CO (PPM)	2.71	NA	2.71	8.69	
CRG	8	Episode Day 3, 2013	3	CO (PPM)	2.16	NA	2.16	7.14	
CRG	8	Episode Day 3, 2013	4	CO (PPM)	1.69	NA	1.69	5.78	
CRG	8	Episode Day 3, 2013	5	CO (PPM)	1.36	NA	1.36	5.26	
CRG	8	Episode Day 3, 2013	6	CO (PPM)	1.21	NA	1.21	5.04	
CRG	8	Episode Day 3, 2013	7	CO (PPM)	1.31	NA	1.31	4.73	
CRG	8	Episode Day 3, 2013	8	CO (PPM)	1.27	NA	1.27	4.10	
CRG	8	Episode Day 3, 2013	9	CO (PPM)	1.24	NA	1.24	4.08	
CRG	8	Episode Day 3, 2013	10	CO (PPM)	1.22	NA	1.22	3.59	
CRG	8	Episode Day 3, 2013	11	CO (PPM)	1.23	NA	1.23	3.54	
CRG	8	Episode Day 3, 2013	12	CO (PPM)	1.33	NA	1.33	3.37	

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SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
CRG	8	Episode Day 3, 2013	13	CO (PPM)	1.43	NA	1.43	3.00	
CRG	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	2.60	
CRG	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.74	
CRG	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.30	
CRG	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.71	
CRG	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	2.86	
CRG	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	4.05	
CRG	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	5.23	
CRG	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	6.16	
CRG	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	7.05	
CRG	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	8.00	
NJH	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
NJH	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	2.08	
NJH	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	2.04	
NJH	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	2.13	
NJH	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	2.21	
NJH	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	2.25	
NJH	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	2.10	
NJH	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	1.98	
NJH	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.74	
NJH	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.49	
NJH	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.60	
NJH	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	2.43	
NJH	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	2.66	
NJH	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	2.85	
NJH	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	3.08	
NJH	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	3.28	
NJH	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	3.46	
NJH	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	3.58	
NJH	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	3.50	
NJH	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	2.56	
NJH	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	2.21	
NJH	8	Episode Day 2, 2013	3	CO (PPM)	0.88	NA	0.88	1.96	
NJH	8	Episode Day 2, 2013	4	CO (PPM)	0.82	NA	0.82	1.73	
NJH	8	Episode Day 2, 2013	5	CO (PPM)	0.78	NA	0.78	1.60	
NJH	8	Episode Day 2, 2013	6	CO (PPM)	0.73	NA	0.73	1.71	
NJH	8	Episode Day 2, 2013	7	CO (PPM)	0.80	NA	0.80	2.26	
NJH	8	Episode Day 2, 2013	8	CO (PPM)	0.82	NA	0.82	2.74	
NJH	8	Episode Day 2, 2013	9	CO (PPM)	0.85	NA	0.85	2.97	
NJH	8	Episode Day 2, 2013	10	CO (PPM)	0.86	NA	0.86	3.17	
NJH	8	Episode Day 2, 2013	11	CO (PPM)	0.89	NA	0.89	3.29	
NJH	8	Episode Day 2, 2013	12	CO (PPM)	0.91	NA	0.91	3.42	
NJH	8	Episode Day 2, 2013	13	CO (PPM)	0.94	NA	0.94	3.56	
NJH	8	Episode Day 2, 2013	14	CO (PPM)	0.99	NA	0.99	3.55	
NJH	8	Episode Day 2, 2013	15	CO (PPM)	0.97	NA	0.97	3.32	
NJH	8	Episode Day 2, 2013	16	CO (PPM)	1.25	NA	1.25	5.03	
NJH	8	Episode Day 2, 2013	17	CO (PPM)	1.70	NA	1.70	7.49	
NJH	8	Episode Day 2, 2013	18	CO (PPM)	2.29	NA	2.29	9.60	
NJH	8	Episode Day 2, 2013	19	CO (PPM)	3.00	NA	3.00	10.43	
NJH	8	Episode Day 2, 2013	20	CO (PPM)	3.25	NA	3.25	10.95	
NJH	8	Episode Day 2, 2013	21	CO (PPM)	3.33	NA	3.33	11.16	
NJH	8	Episode Day 2, 2013	22	CO (PPM)	3.36	NA	3.36	11.27	
NJH	8	Episode Day 2, 2013	23	CO (PPM)	3.28	NA	3.28	11.10	
NJH	8	Episode Day 3, 2013	0	CO (PPM)	2.95	NA	2.95	8.92	
NJH	8	Episode Day 3, 2013	1	CO (PPM)	2.45	NA	2.45	6.21	
NJH	8	Episode Day 3, 2013	2	CO (PPM)	1.85	NA	1.85	3.91	
NJH	8	Episode Day 3, 2013	3	CO (PPM)	1.10	NA	1.10	2.94	
NJH	8	Episode Day 3, 2013	4	CO (PPM)	0.81	NA	0.81	2.25	
NJH	8	Episode Day 3, 2013	5	CO (PPM)	0.70	NA	0.70	1.90	
NJH	8	Episode Day 3, 2013	6	CO (PPM)	0.62	NA	0.62	1.75	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
NJH	8	Episode Day 3, 2013	7	CO (PPM)	0.73	NA	0.73	2.22	
NJH	8	Episode Day 3, 2013	8	CO (PPM)	0.79	NA	0.79	2.65	
NJH	8	Episode Day 3, 2013	9	CO (PPM)	0.84	NA	0.84	3.11	
NJH	8	Episode Day 3, 2013	10	CO (PPM)	0.89	NA	0.89	3.40	
NJH	8	Episode Day 3, 2013	11	CO (PPM)	0.95	NA	0.95	3.46	
NJH	8	Episode Day 3, 2013	12	CO (PPM)	1.03	NA	1.03	3.51	
NJH	8	Episode Day 3, 2013	13	CO (PPM)	1.12	NA	1.12	3.79	
NJH	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	3.46	
NJH	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	2.57	
NJH	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	2.39	
NJH	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	2.63	
NJH	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	2.84	
NJH	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	3.64	
NJH	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	4.27	
NJH	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	4.24	
NJH	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	4.61	
NJH	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	4.81	
TIV	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
TIV	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 2, 2013	3	CO (PPM)	1.41	NA	1.41	-9.00	
TIV	8	Episode Day 2, 2013	4	CO (PPM)	1.30	NA	1.30	-9.00	
TIV	8	Episode Day 2, 2013	5	CO (PPM)	1.23	NA	1.23	-9.00	
TIV	8	Episode Day 2, 2013	6	CO (PPM)	1.16	NA	1.16	-9.00	
TIV	8	Episode Day 2, 2013	7	CO (PPM)	1.27	NA	1.27	-9.00	
TIV	8	Episode Day 2, 2013	8	CO (PPM)	1.18	NA	1.18	-9.00	
TIV	8	Episode Day 2, 2013	9	CO (PPM)	1.09	NA	1.09	-9.00	
TIV	8	Episode Day 2, 2013	10	CO (PPM)	1.09	NA	1.09	-9.00	
TIV	8	Episode Day 2, 2013	11	CO (PPM)	1.15	NA	1.15	-9.00	
TIV	8	Episode Day 2, 2013	12	CO (PPM)	1.26	NA	1.26	-9.00	
TIV	8	Episode Day 2, 2013	13	CO (PPM)	1.38	NA	1.38	-9.00	
TIV	8	Episode Day 2, 2013	14	CO (PPM)	1.50	NA	1.50	-9.00	
TIV	8	Episode Day 2, 2013	15	CO (PPM)	1.53	NA	1.53	-9.00	
TIV	8	Episode Day 2, 2013	16	CO (PPM)	2.47	NA	2.47	-9.00	
TIV	8	Episode Day 2, 2013	17	CO (PPM)	4.13	NA	4.13	-9.00	
TIV	8	Episode Day 2, 2013	18	CO (PPM)	5.82	NA	5.82	-9.00	
TIV	8	Episode Day 2, 2013	19	CO (PPM)	6.72	NA	6.72	-9.00	
TIV	8	Episode Day 2, 2013	20	CO (PPM)	7.01	NA	7.01	-9.00	
TIV	8	Episode Day 2, 2013	21	CO (PPM)	7.18	NA	7.18	-9.00	
TIV	8	Episode Day 2, 2013	22	CO (PPM)	7.30	NA	7.30	-9.00	
TIV	8	Episode Day 2, 2013	23	CO (PPM)	7.28	NA	7.28	-9.00	
TIV	8	Episode Day 3, 2013	0	CO (PPM)	6.42	NA	6.42	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
TIV	8	Episode Day 3, 2013	1	CO (PPM)	4.82	NA	4.82	-9.00	
TIV	8	Episode Day 3, 2013	2	CO (PPM)	3.15	NA	3.15	-9.00	
TIV	8	Episode Day 3, 2013	3	CO (PPM)	2.18	NA	2.18	-9.00	
TIV	8	Episode Day 3, 2013	4	CO (PPM)	1.78	NA	1.78	-9.00	
TIV	8	Episode Day 3, 2013	5	CO (PPM)	1.54	NA	1.54	-9.00	
TIV	8	Episode Day 3, 2013	6	CO (PPM)	1.48	NA	1.48	-9.00	
TIV	8	Episode Day 3, 2013	7	CO (PPM)	1.77	NA	1.77	-9.00	
TIV	8	Episode Day 3, 2013	8	CO (PPM)	1.85	NA	1.85	-9.00	
TIV	8	Episode Day 3, 2013	9	CO (PPM)	1.94	NA	1.94	-9.00	
TIV	8	Episode Day 3, 2013	10	CO (PPM)	2.00	NA	2.00	-9.00	
TIV	8	Episode Day 3, 2013	11	CO (PPM)	2.07	NA	2.07	-9.00	
TIV	8	Episode Day 3, 2013	12	CO (PPM)	2.28	NA	2.28	-9.00	
TIV	8	Episode Day 3, 2013	13	CO (PPM)	2.46	NA	2.46	-9.00	
TIV	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
TIV	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
ICMP	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 2, 2013	3	CO (PPM)	1.45	NA	1.45	-9.00	
ICMP	8	Episode Day 2, 2013	4	CO (PPM)	1.36	NA	1.36	-9.00	
ICMP	8	Episode Day 2, 2013	5	CO (PPM)	1.28	NA	1.28	-9.00	
ICMP	8	Episode Day 2, 2013	6	CO (PPM)	1.24	NA	1.24	-9.00	
ICMP	8	Episode Day 2, 2013	7	CO (PPM)	1.38	NA	1.38	-9.00	
ICMP	8	Episode Day 2, 2013	8	CO (PPM)	1.31	NA	1.31	-9.00	
ICMP	8	Episode Day 2, 2013	9	CO (PPM)	1.23	NA	1.23	-9.00	
ICMP	8	Episode Day 2, 2013	10	CO (PPM)	1.24	NA	1.24	-9.00	
ICMP	8	Episode Day 2, 2013	11	CO (PPM)	1.30	NA	1.30	-9.00	
ICMP	8	Episode Day 2, 2013	12	CO (PPM)	1.37	NA	1.37	-9.00	
ICMP	8	Episode Day 2, 2013	13	CO (PPM)	1.46	NA	1.46	-9.00	
ICMP	8	Episode Day 2, 2013	14	CO (PPM)	1.57	NA	1.80	-9.00	
ICMP	8	Episode Day 2, 2013	15	CO (PPM)	1.59	NA	1.99	-9.00	
ICMP	8	Episode Day 2, 2013	16	CO (PPM)	2.48	NA	3.25	-9.00	
ICMP	8	Episode Day 2, 2013	17	CO (PPM)	4.07	NA	5.10	-9.00	
ICMP	8	Episode Day 2, 2013	18	CO (PPM)	5.78	NA	6.95	-9.00	

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High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ICMP	8	Episode Day 2, 2013	19	CO (PPM)	7.02	NA	8.23	-9.00	
ICMP	8	Episode Day 2, 2013	20	CO (PPM)	7.42	NA	8.67	-9.00	
ICMP	8	Episode Day 2, 2013	21	CO (PPM)	7.67	NA	8.92	-9.00	
ICMP	8	Episode Day 2, 2013	22	CO (PPM)	7.88	NA	8.96	-9.00	
ICMP	8	Episode Day 2, 2013	23	CO (PPM)	7.92	NA	8.84	-9.00	
ICMP	8	Episode Day 3, 2013	0	CO (PPM)	7.11	NA	7.67	-9.00	
ICMP	8	Episode Day 3, 2013	1	CO (PPM)	5.58	NA	5.88	-9.00	
ICMP	8	Episode Day 3, 2013	2	CO (PPM)	3.88	NA	4.04	-9.00	
ICMP	8	Episode Day 3, 2013	3	CO (PPM)	2.56	NA	2.68	-9.00	
ICMP	8	Episode Day 3, 2013	4	CO (PPM)	2.07	NA	2.14	-9.00	
ICMP	8	Episode Day 3, 2013	5	CO (PPM)	1.78	NA	1.86	-9.00	
ICMP	8	Episode Day 3, 2013	6	CO (PPM)	1.61	NA	1.62	-9.00	
ICMP	8	Episode Day 3, 2013	7	CO (PPM)	1.78	NA	1.78	-9.00	
ICMP	8	Episode Day 3, 2013	8	CO (PPM)	1.81	NA	1.81	-9.00	
ICMP	8	Episode Day 3, 2013	9	CO (PPM)	1.91	NA	1.91	-9.00	
ICMP	8	Episode Day 3, 2013	10	CO (PPM)	2.05	NA	2.05	-9.00	
ICMP	8	Episode Day 3, 2013	11	CO (PPM)	2.16	NA	2.16	-9.00	
ICMP	8	Episode Day 3, 2013	12	CO (PPM)	2.38	NA	2.38	-9.00	
ICMP	8	Episode Day 3, 2013	13	CO (PPM)	2.57	NA	2.57	-9.00	
ICMP	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
ICMP	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
ENG	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
ENG	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	1.50	
ENG	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	1.54	
ENG	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	1.54	
ENG	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	1.46	
ENG	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	1.32	
ENG	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	1.19	
ENG	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	1.05	
ENG	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	0.90	
ENG	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	0.76	
ENG	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	0.79	
ENG	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.21	
ENG	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	1.42	
ENG	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	1.52	
ENG	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	1.60	
ENG	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	1.67	
ENG	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	1.80	
ENG	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	1.86	
ENG	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	1.76	
ENG	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	1.30	
ENG	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	1.06	
ENG	8	Episode Day 2, 2013	3	CO (PPM)	0.41	NA	0.41	0.96	
ENG	8	Episode Day 2, 2013	4	CO (PPM)	0.39	NA	0.39	0.88	
ENG	8	Episode Day 2, 2013	5	CO (PPM)	0.38	NA	0.38	0.88	
ENG	8	Episode Day 2, 2013	6	CO (PPM)	0.34	NA	0.34	0.96	
ENG	8	Episode Day 2, 2013	7	CO (PPM)	0.41	NA	0.41	1.40	
ENG	8	Episode Day 2, 2013	8	CO (PPM)	0.44	NA	0.44	1.82	
ENG	8	Episode Day 2, 2013	9	CO (PPM)	0.45	NA	0.45	1.89	
ENG	8	Episode Day 2, 2013	10	CO (PPM)	0.46	NA	0.46	1.91	
ENG	8	Episode Day 2, 2013	11	CO (PPM)	0.47	NA	0.47	1.94	
ENG	8	Episode Day 2, 2013	12	CO (PPM)	0.49	NA	0.49	1.97	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ENG	8	Episode Day 2, 2013	13	CO (PPM)	0.53	NA	0.53	1.96	
ENG	8	Episode Day 2, 2013	14	CO (PPM)	0.58	NA	0.58	1.85	
ENG	8	Episode Day 2, 2013	15	CO (PPM)	0.65	NA	0.65	1.63	
ENG	8	Episode Day 2, 2013	16	CO (PPM)	1.05	NA	1.05	1.89	
ENG	8	Episode Day 2, 2013	17	CO (PPM)	1.47	NA	1.47	2.91	
ENG	8	Episode Day 2, 2013	18	CO (PPM)	1.60	NA	1.60	3.22	
ENG	8	Episode Day 2, 2013	19	CO (PPM)	1.64	NA	1.64	3.38	
ENG	8	Episode Day 2, 2013	20	CO (PPM)	1.64	NA	1.64	3.47	
ENG	8	Episode Day 2, 2013	21	CO (PPM)	1.61	NA	1.61	3.56	
ENG	8	Episode Day 2, 2013	22	CO (PPM)	1.56	NA	1.56	3.66	
ENG	8	Episode Day 2, 2013	23	CO (PPM)	1.42	NA	1.42	3.50	
ENG	8	Episode Day 3, 2013	0	CO (PPM)	0.99	NA	0.99	2.91	
ENG	8	Episode Day 3, 2013	1	CO (PPM)	0.57	NA	0.57	1.86	
ENG	8	Episode Day 3, 2013	2	CO (PPM)	0.43	NA	0.43	1.54	
ENG	8	Episode Day 3, 2013	3	CO (PPM)	0.38	NA	0.38	1.36	
ENG	8	Episode Day 3, 2013	4	CO (PPM)	0.35	NA	0.35	1.22	
ENG	8	Episode Day 3, 2013	5	CO (PPM)	0.33	NA	0.33	1.09	
ENG	8	Episode Day 3, 2013	6	CO (PPM)	0.33	NA	0.33	1.02	
ENG	8	Episode Day 3, 2013	7	CO (PPM)	0.44	NA	0.44	1.26	
ENG	8	Episode Day 3, 2013	8	CO (PPM)	0.46	NA	0.46	1.23	
ENG	8	Episode Day 3, 2013	9	CO (PPM)	0.49	NA	0.49	1.49	
ENG	8	Episode Day 3, 2013	10	CO (PPM)	0.54	NA	0.54	1.69	
ENG	8	Episode Day 3, 2013	11	CO (PPM)	0.59	NA	0.59	1.70	
ENG	8	Episode Day 3, 2013	12	CO (PPM)	0.64	NA	0.64	1.71	
ENG	8	Episode Day 3, 2013	13	CO (PPM)	0.69	NA	0.69	1.70	
ENG	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.53	
ENG	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.11	
ENG	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.17	
ENG	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.30	
ENG	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	1.59	
ENG	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	1.89	
ENG	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	2.07	
ENG	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	2.17	
ENG	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	2.24	
ENG	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	2.35	
BOU	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
BOU	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	0.68	
BOU	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	0.85	
BOU	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	1.19	
BOU	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	1.43	
BOU	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	1.39	
BOU	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.28	
BOU	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	0.99	
BOU	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	0.83	
BOU	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	0.70	
BOU	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	0.61	
BOU	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	0.54	
BOU	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	0.46	
BOU	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	0.34	
BOU	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	0.21	
BOU	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	0.19	
BOU	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	0.16	
BOU	8	Episode Day 2, 2013	3	CO (PPM)	0.39	NA	0.39	0.16	
BOU	8	Episode Day 2, 2013	4	CO (PPM)	0.37	NA	0.37	0.20	
BOU	8	Episode Day 2, 2013	5	CO (PPM)	0.36	NA	0.36	0.28	
BOU	8	Episode Day 2, 2013	6	CO (PPM)	0.30	NA	0.30	0.40	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
BOU	8	Episode Day 2, 2013	7	CO (PPM)	0.35	NA	0.35	0.66	
BOU	8	Episode Day 2, 2013	8	CO (PPM)	0.38	NA	0.38	0.91	
BOU	8	Episode Day 2, 2013	9	CO (PPM)	0.41	NA	0.41	1.41	
BOU	8	Episode Day 2, 2013	10	CO (PPM)	0.46	NA	0.46	1.76	
BOU	8	Episode Day 2, 2013	11	CO (PPM)	0.51	NA	0.51	1.91	
BOU	8	Episode Day 2, 2013	12	CO (PPM)	0.56	NA	0.56	2.05	
BOU	8	Episode Day 2, 2013	13	CO (PPM)	0.60	NA	0.60	2.13	
BOU	8	Episode Day 2, 2013	14	CO (PPM)	0.63	NA	0.63	2.13	
BOU	8	Episode Day 2, 2013	15	CO (PPM)	0.71	NA	0.71	2.04	
BOU	8	Episode Day 2, 2013	16	CO (PPM)	0.80	NA	0.80	2.01	
BOU	8	Episode Day 2, 2013	17	CO (PPM)	0.82	NA	0.82	1.65	
BOU	8	Episode Day 2, 2013	18	CO (PPM)	0.80	NA	0.80	1.42	
BOU	8	Episode Day 2, 2013	19	CO (PPM)	0.78	NA	0.78	2.07	
BOU	8	Episode Day 2, 2013	20	CO (PPM)	0.75	NA	0.75	2.10	
BOU	8	Episode Day 2, 2013	21	CO (PPM)	0.72	NA	0.72	2.11	
BOU	8	Episode Day 2, 2013	22	CO (PPM)	0.66	NA	0.66	2.06	
BOU	8	Episode Day 2, 2013	23	CO (PPM)	0.51	NA	0.51	1.88	
BOU	8	Episode Day 3, 2013	0	CO (PPM)	0.40	NA	0.40	1.63	
BOU	8	Episode Day 3, 2013	1	CO (PPM)	0.35	NA	0.35	1.46	
BOU	8	Episode Day 3, 2013	2	CO (PPM)	0.32	NA	0.32	1.32	
BOU	8	Episode Day 3, 2013	3	CO (PPM)	0.28	NA	0.28	0.51	
BOU	8	Episode Day 3, 2013	4	CO (PPM)	0.26	NA	0.26	0.32	
BOU	8	Episode Day 3, 2013	5	CO (PPM)	0.25	NA	0.25	0.21	
BOU	8	Episode Day 3, 2013	6	CO (PPM)	0.27	NA	0.27	0.21	
BOU	8	Episode Day 3, 2013	7	CO (PPM)	0.35	NA	0.35	0.66	
BOU	8	Episode Day 3, 2013	8	CO (PPM)	0.38	NA	0.38	0.95	
BOU	8	Episode Day 3, 2013	9	CO (PPM)	0.40	NA	0.40	1.31	
BOU	8	Episode Day 3, 2013	10	CO (PPM)	0.41	NA	0.41	1.40	
BOU	8	Episode Day 3, 2013	11	CO (PPM)	0.42	NA	0.42	1.51	
BOU	8	Episode Day 3, 2013	12	CO (PPM)	0.44	NA	0.44	1.61	
BOU	8	Episode Day 3, 2013	13	CO (PPM)	0.48	NA	0.48	1.72	
BOU	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.75	
BOU	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.49	
BOU	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.32	
BOU	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	1.35	
BOU	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	1.34	
BOU	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	1.27	
BOU	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	1.26	
BOU	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	1.26	
GRDS	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
GRDS	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	2.00	
GRDS	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	2.25	
GRDS	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	2.75	
GRDS	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	3.00	
GRDS	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	3.13	
GRDS	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	3.00	
GRDS	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	2.75	
GRDS	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	2.25	
GRDS	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	2.13	
GRDS	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	2.00	
GRDS	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	2.00	
GRDS	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	2.38	
GRDS	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	2.35	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
GRDS	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	2.04	
GRDS	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	1.87	
GRDS	8	Episode Day 2, 2013	3	CO (PPM)	0.46	NA	0.46	1.74	
GRDS	8	Episode Day 2, 2013	4	CO (PPM)	0.43	NA	0.43	1.62	
GRDS	8	Episode Day 2, 2013	5	CO (PPM)	0.41	NA	0.41	1.56	
GRDS	8	Episode Day 2, 2013	6	CO (PPM)	0.32	NA	0.32	1.72	
GRDS	8	Episode Day 2, 2013	7	CO (PPM)	0.40	NA	0.40	3.39	
GRDS	8	Episode Day 2, 2013	8	CO (PPM)	0.44	NA	0.44	5.36	
GRDS	8	Episode Day 2, 2013	9	CO (PPM)	0.48	NA	0.48	6.06	
GRDS	8	Episode Day 2, 2013	10	CO (PPM)	0.55	NA	0.55	6.22	
GRDS	8	Episode Day 2, 2013	11	CO (PPM)	0.61	NA	0.61	6.34	
GRDS	8	Episode Day 2, 2013	12	CO (PPM)	0.66	NA	0.66	6.42	
GRDS	8	Episode Day 2, 2013	13	CO (PPM)	0.69	NA	0.69	7.13	
GRDS	8	Episode Day 2, 2013	14	CO (PPM)	0.72	NA	0.72	6.71	
GRDS	8	Episode Day 2, 2013	15	CO (PPM)	0.77	NA	0.77	4.89	
GRDS	8	Episode Day 2, 2013	16	CO (PPM)	0.90	NA	0.90	3.19	
GRDS	8	Episode Day 2, 2013	17	CO (PPM)	0.93	NA	0.93	3.74	
GRDS	8	Episode Day 2, 2013	18	CO (PPM)	0.91	NA	0.91	5.34	
GRDS	8	Episode Day 2, 2013	19	CO (PPM)	0.90	NA	0.90	7.09	
GRDS	8	Episode Day 2, 2013	20	CO (PPM)	0.88	NA	0.88	8.34	
GRDS	8	Episode Day 2, 2013	21	CO (PPM)	0.85	NA	0.85	8.21	
GRDS	8	Episode Day 2, 2013	22	CO (PPM)	0.79	NA	0.79	8.32	
GRDS	8	Episode Day 2, 2013	23	CO (PPM)	0.63	NA	0.63	8.18	
GRDS	8	Episode Day 3, 2013	0	CO (PPM)	0.47	NA	0.47	7.71	
GRDS	8	Episode Day 3, 2013	1	CO (PPM)	0.40	NA	0.40	6.46	
GRDS	8	Episode Day 3, 2013	2	CO (PPM)	0.35	NA	0.35	4.81	
GRDS	8	Episode Day 3, 2013	3	CO (PPM)	0.30	NA	0.30	3.06	
GRDS	8	Episode Day 3, 2013	4	CO (PPM)	0.28	NA	0.28	1.74	
GRDS	8	Episode Day 3, 2013	5	CO (PPM)	0.26	NA	0.26	0.95	
GRDS	8	Episode Day 3, 2013	6	CO (PPM)	0.27	NA	0.27	0.79	
GRDS	8	Episode Day 3, 2013	7	CO (PPM)	0.37	NA	0.37	1.62	
GRDS	8	Episode Day 3, 2013	8	CO (PPM)	0.40	NA	0.40	2.50	
GRDS	8	Episode Day 3, 2013	9	CO (PPM)	0.43	NA	0.43	3.00	
GRDS	8	Episode Day 3, 2013	10	CO (PPM)	0.44	NA	0.44	3.13	
GRDS	8	Episode Day 3, 2013	11	CO (PPM)	0.45	NA	0.45	3.25	
GRDS	8	Episode Day 3, 2013	12	CO (PPM)	0.48	NA	0.48	3.38	
GRDS	8	Episode Day 3, 2013	13	CO (PPM)	0.52	NA	0.52	3.50	
GRDS	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	3.38	
GRDS	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	2.38	
GRDS	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.88	
GRDS	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	2.13	
GRDS	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	2.50	
GRDS	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	2.88	
GRDS	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	3.88	
GRDS	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	4.50	
GRDS	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	4.88	
GRDS	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	5.25	
ARV	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
ARV	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	2.01	
ARV	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	2.20	
ARV	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	2.04	
ARV	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	1.94	
ARV	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	1.98	
ARV	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	2.05	
ARV	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	2.05	
ARV	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.98	
ARV	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.83	
ARV	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.58	
ARV	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.80	
ARV	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	2.05	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
ARV	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	2.30	
ARV	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	2.68	
ARV	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	3.36	
ARV	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	3.91	
ARV	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	4.05	
ARV	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	3.99	
ARV	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	3.68	
ARV	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	3.40	
ARV	8	Episode Day 2, 2013	3	CO (PPM)	1.42	NA	1.42	3.09	
ARV	8	Episode Day 2, 2013	4	CO (PPM)	1.27	NA	1.27	2.68	
ARV	8	Episode Day 2, 2013	5	CO (PPM)	1.16	NA	1.16	2.09	
ARV	8	Episode Day 2, 2013	6	CO (PPM)	0.87	NA	0.87	1.89	
ARV	8	Episode Day 2, 2013	7	CO (PPM)	0.66	NA	0.66	2.79	
ARV	8	Episode Day 2, 2013	8	CO (PPM)	0.59	NA	0.59	3.95	
ARV	8	Episode Day 2, 2013	9	CO (PPM)	0.60	NA	0.60	4.61	
ARV	8	Episode Day 2, 2013	10	CO (PPM)	0.58	NA	0.58	4.98	
ARV	8	Episode Day 2, 2013	11	CO (PPM)	0.61	NA	0.61	5.08	
ARV	8	Episode Day 2, 2013	12	CO (PPM)	0.68	NA	0.68	5.14	
ARV	8	Episode Day 2, 2013	13	CO (PPM)	0.77	NA	0.77	5.11	
ARV	8	Episode Day 2, 2013	14	CO (PPM)	0.86	NA	0.86	4.85	
ARV	8	Episode Day 2, 2013	15	CO (PPM)	0.96	NA	0.96	3.98	
ARV	8	Episode Day 2, 2013	16	CO (PPM)	1.24	NA	1.24	3.25	
ARV	8	Episode Day 2, 2013	17	CO (PPM)	1.42	NA	1.42	3.21	
ARV	8	Episode Day 2, 2013	18	CO (PPM)	1.45	NA	1.45	3.44	
ARV	8	Episode Day 2, 2013	19	CO (PPM)	1.41	NA	1.41	3.91	
ARV	8	Episode Day 2, 2013	20	CO (PPM)	1.34	NA	1.34	4.34	
ARV	8	Episode Day 2, 2013	21	CO (PPM)	1.27	NA	1.27	4.65	
ARV	8	Episode Day 2, 2013	22	CO (PPM)	1.17	NA	1.17	4.84	
ARV	8	Episode Day 2, 2013	23	CO (PPM)	1.03	NA	1.03	4.80	
ARV	8	Episode Day 3, 2013	0	CO (PPM)	0.71	NA	0.71	4.34	
ARV	8	Episode Day 3, 2013	1	CO (PPM)	0.47	NA	0.47	3.70	
ARV	8	Episode Day 3, 2013	2	CO (PPM)	0.39	NA	0.39	3.06	
ARV	8	Episode Day 3, 2013	3	CO (PPM)	0.36	NA	0.36	2.43	
ARV	8	Episode Day 3, 2013	4	CO (PPM)	0.34	NA	0.34	1.86	
ARV	8	Episode Day 3, 2013	5	CO (PPM)	0.32	NA	0.32	1.49	
ARV	8	Episode Day 3, 2013	6	CO (PPM)	0.34	NA	0.34	1.45	
ARV	8	Episode Day 3, 2013	7	CO (PPM)	0.46	NA	0.46	2.19	
ARV	8	Episode Day 3, 2013	8	CO (PPM)	0.51	NA	0.51	2.91	
ARV	8	Episode Day 3, 2013	9	CO (PPM)	0.56	NA	0.56	3.33	
ARV	8	Episode Day 3, 2013	10	CO (PPM)	0.62	NA	0.62	3.64	
ARV	8	Episode Day 3, 2013	11	CO (PPM)	0.68	NA	0.68	3.66	
ARV	8	Episode Day 3, 2013	12	CO (PPM)	0.74	NA	0.74	3.71	
ARV	8	Episode Day 3, 2013	13	CO (PPM)	0.81	NA	0.81	3.70	
ARV	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	3.41	
ARV	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	2.39	
ARV	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.69	
ARV	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.83	
ARV	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	2.25	
ARV	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	2.72	
ARV	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	3.09	
ARV	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	3.46	
ARV	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	3.89	
ARV	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	4.01	
HLD	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
HLD	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	0.75	
HLD	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	0.71	
HLD	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	0.66	
HLD	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	0.62	
HLD	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	0.57	
HLD	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	0.52	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
HLD	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	0.37	
HLD	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	0.19	
HLD	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	0.11	
HLD	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	0.14	
HLD	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	0.16	
HLD	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	0.19	
HLD	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	0.21	
HLD	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	0.24	
HLD	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	0.26	
HLD	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	0.30	
HLD	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	0.31	
HLD	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	0.27	
HLD	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	0.25	
HLD	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	0.21	
HLD	8	Episode Day 2, 2013	3	CO (PPM)	0.23	NA	0.23	0.20	
HLD	8	Episode Day 2, 2013	4	CO (PPM)	0.23	NA	0.23	0.19	
HLD	8	Episode Day 2, 2013	5	CO (PPM)	0.23	NA	0.23	0.17	
HLD	8	Episode Day 2, 2013	6	CO (PPM)	0.23	NA	0.23	0.15	
HLD	8	Episode Day 2, 2013	7	CO (PPM)	0.25	NA	0.25	0.14	
HLD	8	Episode Day 2, 2013	8	CO (PPM)	0.25	NA	0.25	0.11	
HLD	8	Episode Day 2, 2013	9	CO (PPM)	0.26	NA	0.26	0.09	
HLD	8	Episode Day 2, 2013	10	CO (PPM)	0.26	NA	0.26	0.07	
HLD	8	Episode Day 2, 2013	11	CO (PPM)	0.26	NA	0.26	0.05	
HLD	8	Episode Day 2, 2013	12	CO (PPM)	0.28	NA	0.28	0.04	
HLD	8	Episode Day 2, 2013	13	CO (PPM)	0.31	NA	0.31	0.02	
HLD	8	Episode Day 2, 2013	14	CO (PPM)	0.36	NA	0.36	0.01	
HLD	8	Episode Day 2, 2013	15	CO (PPM)	0.44	NA	0.44	0.09	
HLD	8	Episode Day 2, 2013	16	CO (PPM)	0.72	NA	0.72	0.59	
HLD	8	Episode Day 2, 2013	17	CO (PPM)	1.10	NA	1.10	1.14	
HLD	8	Episode Day 2, 2013	18	CO (PPM)	1.20	NA	1.20	1.34	
HLD	8	Episode Day 2, 2013	19	CO (PPM)	1.22	NA	1.22	1.42	
HLD	8	Episode Day 2, 2013	20	CO (PPM)	1.21	NA	1.21	1.49	
HLD	8	Episode Day 2, 2013	21	CO (PPM)	1.18	NA	1.18	1.52	
HLD	8	Episode Day 2, 2013	22	CO (PPM)	1.14	NA	1.14	1.56	
HLD	8	Episode Day 2, 2013	23	CO (PPM)	1.04	NA	1.04	1.52	
HLD	8	Episode Day 3, 2013	0	CO (PPM)	0.75	NA	0.75	1.07	
HLD	8	Episode Day 3, 2013	1	CO (PPM)	0.38	NA	0.38	0.57	
HLD	8	Episode Day 3, 2013	2	CO (PPM)	0.27	NA	0.27	0.44	
HLD	8	Episode Day 3, 2013	3	CO (PPM)	0.25	NA	0.25	0.41	
HLD	8	Episode Day 3, 2013	4	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2013	5	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2013	6	CO (PPM)	0.24	NA	0.24	0.40	
HLD	8	Episode Day 3, 2013	7	CO (PPM)	0.32	NA	0.32	0.59	
HLD	8	Episode Day 3, 2013	8	CO (PPM)	0.38	NA	0.38	0.79	
HLD	8	Episode Day 3, 2013	9	CO (PPM)	0.44	NA	0.44	0.87	
HLD	8	Episode Day 3, 2013	10	CO (PPM)	0.47	NA	0.47	0.81	
HLD	8	Episode Day 3, 2013	11	CO (PPM)	0.49	NA	0.49	0.75	
HLD	8	Episode Day 3, 2013	12	CO (PPM)	0.53	NA	0.53	0.70	
HLD	8	Episode Day 3, 2013	13	CO (PPM)	0.57	NA	0.57	0.66	
HLD	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	0.62	
HLD	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	0.39	
HLD	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	0.22	
HLD	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	0.17	
HLD	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	0.20	
HLD	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	0.22	
HLD	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	0.32	
HLD	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	0.36	
HLD	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	0.41	
HLD	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	0.64	
AUR	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
AUR	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	

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High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AUR	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 2, 2013	3	CO (PPM)	0.56	NA	0.56	-9.00	
AUR	8	Episode Day 2, 2013	4	CO (PPM)	0.53	NA	0.53	-9.00	
AUR	8	Episode Day 2, 2013	5	CO (PPM)	0.51	NA	0.51	-9.00	
AUR	8	Episode Day 2, 2013	6	CO (PPM)	0.48	NA	0.48	-9.00	
AUR	8	Episode Day 2, 2013	7	CO (PPM)	0.52	NA	0.52	-9.00	
AUR	8	Episode Day 2, 2013	8	CO (PPM)	0.55	NA	0.55	-9.00	
AUR	8	Episode Day 2, 2013	9	CO (PPM)	0.57	NA	0.57	-9.00	
AUR	8	Episode Day 2, 2013	10	CO (PPM)	0.58	NA	0.58	-9.00	
AUR	8	Episode Day 2, 2013	11	CO (PPM)	0.59	NA	0.59	-9.00	
AUR	8	Episode Day 2, 2013	12	CO (PPM)	0.61	NA	0.61	-9.00	
AUR	8	Episode Day 2, 2013	13	CO (PPM)	0.63	NA	0.63	-9.00	
AUR	8	Episode Day 2, 2013	14	CO (PPM)	0.66	NA	0.66	-9.00	
AUR	8	Episode Day 2, 2013	15	CO (PPM)	0.67	NA	0.67	-9.00	
AUR	8	Episode Day 2, 2013	16	CO (PPM)	0.85	NA	0.85	-9.00	
AUR	8	Episode Day 2, 2013	17	CO (PPM)	1.14	NA	1.14	-9.00	
AUR	8	Episode Day 2, 2013	18	CO (PPM)	1.50	NA	1.50	-9.00	
AUR	8	Episode Day 2, 2013	19	CO (PPM)	1.95	NA	1.95	-9.00	
AUR	8	Episode Day 2, 2013	20	CO (PPM)	2.39	NA	2.39	-9.00	
AUR	8	Episode Day 2, 2013	21	CO (PPM)	2.48	NA	2.48	-9.00	
AUR	8	Episode Day 2, 2013	22	CO (PPM)	2.50	NA	2.50	-9.00	
AUR	8	Episode Day 2, 2013	23	CO (PPM)	2.43	NA	2.43	-9.00	
AUR	8	Episode Day 3, 2013	0	CO (PPM)	2.20	NA	2.20	-9.00	
AUR	8	Episode Day 3, 2013	1	CO (PPM)	1.88	NA	1.88	-9.00	
AUR	8	Episode Day 3, 2013	2	CO (PPM)	1.51	NA	1.51	-9.00	
AUR	8	Episode Day 3, 2013	3	CO (PPM)	1.04	NA	1.04	-9.00	
AUR	8	Episode Day 3, 2013	4	CO (PPM)	0.58	NA	0.58	-9.00	
AUR	8	Episode Day 3, 2013	5	CO (PPM)	0.46	NA	0.46	-9.00	
AUR	8	Episode Day 3, 2013	6	CO (PPM)	0.40	NA	0.40	-9.00	
AUR	8	Episode Day 3, 2013	7	CO (PPM)	0.45	NA	0.45	-9.00	
AUR	8	Episode Day 3, 2013	8	CO (PPM)	0.47	NA	0.47	-9.00	
AUR	8	Episode Day 3, 2013	9	CO (PPM)	0.49	NA	0.49	-9.00	
AUR	8	Episode Day 3, 2013	10	CO (PPM)	0.53	NA	0.53	-9.00	
AUR	8	Episode Day 3, 2013	11	CO (PPM)	0.56	NA	0.56	-9.00	
AUR	8	Episode Day 3, 2013	12	CO (PPM)	0.60	NA	0.60	-9.00	
AUR	8	Episode Day 3, 2013	13	CO (PPM)	0.65	NA	0.65	-9.00	
AUR	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
AUR	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
AURS	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;								
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED
AURS	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00
AURS	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00
AURS	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00
AURS	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00
AURS	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00
AURS	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00
AURS	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	1.00
AURS	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	1.09
AURS	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	1.21
AURS	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	1.32
AURS	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	1.46
AURS	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	1.51
AURS	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	1.54
AURS	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	1.31
AURS	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.10
AURS	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.07
AURS	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.34
AURS	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	1.36
AURS	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	1.34
AURS	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	1.35
AURS	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	1.34
AURS	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	1.38
AURS	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	1.42
AURS	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	1.38
AURS	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	0.98
AURS	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	0.81
AURS	8	Episode Day 2, 2013	3	CO (PPM)	0.39	NA	0.39	0.69
AURS	8	Episode Day 2, 2013	4	CO (PPM)	0.37	NA	0.37	0.61
AURS	8	Episode Day 2, 2013	5	CO (PPM)	0.37	NA	0.37	0.63
AURS	8	Episode Day 2, 2013	6	CO (PPM)	0.36	NA	0.36	0.85
AURS	8	Episode Day 2, 2013	7	CO (PPM)	0.43	NA	0.43	1.23
AURS	8	Episode Day 2, 2013	8	CO (PPM)	0.46	NA	0.46	1.46
AURS	8	Episode Day 2, 2013	9	CO (PPM)	0.47	NA	0.47	1.69
AURS	8	Episode Day 2, 2013	10	CO (PPM)	0.48	NA	0.48	1.91
AURS	8	Episode Day 2, 2013	11	CO (PPM)	0.49	NA	0.49	2.21
AURS	8	Episode Day 2, 2013	12	CO (PPM)	0.51	NA	0.51	2.46
AURS	8	Episode Day 2, 2013	13	CO (PPM)	0.55	NA	0.55	2.66
AURS	8	Episode Day 2, 2013	14	CO (PPM)	0.59	NA	0.59	2.53
AURS	8	Episode Day 2, 2013	15	CO (PPM)	0.62	NA	0.62	2.36
AURS	8	Episode Day 2, 2013	16	CO (PPM)	0.98	NA	0.98	2.69
AURS	8	Episode Day 2, 2013	17	CO (PPM)	1.65	NA	1.65	3.80
AURS	8	Episode Day 2, 2013	18	CO (PPM)	2.39	NA	2.39	4.24
AURS	8	Episode Day 2, 2013	19	CO (PPM)	2.82	NA	2.82	4.28
AURS	8	Episode Day 2, 2013	20	CO (PPM)	2.88	NA	2.88	4.26
AURS	8	Episode Day 2, 2013	21	CO (PPM)	2.88	NA	2.88	4.18
AURS	8	Episode Day 2, 2013	22	CO (PPM)	2.84	NA	2.84	4.18
AURS	8	Episode Day 2, 2013	23	CO (PPM)	2.72	NA	2.72	4.01
AURS	8	Episode Day 3, 2013	0	CO (PPM)	2.33	NA	2.33	3.45
AURS	8	Episode Day 3, 2013	1	CO (PPM)	1.65	NA	1.65	2.11
AURS	8	Episode Day 3, 2013	2	CO (PPM)	0.91	NA	0.91	1.48
AURS	8	Episode Day 3, 2013	3	CO (PPM)	0.47	NA	0.47	1.16
AURS	8	Episode Day 3, 2013	4	CO (PPM)	0.38	NA	0.38	0.98
AURS	8	Episode Day 3, 2013	5	CO (PPM)	0.34	NA	0.34	0.90
AURS	8	Episode Day 3, 2013	6	CO (PPM)	0.34	NA	0.34	1.36
AURS	8	Episode Day 3, 2013	7	CO (PPM)	0.42	NA	0.42	2.06
AURS	8	Episode Day 3, 2013	8	CO (PPM)	0.44	NA	0.44	2.59
AURS	8	Episode Day 3, 2013	9	CO (PPM)	0.47	NA	0.47	2.94
AURS	8	Episode Day 3, 2013	10	CO (PPM)	0.49	NA	0.49	2.99
AURS	8	Episode Day 3, 2013	11	CO (PPM)	0.52	NA	0.52	3.04
AURS	8	Episode Day 3, 2013	12	CO (PPM)	0.56	NA	0.56	3.04
AURS	8	Episode Day 3, 2013	13	CO (PPM)	0.60	NA	0.60	2.99
AURS	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	2.41
AURS	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	1.65
AURS	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	1.25
AURS	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	1.26
AURS	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	1.64

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
AURS	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	1.86	
AURS	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	2.15	
AURS	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	2.36	
AURS	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	2.45	
AURS	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	2.49	
PLM	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
PLM	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 2, 2013	3	CO (PPM)	0.73	NA	0.73	-9.00	
PLM	8	Episode Day 2, 2013	4	CO (PPM)	0.68	NA	0.68	-9.00	
PLM	8	Episode Day 2, 2013	5	CO (PPM)	0.65	NA	0.65	-9.00	
PLM	8	Episode Day 2, 2013	6	CO (PPM)	0.59	NA	0.59	-9.00	
PLM	8	Episode Day 2, 2013	7	CO (PPM)	0.65	NA	0.65	-9.00	
PLM	8	Episode Day 2, 2013	8	CO (PPM)	0.67	NA	0.67	-9.00	
PLM	8	Episode Day 2, 2013	9	CO (PPM)	0.71	NA	0.71	-9.00	
PLM	8	Episode Day 2, 2013	10	CO (PPM)	0.73	NA	0.73	-9.00	
PLM	8	Episode Day 2, 2013	11	CO (PPM)	0.74	NA	0.74	-9.00	
PLM	8	Episode Day 2, 2013	12	CO (PPM)	0.77	NA	0.77	-9.00	
PLM	8	Episode Day 2, 2013	13	CO (PPM)	0.79	NA	0.79	-9.00	
PLM	8	Episode Day 2, 2013	14	CO (PPM)	0.83	NA	0.83	-9.00	
PLM	8	Episode Day 2, 2013	15	CO (PPM)	0.83	NA	0.83	-9.00	
PLM	8	Episode Day 2, 2013	16	CO (PPM)	1.09	NA	1.09	-9.00	
PLM	8	Episode Day 2, 2013	17	CO (PPM)	1.49	NA	1.49	-9.00	
PLM	8	Episode Day 2, 2013	18	CO (PPM)	2.01	NA	2.01	-9.00	
PLM	8	Episode Day 2, 2013	19	CO (PPM)	2.68	NA	2.68	-9.00	
PLM	8	Episode Day 2, 2013	20	CO (PPM)	2.86	NA	2.86	-9.00	
PLM	8	Episode Day 2, 2013	21	CO (PPM)	2.90	NA	2.90	-9.00	
PLM	8	Episode Day 2, 2013	22	CO (PPM)	2.92	NA	2.92	-9.00	
PLM	8	Episode Day 2, 2013	23	CO (PPM)	2.83	NA	2.83	-9.00	
PLM	8	Episode Day 3, 2013	0	CO (PPM)	2.51	NA	2.51	-9.00	
PLM	8	Episode Day 3, 2013	1	CO (PPM)	2.06	NA	2.06	-9.00	
PLM	8	Episode Day 3, 2013	2	CO (PPM)	1.53	NA	1.53	-9.00	
PLM	8	Episode Day 3, 2013	3	CO (PPM)	0.83	NA	0.83	-9.00	
PLM	8	Episode Day 3, 2013	4	CO (PPM)	0.62	NA	0.62	-9.00	
PLM	8	Episode Day 3, 2013	5	CO (PPM)	0.54	NA	0.54	-9.00	
PLM	8	Episode Day 3, 2013	6	CO (PPM)	0.47	NA	0.47	-9.00	
PLM	8	Episode Day 3, 2013	7	CO (PPM)	0.56	NA	0.56	-9.00	
PLM	8	Episode Day 3, 2013	8	CO (PPM)	0.60	NA	0.60	-9.00	
PLM	8	Episode Day 3, 2013	9	CO (PPM)	0.63	NA	0.63	-9.00	
PLM	8	Episode Day 3, 2013	10	CO (PPM)	0.67	NA	0.67	-9.00	
PLM	8	Episode Day 3, 2013	11	CO (PPM)	0.73	NA	0.73	-9.00	
PLM	8	Episode Day 3, 2013	12	CO (PPM)	0.79	NA	0.79	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
PLM	8	Episode Day 3, 2013	13	CO (PPM)	0.86	NA	0.86	-9.00	
PLM	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
PLM	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
BTN	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 2, 2013	3	CO (PPM)	0.41	NA	0.41	-9.00	
BTN	8	Episode Day 2, 2013	4	CO (PPM)	0.40	NA	0.40	-9.00	
BTN	8	Episode Day 2, 2013	5	CO (PPM)	0.39	NA	0.39	-9.00	
BTN	8	Episode Day 2, 2013	6	CO (PPM)	0.40	NA	0.40	-9.00	
BTN	8	Episode Day 2, 2013	7	CO (PPM)	0.42	NA	0.42	-9.00	
BTN	8	Episode Day 2, 2013	8	CO (PPM)	0.43	NA	0.43	-9.00	
BTN	8	Episode Day 2, 2013	9	CO (PPM)	0.43	NA	0.43	-9.00	
BTN	8	Episode Day 2, 2013	10	CO (PPM)	0.45	NA	0.45	-9.00	
BTN	8	Episode Day 2, 2013	11	CO (PPM)	0.49	NA	0.49	-9.00	
BTN	8	Episode Day 2, 2013	12	CO (PPM)	0.54	NA	0.54	-9.00	
BTN	8	Episode Day 2, 2013	13	CO (PPM)	0.59	NA	0.59	-9.00	
BTN	8	Episode Day 2, 2013	14	CO (PPM)	0.65	NA	0.65	-9.00	
BTN	8	Episode Day 2, 2013	15	CO (PPM)	0.70	NA	0.70	-9.00	
BTN	8	Episode Day 2, 2013	16	CO (PPM)	0.80	NA	0.80	-9.00	
BTN	8	Episode Day 2, 2013	17	CO (PPM)	0.91	NA	0.91	-9.00	
BTN	8	Episode Day 2, 2013	18	CO (PPM)	1.02	NA	1.02	-9.00	
BTN	8	Episode Day 2, 2013	19	CO (PPM)	1.08	NA	1.08	-9.00	
BTN	8	Episode Day 2, 2013	20	CO (PPM)	1.08	NA	1.08	-9.00	
BTN	8	Episode Day 2, 2013	21	CO (PPM)	1.09	NA	1.09	-9.00	
BTN	8	Episode Day 2, 2013	22	CO (PPM)	1.17	NA	1.17	-9.00	
BTN	8	Episode Day 2, 2013	23	CO (PPM)	1.26	NA	1.26	-9.00	
BTN	8	Episode Day 3, 2013	0	CO (PPM)	1.24	NA	1.24	-9.00	
BTN	8	Episode Day 3, 2013	1	CO (PPM)	1.16	NA	1.16	-9.00	
BTN	8	Episode Day 3, 2013	2	CO (PPM)	1.04	NA	1.04	-9.00	
BTN	8	Episode Day 3, 2013	3	CO (PPM)	0.94	NA	0.94	-9.00	
BTN	8	Episode Day 3, 2013	4	CO (PPM)	0.89	NA	0.89	-9.00	
BTN	8	Episode Day 3, 2013	5	CO (PPM)	0.82	NA	0.82	-9.00	
BTN	8	Episode Day 3, 2013	6	CO (PPM)	0.70	NA	0.70	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
BTN	8	Episode Day 3, 2013	7	CO (PPM)	0.54	NA	0.54	-9.00	
BTN	8	Episode Day 3, 2013	8	CO (PPM)	0.45	NA	0.45	-9.00	
BTN	8	Episode Day 3, 2013	9	CO (PPM)	0.40	NA	0.40	-9.00	
BTN	8	Episode Day 3, 2013	10	CO (PPM)	0.37	NA	0.37	-9.00	
BTN	8	Episode Day 3, 2013	11	CO (PPM)	0.35	NA	0.35	-9.00	
BTN	8	Episode Day 3, 2013	12	CO (PPM)	0.35	NA	0.35	-9.00	
BTN	8	Episode Day 3, 2013	13	CO (PPM)	0.36	NA	0.36	-9.00	
BTN	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
BTN	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
U_1	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 2, 2013	3	CO (PPM)	0.74	NA	0.74	-9.00	
U_1	8	Episode Day 2, 2013	4	CO (PPM)	0.70	NA	0.70	-9.00	
U_1	8	Episode Day 2, 2013	5	CO (PPM)	0.67	NA	0.67	-9.00	
U_1	8	Episode Day 2, 2013	6	CO (PPM)	0.62	NA	0.62	-9.00	
U_1	8	Episode Day 2, 2013	7	CO (PPM)	0.71	NA	0.71	-9.00	
U_1	8	Episode Day 2, 2013	8	CO (PPM)	0.76	NA	0.76	-9.00	
U_1	8	Episode Day 2, 2013	9	CO (PPM)	0.79	NA	0.79	-9.00	
U_1	8	Episode Day 2, 2013	10	CO (PPM)	0.79	NA	0.79	-9.00	
U_1	8	Episode Day 2, 2013	11	CO (PPM)	0.81	NA	0.81	-9.00	
U_1	8	Episode Day 2, 2013	12	CO (PPM)	0.85	NA	0.85	-9.00	
U_1	8	Episode Day 2, 2013	13	CO (PPM)	0.91	NA	0.91	-9.00	
U_1	8	Episode Day 2, 2013	14	CO (PPM)	1.01	NA	1.01	-9.00	
U_1	8	Episode Day 2, 2013	15	CO (PPM)	1.04	NA	1.04	-9.00	
U_1	8	Episode Day 2, 2013	16	CO (PPM)	1.52	NA	1.52	-9.00	
U_1	8	Episode Day 2, 2013	17	CO (PPM)	2.50	NA	2.50	-9.00	
U_1	8	Episode Day 2, 2013	18	CO (PPM)	3.52	NA	3.52	-9.00	
U_1	8	Episode Day 2, 2013	19	CO (PPM)	3.79	NA	3.79	-9.00	
U_1	8	Episode Day 2, 2013	20	CO (PPM)	3.84	NA	3.84	-9.00	
U_1	8	Episode Day 2, 2013	21	CO (PPM)	3.85	NA	3.85	-9.00	
U_1	8	Episode Day 2, 2013	22	CO (PPM)	3.78	NA	3.78	-9.00	
U_1	8	Episode Day 2, 2013	23	CO (PPM)	3.62	NA	3.62	-9.00	
U_1	8	Episode Day 3, 2013	0	CO (PPM)	3.08	NA	3.08	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
U_1	8	Episode Day 3, 2013	1	CO (PPM)	2.07	NA	2.07	-9.00	
U_1	8	Episode Day 3, 2013	2	CO (PPM)	1.05	NA	1.05	-9.00	
U_1	8	Episode Day 3, 2013	3	CO (PPM)	0.75	NA	0.75	-9.00	
U_1	8	Episode Day 3, 2013	4	CO (PPM)	0.65	NA	0.65	-9.00	
U_1	8	Episode Day 3, 2013	5	CO (PPM)	0.58	NA	0.58	-9.00	
U_1	8	Episode Day 3, 2013	6	CO (PPM)	0.56	NA	0.56	-9.00	
U_1	8	Episode Day 3, 2013	7	CO (PPM)	0.75	NA	0.75	-9.00	
U_1	8	Episode Day 3, 2013	8	CO (PPM)	0.85	NA	0.85	-9.00	
U_1	8	Episode Day 3, 2013	9	CO (PPM)	0.91	NA	0.91	-9.00	
U_1	8	Episode Day 3, 2013	10	CO (PPM)	0.97	NA	0.97	-9.00	
U_1	8	Episode Day 3, 2013	11	CO (PPM)	1.03	NA	1.03	-9.00	
U_1	8	Episode Day 3, 2013	12	CO (PPM)	1.13	NA	1.13	-9.00	
U_1	8	Episode Day 3, 2013	13	CO (PPM)	1.24	NA	1.24	-9.00	
U_1	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_1	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
F_A	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 2, 2013	3	CO (PPM)	0.51	NA	0.51	-9.00	
F_A	8	Episode Day 2, 2013	4	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 2, 2013	5	CO (PPM)	0.46	NA	0.46	-9.00	
F_A	8	Episode Day 2, 2013	6	CO (PPM)	0.37	NA	0.37	-9.00	
F_A	8	Episode Day 2, 2013	7	CO (PPM)	0.45	NA	0.45	-9.00	
F_A	8	Episode Day 2, 2013	8	CO (PPM)	0.49	NA	0.49	-9.00	
F_A	8	Episode Day 2, 2013	9	CO (PPM)	0.54	NA	0.54	-9.00	
F_A	8	Episode Day 2, 2013	10	CO (PPM)	0.58	NA	0.58	-9.00	
F_A	8	Episode Day 2, 2013	11	CO (PPM)	0.61	NA	0.61	-9.00	
F_A	8	Episode Day 2, 2013	12	CO (PPM)	0.64	NA	0.64	-9.00	
F_A	8	Episode Day 2, 2013	13	CO (PPM)	0.66	NA	0.66	-9.00	
F_A	8	Episode Day 2, 2013	14	CO (PPM)	0.67	NA	0.67	-9.00	
F_A	8	Episode Day 2, 2013	15	CO (PPM)	0.65	NA	0.65	-9.00	
F_A	8	Episode Day 2, 2013	16	CO (PPM)	0.79	NA	0.79	-9.00	
F_A	8	Episode Day 2, 2013	17	CO (PPM)	0.84	NA	0.84	-9.00	
F_A	8	Episode Day 2, 2013	18	CO (PPM)	0.86	NA	0.86	-9.00	

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
F_A	8	Episode Day 2, 2013	19	CO (PPM)	0.89	NA	0.89	-9.00	
F_A	8	Episode Day 2, 2013	20	CO (PPM)	0.91	NA	0.91	-9.00	
F_A	8	Episode Day 2, 2013	21	CO (PPM)	0.91	NA	0.91	-9.00	
F_A	8	Episode Day 2, 2013	22	CO (PPM)	0.87	NA	0.87	-9.00	
F_A	8	Episode Day 2, 2013	23	CO (PPM)	0.76	NA	0.76	-9.00	
F_A	8	Episode Day 3, 2013	0	CO (PPM)	0.57	NA	0.57	-9.00	
F_A	8	Episode Day 3, 2013	1	CO (PPM)	0.48	NA	0.48	-9.00	
F_A	8	Episode Day 3, 2013	2	CO (PPM)	0.42	NA	0.42	-9.00	
F_A	8	Episode Day 3, 2013	3	CO (PPM)	0.36	NA	0.36	-9.00	
F_A	8	Episode Day 3, 2013	4	CO (PPM)	0.31	NA	0.31	-9.00	
F_A	8	Episode Day 3, 2013	5	CO (PPM)	0.29	NA	0.29	-9.00	
F_A	8	Episode Day 3, 2013	6	CO (PPM)	0.30	NA	0.30	-9.00	
F_A	8	Episode Day 3, 2013	7	CO (PPM)	0.40	NA	0.40	-9.00	
F_A	8	Episode Day 3, 2013	8	CO (PPM)	0.44	NA	0.44	-9.00	
F_A	8	Episode Day 3, 2013	9	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 3, 2013	10	CO (PPM)	0.47	NA	0.47	-9.00	
F_A	8	Episode Day 3, 2013	11	CO (PPM)	0.49	NA	0.49	-9.00	
F_A	8	Episode Day 3, 2013	12	CO (PPM)	0.51	NA	0.51	-9.00	
F_A	8	Episode Day 3, 2013	13	CO (PPM)	0.56	NA	0.56	-9.00	
F_A	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
F_A	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
H_U	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 2, 2013	3	CO (PPM)	0.37	NA	0.37	-9.00	
H_U	8	Episode Day 2, 2013	4	CO (PPM)	0.36	NA	0.36	-9.00	
H_U	8	Episode Day 2, 2013	5	CO (PPM)	0.35	NA	0.35	-9.00	
H_U	8	Episode Day 2, 2013	6	CO (PPM)	0.33	NA	0.33	-9.00	
H_U	8	Episode Day 2, 2013	7	CO (PPM)	0.37	NA	0.37	-9.00	
H_U	8	Episode Day 2, 2013	8	CO (PPM)	0.40	NA	0.40	-9.00	
H_U	8	Episode Day 2, 2013	9	CO (PPM)	0.40	NA	0.40	-9.00	
H_U	8	Episode Day 2, 2013	10	CO (PPM)	0.40	NA	0.40	-9.00	
H_U	8	Episode Day 2, 2013	11	CO (PPM)	0.41	NA	0.41	-9.00	
H_U	8	Episode Day 2, 2013	12	CO (PPM)	0.42	NA	0.42	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
H_U	8	Episode Day 2, 2013	13	CO (PPM)	0.46	NA	0.46	-9.00	
H_U	8	Episode Day 2, 2013	14	CO (PPM)	0.53	NA	0.53	-9.00	
H_U	8	Episode Day 2, 2013	15	CO (PPM)	0.67	NA	0.67	-9.00	
H_U	8	Episode Day 2, 2013	16	CO (PPM)	1.12	NA	1.12	-9.00	
H_U	8	Episode Day 2, 2013	17	CO (PPM)	1.63	NA	1.63	-9.00	
H_U	8	Episode Day 2, 2013	18	CO (PPM)	1.81	NA	1.81	-9.00	
H_U	8	Episode Day 2, 2013	19	CO (PPM)	1.87	NA	1.87	-9.00	
H_U	8	Episode Day 2, 2013	20	CO (PPM)	1.87	NA	1.87	-9.00	
H_U	8	Episode Day 2, 2013	21	CO (PPM)	1.85	NA	1.85	-9.00	
H_U	8	Episode Day 2, 2013	22	CO (PPM)	1.78	NA	1.78	-9.00	
H_U	8	Episode Day 2, 2013	23	CO (PPM)	1.59	NA	1.59	-9.00	
H_U	8	Episode Day 3, 2013	0	CO (PPM)	1.12	NA	1.12	-9.00	
H_U	8	Episode Day 3, 2013	1	CO (PPM)	0.61	NA	0.61	-9.00	
H_U	8	Episode Day 3, 2013	2	CO (PPM)	0.42	NA	0.42	-9.00	
H_U	8	Episode Day 3, 2013	3	CO (PPM)	0.35	NA	0.35	-9.00	
H_U	8	Episode Day 3, 2013	4	CO (PPM)	0.33	NA	0.33	-9.00	
H_U	8	Episode Day 3, 2013	5	CO (PPM)	0.32	NA	0.32	-9.00	
H_U	8	Episode Day 3, 2013	6	CO (PPM)	0.32	NA	0.32	-9.00	
H_U	8	Episode Day 3, 2013	7	CO (PPM)	0.41	NA	0.41	-9.00	
H_U	8	Episode Day 3, 2013	8	CO (PPM)	0.43	NA	0.43	-9.00	
H_U	8	Episode Day 3, 2013	9	CO (PPM)	0.46	NA	0.46	-9.00	
H_U	8	Episode Day 3, 2013	10	CO (PPM)	0.51	NA	0.51	-9.00	
H_U	8	Episode Day 3, 2013	11	CO (PPM)	0.55	NA	0.55	-9.00	
H_U	8	Episode Day 3, 2013	12	CO (PPM)	0.59	NA	0.59	-9.00	
H_U	8	Episode Day 3, 2013	13	CO (PPM)	0.64	NA	0.64	-9.00	
H_U	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
H_U	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
U_A	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 2, 2013	3	CO (PPM)	0.25	NA	0.25	-9.00	
U_A	8	Episode Day 2, 2013	4	CO (PPM)	0.24	NA	0.24	-9.00	
U_A	8	Episode Day 2, 2013	5	CO (PPM)	0.24	NA	0.24	-9.00	
U_A	8	Episode Day 2, 2013	6	CO (PPM)	0.24	NA	0.24	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
U_A	8	Episode Day 2, 2013	7	CO (PPM)	0.27	NA	0.27	-9.00	
U_A	8	Episode Day 2, 2013	8	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2013	9	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2013	10	CO (PPM)	0.28	NA	0.28	-9.00	
U_A	8	Episode Day 2, 2013	11	CO (PPM)	0.29	NA	0.29	-9.00	
U_A	8	Episode Day 2, 2013	12	CO (PPM)	0.31	NA	0.31	-9.00	
U_A	8	Episode Day 2, 2013	13	CO (PPM)	0.34	NA	0.34	-9.00	
U_A	8	Episode Day 2, 2013	14	CO (PPM)	0.39	NA	0.39	-9.00	
U_A	8	Episode Day 2, 2013	15	CO (PPM)	0.48	NA	0.48	-9.00	
U_A	8	Episode Day 2, 2013	16	CO (PPM)	0.80	NA	0.80	-9.00	
U_A	8	Episode Day 2, 2013	17	CO (PPM)	1.18	NA	1.18	-9.00	
U_A	8	Episode Day 2, 2013	18	CO (PPM)	1.32	NA	1.32	-9.00	
U_A	8	Episode Day 2, 2013	19	CO (PPM)	1.34	NA	1.34	-9.00	
U_A	8	Episode Day 2, 2013	20	CO (PPM)	1.33	NA	1.33	-9.00	
U_A	8	Episode Day 2, 2013	21	CO (PPM)	1.31	NA	1.31	-9.00	
U_A	8	Episode Day 2, 2013	22	CO (PPM)	1.26	NA	1.26	-9.00	
U_A	8	Episode Day 2, 2013	23	CO (PPM)	1.15	NA	1.15	-9.00	
U_A	8	Episode Day 3, 2013	0	CO (PPM)	0.82	NA	0.82	-9.00	
U_A	8	Episode Day 3, 2013	1	CO (PPM)	0.44	NA	0.44	-9.00	
U_A	8	Episode Day 3, 2013	2	CO (PPM)	0.30	NA	0.30	-9.00	
U_A	8	Episode Day 3, 2013	3	CO (PPM)	0.27	NA	0.27	-9.00	
U_A	8	Episode Day 3, 2013	4	CO (PPM)	0.26	NA	0.26	-9.00	
U_A	8	Episode Day 3, 2013	5	CO (PPM)	0.25	NA	0.25	-9.00	
U_A	8	Episode Day 3, 2013	6	CO (PPM)	0.26	NA	0.26	-9.00	
U_A	8	Episode Day 3, 2013	7	CO (PPM)	0.35	NA	0.35	-9.00	
U_A	8	Episode Day 3, 2013	8	CO (PPM)	0.39	NA	0.39	-9.00	
U_A	8	Episode Day 3, 2013	9	CO (PPM)	0.43	NA	0.43	-9.00	
U_A	8	Episode Day 3, 2013	10	CO (PPM)	0.47	NA	0.47	-9.00	
U_A	8	Episode Day 3, 2013	11	CO (PPM)	0.50	NA	0.50	-9.00	
U_A	8	Episode Day 3, 2013	12	CO (PPM)	0.54	NA	0.54	-9.00	
U_A	8	Episode Day 3, 2013	13	CO (PPM)	0.59	NA	0.59	-9.00	
U_A	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
U_A	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	0	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2013	1	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2013	2	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2013	3	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2013	4	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2013	5	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2013	6	CO (PPM)	0.00	NA	0.00	-9.00	
P_I	8	Episode Day 1, 2013	7	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	8	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	9	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	10	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	11	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	12	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	13	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 1, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2013	0	CO (PPM)	-9.00	NA	-9.00	-9.00	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;									
SITE	AVG PERIOD	DATE	HR	POLLUTANT	2013 PREDICTED (UAM)	2013 PREDICTED (CAL3QHC)	2013 PREDICTED (UAM+CAL3)	1988 OBSERVED	
P_I	8	Episode Day 2, 2013	1	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2013	2	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 2, 2013	3	CO (PPM)	0.45	NA	0.45	-9.00	
P_I	8	Episode Day 2, 2013	4	CO (PPM)	0.43	NA	0.43	-9.00	
P_I	8	Episode Day 2, 2013	5	CO (PPM)	0.42	NA	0.42	-9.00	
P_I	8	Episode Day 2, 2013	6	CO (PPM)	0.41	NA	0.41	-9.00	
P_I	8	Episode Day 2, 2013	7	CO (PPM)	0.49	NA	0.49	-9.00	
P_I	8	Episode Day 2, 2013	8	CO (PPM)	0.53	NA	0.53	-9.00	
P_I	8	Episode Day 2, 2013	9	CO (PPM)	0.54	NA	0.54	-9.00	
P_I	8	Episode Day 2, 2013	10	CO (PPM)	0.55	NA	0.55	-9.00	
P_I	8	Episode Day 2, 2013	11	CO (PPM)	0.56	NA	0.56	-9.00	
P_I	8	Episode Day 2, 2013	12	CO (PPM)	0.58	NA	0.58	-9.00	
P_I	8	Episode Day 2, 2013	13	CO (PPM)	0.61	NA	0.61	-9.00	
P_I	8	Episode Day 2, 2013	14	CO (PPM)	0.63	NA	0.63	-9.00	
P_I	8	Episode Day 2, 2013	15	CO (PPM)	0.63	NA	0.63	-9.00	
P_I	8	Episode Day 2, 2013	16	CO (PPM)	0.91	NA	0.91	-9.00	
P_I	8	Episode Day 2, 2013	17	CO (PPM)	1.47	NA	1.47	-9.00	
P_I	8	Episode Day 2, 2013	18	CO (PPM)	2.17	NA	2.17	-9.00	
P_I	8	Episode Day 2, 2013	19	CO (PPM)	2.51	NA	2.51	-9.00	
P_I	8	Episode Day 2, 2013	20	CO (PPM)	2.58	NA	2.58	-9.00	
P_I	8	Episode Day 2, 2013	21	CO (PPM)	2.59	NA	2.59	-9.00	
P_I	8	Episode Day 2, 2013	22	CO (PPM)	2.58	NA	2.58	-9.00	
P_I	8	Episode Day 2, 2013	23	CO (PPM)	2.48	NA	2.48	-9.00	
P_I	8	Episode Day 3, 2013	0	CO (PPM)	2.15	NA	2.15	-9.00	
P_I	8	Episode Day 3, 2013	1	CO (PPM)	1.59	NA	1.59	-9.00	
P_I	8	Episode Day 3, 2013	2	CO (PPM)	0.87	NA	0.87	-9.00	
P_I	8	Episode Day 3, 2013	3	CO (PPM)	0.52	NA	0.52	-9.00	
P_I	8	Episode Day 3, 2013	4	CO (PPM)	0.43	NA	0.43	-9.00	
P_I	8	Episode Day 3, 2013	5	CO (PPM)	0.38	NA	0.38	-9.00	
P_I	8	Episode Day 3, 2013	6	CO (PPM)	0.36	NA	0.36	-9.00	
P_I	8	Episode Day 3, 2013	7	CO (PPM)	0.46	NA	0.46	-9.00	
P_I	8	Episode Day 3, 2013	8	CO (PPM)	0.50	NA	0.50	-9.00	
P_I	8	Episode Day 3, 2013	9	CO (PPM)	0.55	NA	0.55	-9.00	
P_I	8	Episode Day 3, 2013	10	CO (PPM)	0.59	NA	0.59	-9.00	
P_I	8	Episode Day 3, 2013	11	CO (PPM)	0.62	NA	0.62	-9.00	
P_I	8	Episode Day 3, 2013	12	CO (PPM)	0.68	NA	0.68	-9.00	
P_I	8	Episode Day 3, 2013	13	CO (PPM)	0.74	NA	0.74	-9.00	
P_I	8	Episode Day 3, 2013	14	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	15	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	16	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	17	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	18	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	19	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	20	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	21	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	22	CO (PPM)	-9.00	NA	-9.00	-9.00	
P_I	8	Episode Day 3, 2013	23	CO (PPM)	-9.00	NA	-9.00	-9.00	
NOTE:									
NA in THIS report appears for ALL 8-hr avg CAL3QHC values									
since 8-hr running averages for CAL3QHC results are NOT									
computed; 1-hr averages for UAM and CAL3QHC are									
summed and then 8-hour running averages are computed.									

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

MET A7, 09-01-99 EI, 01-11-94 PT, 09-09-99 CAL, 09-01-99 UAM
 High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;

TIME AND MAGNITUDE OF MAXIMUM CONCENTRATION
 FOR 8-HR AVERAGING PERIOD:

station	max concentration 1988 observed)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	18.7	43	18
WBY	8.9	49	0
CRG	10.4	49	0
NJH	11.3	47	22
TIV	0.0	0	0
ICMP	0.0	0	0
ENG	3.7	47	22
BOU	2.1	38	13
GRDS	8.3	45	20
ARV	5.1	37	12
HLD	1.6	47	22
AUR	0.0	0	0
AURS	4.3	44	19
PLM	0.0	0	0
BTN	0.0	0	0
U_1	0.0	0	0
F_A	0.0	0	0
H_U	0.0	0	0
U_A	0.0	0	0
P_I	0.0	0	0

station	max concentration (2013 predicted)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	7.9	48	23
WBY	4.1	50	1
CRG	4.0	48	23
NJH	3.4	47	22
TIV	7.3	47	22
ICMP	9.0	47	22 [Note: With 2 decimal places, this value is
8.96 ppm]			
ENG	1.6	44	19
BOU	0.8	42	17
GRDS	0.9	42	17
ARV	1.4	43	18
HLD	1.2	44	19
AUR	2.5	47	22
AURS	2.9	45	20
PLM	2.9	47	22
BTN	1.3	48	23
U_1	3.8	46	21
F_A	0.9	45	20
H_U	1.9	45	20
U_A	1.3	44	19
P_I	2.6	46	21

NOTE: The "performance statistics hour" refers to a unique hour for the entire simulation that is used to determine when the maximum concentration occurred. It is based on the system where HOUR 1 is ALWAYS the period from "midnight to 1am" on the FIRST day of the simulation; if there are three calendar days in the simulation; this hour counter increments from 1 to 72.

The "hour of day" refers to the actual hour of the day where HOUR 0 is the period from "midnight to 1am;" this hour counter increments from 0 to 23 for each day.

 MET A7, 09-01-99 EI, 01-11-94 PT, 09-09-99 CAL, 09-01-99 UAM
 High: 2013 mob=867.2tpd;1.7;80;I/M 240 w/newest 4myr exempt;

TIME AND MAGNITUDE OF MAXIMUM CONCENTRATION

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

FOR 1-HR AVERAGING PERIOD:

station	max concentration (1988 observed)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	50.5	42	17
WBY	13.4	43	18
CRG	16.3	44	19
NJH	22.9	42	17
TIV	0.0	0	0
ICMP	0.0	0	0
ENG	9.4	42	17
BOU	6.5	44	19
GRDS	16.6	33	8
ARV	11.0	33	8
HLD	4.4	42	17
AUR	0.0	0	0
AURS	11.2	42	17
PLM	0.0	0	0
BTN	0.0	0	0
U_1	0.0	0	0
F_A	0.0	0	0
H_U	0.0	0	0
U_A	0.0	0	0
P_I	0.0	0	0

station	max concentration (2013 predicted)	hour of maximum (perform. stats)	hour of maximum (hour of day)
CMP	14.6	43	18
WBY	5.2	48	23
CRG	5.3	43	18
NJH	6.4	44	19
TIV	14.4	43	18
ICMP	15.9	42	17
ENG	3.8	41	16
BOU	1.5	40	15
GRDS	1.6	41	16
ARV	2.9	41	16
HLD	3.2	42	17
AUR	4.1	44	19
AURS	6.2	43	18
PLM	5.9	44	19
BTN	1.7	48	23
U_1	8.6	43	18
F_A	1.8	41	16
H_U	4.4	42	17
U_A	3.3	42	17
P_I	6.0	43	18

NOTE: The "performance statistics hour" refers to a unique hour for the entire simulation that is used to determine when the maximum concentration occurred. It is based on the system where HOUR 1 is ALWAYS the period from "midnight to 1am" on the FIRST day of the simulation; if there are three calendar days in the simulation; this hour counter increments from 1 to 72.

The "hour of day" refers to the actual hour of the day where HOUR 0 is the period from "midnight to 1am;" this hour counter increments from 0 to 23 for each day.

Appendix H – CAL3QHC Modeling

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE 1

JOB: UNIVERSITY & HAMPDEN 2013 SCREENING

RUN: UNIVERSITY & HAMPDEN 2013

DATE : 9/14/99

TIME : 9:32:25

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	(I
1. UNIVERSITY NB APPR *	*	32.0	-1000.0	32.0	.0	*	1000.	360. AG	1502.	8.0	
2. UNIVERSITY NB Q *	*	32.0	-59.0	32.0	-1477.1	*	1418.	180. AG	420.	100.0	
3. UNIVERSITY NB Q LEF*	*	9.0	-59.0	9.0	-1574.1	*	1515.	180. AG	573.	100.0	
4. UNIVERSITY NB DEP. *	*	32.0	.0	32.0	1000.0	*	1000.	360. AG	1986.	8.0	
5. UNIVERSITY NB FR *	*	52.0	-1000.0	52.0	.0	*	1000.	360. AG	505.	8.0	
6. UNIVERSITY SB APPR *	*	-24.0	1000.0	-24.0	.0	*	1000.	180. AG	1600.	8.0	
7. UNIVERSITY SB Q *	*	-24.0	74.0	-24.0	2674.3	*	2600.	360. AG	442.	100.0	
8. UNIVERSITY SB Q LEFT*	*	.0	74.0	.0	1203.2	*	1129.	360. AG	297.	100.0	
9. UNIVERSITY SB DEP. *	*	-24.0	.0	-24.0	-1000.0	*	1000.	180. AG	2775.	8.0	
10. UNIVERSITY SB FR *	*	-49.0	1000.0	-49.0	.0	*	1000.	180. AG	240.	8.0	
11. HAMPDEN EB APPR. *	*	-1000.0	-29.5	.0	-29.5	*	1000.	90. AG	3045.	6.8	
12. HAMPDEN EB QUEUE *	*	-60.0	-29.5	-3417.2	-29.5	*	3357.	270. AG	589.	100.0	
13. HAMPDEN .EB DEP. *	*	.0	-29.5	1000.0	-29.5	*	1000.	90. AG	3755.	6.8	
14. HAMPDEN EB QUEUE LEF*	*	-60.0	.0	-1888.7	-.3	*	1829.	270. AG	289.	100.0	
15. HAMPDEN EB FR *	*	-335.0	-53.0	.0	-53.0	*	335.	90. AG	406.	6.8	
16. HAMPDEN WB APPR. *	*	1000.0	43.0	.0	43.0	*	1000.	270. AG	3409.	6.8	
17. HAMPDEN WB QUEUE *	*	60.0	43.0	3994.5	43.0	*	3934.	90. AG	556.	100.0	
18. HAMPDEN WB DEP. *	*	.0	43.0	-1000.0	43.0	*	1000.	270. AG	4254.	6.8	
19. HAMPDEN WB QUEUE LEF*	*	60.0	12.0	1980.0	12.0	*	1920.	90. AG	556.	100.0	
20. HAMPDEN WB R *	*	60.0	96.0	95.0	61.0	*	49.	135. AG	168.	6.8	
21. HAMPDEN WB QUEUE R *	*	60.0	96.0	104.2	51.8	*	62.	135. AG	185.	100.0	

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE	RED LENGTH (SEC)	CLEARANCE TIME (SEC)	APPROACH LOST TIME (SEC)	SATURATION VOL (VPH)	IDLE FLOW RATE (VPH)	SIGNAL EM FAC (gm/hr)	ARRIVAL TYPE	RATE
2. UNIVERSITY NB Q *	*	120	77	2.0	1502	2000	121.97	2	3	
3. UNIVERSITY NB Q LEF*	*	120	105	2.0	605	1900	121.97	2	3	
7. UNIVERSITY SB Q *	*	120	81	2.0	1600	2000	121.97	2	3	
8. UNIVERSITY SB Q LEFT*	*	120	109	2.0	205	1900	121.97	2	3	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

12.	HAMPDEN	EB	QUEUE	*	120	72	2.0	3045	2000	121.97	1	3
14.	HAMPDEN	EB	QUEUE	LEF*	120	106	2.0	316	1900	121.97	2	3
17.	HAMPDEN	WB	QUEUE	*	120	68	2.0	3409	2000	121.97	1	3
19.	HAMPDEN	WB	QUEUE	LEF*	120	102	2.0	770	1900	121.97	2	3
21.	HAMPDEN	WB	QUEUE	R *	120	68	2.0	168	2000	121.97	1	3

RECEPTOR LOCATIONS												
* COORDINATES (FT) *												
RECEPTOR				*	X	Y	Z	*				
1.	REC 1	(SE CORNER)	*		60.0	-59.0	6.0	*				
2.	REC 2	(SW CORNER)	*		-48.0	-60.0	6.0	*				
3.	REC 3	(NW CORNER)	*		-60.0	72.0	6.0	*				
4.	REC 4	(NE CORNER)	*		99.0	74.0	6.0	*				
5.	REC 5	(E MID-MAIN)	*		60.0	-159.0	6.0	*				
6.	REC 6	(W MID-MAIN)	*		-48.0	-159.0	6.0	*				
7.	REC 7	(N MID-LOCAL)	*		-170.0	74.0	6.0	*				
8.	REC 8	(S MID-LOCAL)	*		-170.0	-60.0	6.0	*				
9.	REC9		*		54.0	172.0	6.0	*				
10.	REC10		*		-60.0	172.0	6.0	*				
11.	REC11		*		154.0	74.0	6.0	*				
12.	REC12		*		170.0	-60.0	6.0	*				
13.	REC13		*		99.0	84.0	6.0	*				
14.	REC14		*		109.0	74.0	6.0	*				
15.	REC15		*		109.0	84.0	6.0	*				
16.	REC16		*		89.0	84.0	6.0	*				

MODEL RESULTS REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: UNIVERSITY & HAMPDEN 2013 SCREENING
WIND ANGLE RANGE: 5.-360.

RUN: UNIVERSITY & HAMPDEN 2013

WIND ANGLE	* CONCENTRATION															
ANGLE	* (PPM)															
(DEGR)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16
5.	*	3.5	3.9	2.6	.4	2.6	3.0	.8	3.9	1.4	2.5	.1	2.7	.4	.4	.6
10.	*	2.9	3.7	2.9	.3	1.9	3.1	.9	3.9	.8	2.8	.1	2.6	.3	.2	.3
15.	*	2.7	3.5	2.9	.0	1.8	3.1	1.0	4.1	.5	2.9	.0	2.5	.0	.0	.0
20.	*	2.7	3.0	2.8	.0	1.4	2.8	1.1	4.3	.2	2.8	.0	2.5	.0	.0	.0
25.	*	2.6	2.9	2.8	.0	1.4	3.0	1.1	4.2	.1	2.8	.0	2.5	.0	.0	.0
30.	*	2.6	2.7	2.8	.0	1.5	3.0	1.1	4.3	.1	2.7	.0	2.6	.0	.0	.0
35.	*	2.8	2.9	2.5	.0	1.5	3.3	1.1	4.3	.1	2.4	.0	2.7	.0	.0	.0
40.	*	3.0	2.9	2.5	.0	1.5	3.6	1.2	4.3	.1	2.4	.0	2.9	.0	.0	.0
45.	*	3.0	3.2	2.4	.1	1.6	3.6	1.2	4.2	.1	2.3	.1	3.0	.0	.1	.0
50.	*	3.1	3.2	2.3	.1	1.6	4.0	1.0	4.0	.1	2.3	.1	3.0	.0	.1	.0
55.	*	3.3	3.3	2.2	.1	1.6	4.0	.9	4.2	.0	2.1	.1	3.2	.0	.1	.0
60.	*	3.4	3.7	2.2	.1	1.8	4.2	.9	4.5	.0	2.1	.1	3.4	.0	.1	.0
65.	*	3.6	4.2	2.1	.2	1.8	4.2	.9	4.7	.0	2.0	.2	3.4	.1	.2	.1
70.	*	3.7	4.6	2.2	.4	1.8	4.0	1.2	4.7	.0	2.0	.4	3.7	.2	.4	.2
75.	*	3.8	5.0	2.8	.9	1.7	4.0	1.5	5.3	.1	2.1	.9	3.8	.5	.9	.5
80.	*	3.8	5.0	3.5	1.8	1.5	3.9	2.1	4.9	.3	2.3	1.7	3.7	1.3	1.8	1.3
85.	*	3.5	4.8	4.1	2.9	1.2	3.6	2.8	4.6	.7	2.7	2.9	3.2	2.1	2.9	2.1
90.	*	2.8	4.4	5.0	4.0	.8	3.3	3.5	3.8	1.1	3.1	4.0	2.6	3.1	4.0	3.1
95.	*	1.9	3.9	5.2	4.8	.4	2.9	3.8	3.1	1.5	3.6	4.8	1.9	3.9	4.8	3.9
100.	*	1.2	3.1	5.3	5.3	.2	2.5	3.8	2.3	1.9	3.9	5.3	1.0	4.3	5.3	4.3
105.	*	.6	2.6	4.8	5.3	.0	2.2	3.4	1.7	2.0	3.9	5.3	.5	4.4	5.3	4.4
110.	*	.2	2.4	4.0	5.1	.0	2.2	3.2	1.2	1.9	4.0	5.0	.2	4.3	5.1	4.3
115.	*	.1	2.4	3.5	4.8	.0	2.4	2.9	1.1	2.1	4.2	4.8	.1	4.1	4.8	4.1
120.	*	.1	2.4	3.1	4.5	.0	2.4	2.8	1.2	2.1	4.1	4.5	.1	3.9	4.5	3.9
125.	*	.1	2.5	2.7	4.2	.0	2.5	2.8	1.2	1.9	3.9	4.2	.1	3.7	4.2	3.7
130.	*	.1	2.5	2.8	4.0	.0	2.5	2.8	1.1	1.9	3.7	4.0	.1	3.5	4.0	3.5
135.	*	.1	2.6	2.5	4.1	.0	2.6	3.1	1.2	1.9	3.6	4.0	.1	3.5	4.0	3.5
140.	*	.1	2.8	2.8	3.9	.0	2.8	3.2	1.3	1.8	3.4	3.8	.0	3.3	3.8	3.3
145.	*	.0	2.8	2.7	3.7	.0	2.8	3.4	1.3	1.8	3.2	3.6	.0	3.4	3.6	3.3
150.	*	.0	3.1	2.9	3.8	.0	3.1	3.5	1.3	1.8	3.3	3.6	.0	3.3	3.6	3.2
155.	*	.2	3.3	3.2	3.8	.2	3.3	3.4	1.3	1.8	3.3	3.5	.0	3.1	3.5	3.0
160.	*	.4	3.6	3.6	3.7	.4	3.5	3.4	1.3	1.9	3.2	3.4	.0	3.2	3.4	3.0
165.	*	.7	3.6	4.1	4.0	.7	3.5	3.4	1.3	2.3	3.6	3.4	.0	3.5	3.6	3.3
170.	*	1.5	3.4	4.0	4.4	1.5	3.4	3.2	1.0	2.4	3.2	3.7	.2	3.9	3.9	3.5
175.	*	2.1	3.1	4.0	4.9	2.1	3.0	3.0	.6	3.2	3.2	3.9	.2	4.3	4.4	4.0
180.	*	3.1	2.5	3.7	5.4	3.1	2.4	2.6	.4	3.6	2.9	4.3	.5	4.8	4.8	4.3
185.	*	3.9	1.9	3.3	5.8	3.8	1.7	2.5	.2	3.6	2.3	4.6	.9	5.2	5.5	5.0
190.	*	4.2	1.1	2.6	6.2	4.2	1.0	2.1	.0	3.4	1.8	4.9	1.1	5.5	5.7	5.2
195.	*	4.2	.6	2.3	6.0	4.2	.6	2.1	.0	3.0	1.5	5.1	1.4	5.3	5.8	5.4
200.	*	4.2	.4	2.2	5.8	4.1	.4	2.2	.0	2.5	1.3	5.0	1.5	5.0	5.5	5.1
205.	*	3.8	.2	2.1	5.4	3.8	.2	2.2	.0	2.6	1.3	5.2	1.5	4.7	5.4	4.7
210.	*	3.7	.1	2.3	5.0	3.7	.1	2.3	.0	2.6	1.3	5.0	1.5	4.4	5.1	4.4
215.	*	3.5	.1	2.3	4.7	3.5	.1	2.3	.0	2.6	1.3	4.8	1.4	3.9	4.8	4.2
220.	*	3.5	.1	2.5	4.3	3.4	.1	2.4	.0	2.6	1.3	4.6	1.4	3.6	4.6	3.8
225.	*	3.3	.1	2.5	4.2	3.2	.1	2.5	.0	3.0	1.3	4.6	1.4	3.5	4.0	3.8
230.	*	3.2	.1	2.7	4.0	3.2	.1	2.7	.0	3.0	1.3	4.4	1.3	3.5	4.2	3.5

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

235.	*	3.2	.2	2.9	4.4	3.1	.1	2.8	.1	3.1	1.4	4.6	1.3	3.3	4.2	3.5	3.2
240.	*	3.1	.1	2.9	4.1	3.1	.0	2.9	.1	3.1	1.4	4.6	1.3	3.4	4.1	3.3	3.4
245.	*	3.0	.2	3.1	4.2	2.9	.0	3.1	.2	3.2	1.5	4.6	1.2	3.5	4.2	3.5	3.5
250.	*	2.9	.4	3.3	4.4	2.8	.0	3.3	.4	3.3	1.5	4.7	1.4	3.7	4.5	3.7	4.0
255.	*	3.2	1.0	3.5	4.7	2.9	.1	3.4	1.0	3.3	1.6	4.6	1.7	3.9	4.6	3.9	4.1
260.	*	3.9	1.7	3.5	4.6	3.1	.2	3.2	1.7	3.0	1.2	4.5	2.2	4.0	4.5	3.8	4.2
265.	*	4.6	2.6	3.0	4.4	3.5	.6	2.9	2.5	2.8	1.0	4.1	2.9	3.6	4.3	3.5	3.9
270.	*	5.3	3.7	2.5	3.8	3.9	.9	2.3	3.5	2.4	.7	3.6	3.3	3.3	3.7	3.3	3.5
275.	*	5.2	4.4	1.8	3.4	4.2	1.3	1.6	4.4	2.1	.4	2.6	3.5	2.7	3.2	2.6	3.0
280.	*	5.0	4.7	1.0	2.6	4.5	1.5	.9	4.8	1.8	.1	2.1	3.4	2.1	2.5	2.1	2.3
285.	*	4.3	4.8	.6	2.1	4.6	1.7	.5	4.9	1.7	.0	1.5	3.3	1.7	1.9	1.5	2.0
290.	*	3.7	4.5	.3	1.9	4.6	1.8	.2	4.6	1.7	.0	1.1	3.0	1.6	1.6	1.3	1.9
295.	*	3.3	4.2	.2	2.0	4.6	1.7	.2	4.4	1.7	.0	1.1	2.8	1.5	1.5	1.3	1.7
300.	*	3.0	4.1	.1	1.9	4.5	1.7	.1	4.1	1.7	.0	1.0	2.8	1.5	1.6	1.3	1.6
305.	*	2.6	3.7	.1	1.8	4.5	1.7	.1	3.8	1.9	.0	1.0	2.8	1.4	1.6	1.4	1.6
310.	*	2.6	3.5	.1	1.7	4.4	1.6	.1	3.7	1.9	.0	1.0	2.9	1.4	1.5	1.3	1.5
315.	*	2.5	3.3	.1	1.6	4.3	1.6	.1	3.6	1.9	.0	1.0	3.4	1.3	1.5	1.3	1.5
320.	*	2.6	3.0	.1	1.4	4.0	1.6	.1	3.4	2.0	.0	.9	3.3	1.3	1.3	1.3	1.6
325.	*	2.6	2.9	.1	1.5	4.1	1.6	.0	3.3	2.2	.0	.9	3.5	1.4	1.3	1.3	1.5
330.	*	2.6	2.6	.1	1.6	4.1	1.5	.0	3.2	2.3	.0	1.0	3.6	1.5	1.3	1.3	1.6
335.	*	2.8	2.5	.0	1.6	3.8	1.5	.0	3.1	2.4	.0	1.1	3.5	1.6	1.4	1.4	1.6
340.	*	3.5	2.5	.1	1.6	3.7	1.6	.0	3.1	2.6	.1	1.1	3.6	1.6	1.4	1.4	1.7
345.	*	3.7	2.6	.6	1.6	4.0	2.0	.0	3.1	2.6	.5	1.0	3.5	1.6	1.4	1.4	1.7
350.	*	3.7	2.9	.9	1.3	3.7	2.2	.1	3.2	2.6	.9	1.0	3.4	1.3	1.3	1.3	1.7
355.	*	4.0	3.4	1.6	1.2	3.5	2.5	.2	3.3	2.3	1.5	.7	3.2	1.2	1.0	1.0	1.3
360.	*	3.8	3.9	2.1	.9	2.9	2.8	.5	3.6	1.8	2.1	.5	3.0	.9	.9	.9	1.0
MAX	*	5.3	5.0	5.3	6.2	4.6	4.2	3.8	5.3	3.6	4.2	5.3	3.8	5.5	5.8	5.4	5.6
DEGR.	*	270	75	100	190	285	60	95	75	180	115	100	75	190	195	195	185

THE HIGHEST CONCENTRATION OF 6.20 PPM OCCURRED AT RECEPTOR REC4 .

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: FOOTHILLS & ARAPAHOE SCREENING 2013

RUN: FOOTHILLS & ARAPAHOE. 2013

DATE : 9/14/99

TIME : 9:11: 6

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM

U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)
1. FOOTHILLS NB APPR	*	36.0	-1000.0	36.0	.0	*	1000.	360. AG	1986.	5.6 .0 44.0
2. FOOTHILLS NB Q	*	36.0	-72.0	36.0	-4065.2	*	3993.	180. AG	426.	100.0
3. FOOTHILLS NB Q LEF	*	12.0	-72.0	12.0	-155.0	*	83.	180. AG	581.	100.0
4. FOOTHILLS NB DEP.	*	36.0	.0	-464.0	1000.0	*	1118.	333. AG	3026.	5.6
5. FOOTHILLS NB R	*	54.0	-747.0	54.0	.0	*	747.	360. AG	266.	5.6
6. FOOTHILLS NB Q R	*	54.0	-72.0	54.0	-184.0	*	112.	180. AG	213.	100.0
7. FOOTHILLS SB APPR	*	-536.0	1000.0	-36.0	.0	*	1118.	153. AG	1968.	5.6
8. FOOTHILLS SB Q	*	-36.0	72.0	-2208.7	4104.5	*	4581.	332. AG	448.	100.0
9. FOOTHILLS SB Q LEFT	*	-12.0	72.0	-444.6	937.2	*	967.	333. AG	603.	100.0
10. FOOTHILLS SB DEP.	*	-36.0	.0	-36.0	-1000.0	*	1000.	180. AG	3338.	5.6
11. FOOTHILLS SB R	*	-202.5	297.0	-54.0	.0	*	332.	153. AG	246.	5.6
12. FOOTHILLS SB Q R	*	-54.0	72.0	-102.7	169.5	*	109.	333. AG	224.	100.0
13. ARAPAHOE EB APPR.	*	-1000.0	-42.0	.0	-42.0	*	1000.	90. AG	1306.	6.6
14. ARAPAHOE EB QUEUE	*	-60.0	-42.0	-231.3	-42.0	*	171.	270. AG	588.	100.0
15. ARAPAHOE .EB DEP.	*	.0	-42.0	1000.0	-42.0	*	1000.	90. AG	1953.	6.6
16. ARAPAHOE EB QUEUE LE*	*	-60.0	-12.0	-1289.1	-12.2	*	1229.	270. AG	577.	100.0
17. ARAPAHOE EB R	*	-110.0	-66.0	.0	-66.0	*	110.	90. AG	696.	6.6
18. ARAPAHOE EB QUEUE R*	*	-60.0	-66.0	-375.3	-66.0	*	315.	270. AG	196.	100.0
19. ARAPAHOE WB APPR.	*	1000.0	42.0	.0	42.0	*	1000.	270. AG	1205.	6.6
20. ARAPAHOE WB QUEUE	*	72.0	42.0	221.1	42.0	*	149.	90. AG	556.	100.0
21. ARAPAHOE WB DEP.	*	.0	42.0	-1000.0	42.0	*	1000.	270. AG	1725.	6.6
22. ARAPAHOE WB QUEUE LE*	*	72.0	12.0	1481.4	12.3	*	1409.	90. AG	556.	100.0
23. ARAPAHOE WB R	*	156.0	66.0	.0	66.0	*	156.	270. AG	520.	6.6
24. ARAPAHOE WB QUEUE R*	*	60.0	66.0	253.4	66.0	*	193.	90. AG	185.	100.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. FOOTHILLS NB Q	*	120	77	2.0	1986	2000	123.80	1	3
3. FOOTHILLS NB Q LEF	*	120	105	2.0	275	1900	123.80	2	3
6. FOOTHILLS NB Q R	*	120	77	2.0	266	2000	123.80	1	3
8. FOOTHILLS SB Q	*	120	81	2.0	1968	2000	123.80	1	3
9. FOOTHILLS SB Q LEFT	*	120	109	2.0	380	1900	123.80	2	3
12. FOOTHILLS SB Q R	*	120	81	2.0	246	2000	123.80	1	3
14. ARAPAHOE EB QUEUE	*	120	72	2.0	1306	2000	121.83	2	3
16. ARAPAHOE EB QUEUE LE*	*	120	106	2.0	520	1900	121.83	2	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

18.	ARAPAHOE	EB QUEUE R*	120	72	2.0	696	2000	121.83	2	3
20.	ARAPAHOE	WB QUEUE *	120	68	2.0	1205	2000	121.83	2	3
22.	ARAPAHOE	WB QUEUE LE*	120	102	2.0	674	1900	121.83	2	3
24.	ARAPAHOE	WB QUEUE R*	120	68	2.0	520	2000	121.83	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*
1. REC 4 (NE CORNER)	*	24.5	72.5	6.0	*
2. REC 1 (SE CORNER)	*	59.0	-70.0	6.0	*
3. REC 2 (SW CORNER)	*	-58.5	-72.0	6.0	*
4. REC 3 (NW CORNER)	*	-97.0	70.0	6.0	*
5. REC 5 (E MID-MAIN)	*	58.0	-170.0	6.0	*
6. REC 6 (W MID-MAIN)	*	-25.5	170.0	6.0	*
7. REC 7 (N MID-LOCAL)	*	-197.0	70.0	6.0	*
8. REC 8 (S MID-LOCAL)	*	-158.0	-72.0	6.0	*
9. REC 9	*	-58.5	-172.0	6.0	*
10. REC10	*	124.5	-72.0	6.0	*
11. REC11	*	124.5	72.5	6.0	*
12. REC12	*	-147.0	170.0	6.0	*
13. REC13	*	59.0	-160.0	6.0	*
14. REC14	*	59.0	-180.0	6.0	*
15. REC15	*	68.0	-160.0	6.0	*
16. REC16	*	68.0	-170.0	6.0	*
17. REC17	*	68.0	-180.0	6.0	*
18. REC18	*	59.0	-150.0	6.0	*
19. REC19	*	68.0	-150.0	6.0	*

PAGE 3

JOB: FOOTHILLS & ARAPAHOE SCREENING 2013

RUN: FOOTHILLS & ARAPAHOE. 2013

ANGLE *	(PPM)																
(DEGR)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17
5. *	.1	1.6	3.7	3.1	3.0	.1	1.5	4.9	2.6	2.0	.0	2.9	2.8	2.9	1.6	1.7	1.7
10. *	.1	1.7	3.3	3.1	2.6	.1	1.5	4.9	2.0	2.0	.0	2.8	2.4	2.4	1.3	1.4	1.4
15. *	.1	1.7	2.5	3.0	2.3	.1	1.5	4.9	2.0	1.9	.0	2.6	2.1	2.0	1.3	1.3	1.3
20. *	.1	1.8	2.2	2.9	2.2	.1	1.3	4.9	1.9	1.9	.0	2.6	1.8	1.7	1.2	1.3	1.3
25. *	.0	1.8	1.9	2.9	1.8	.1	1.3	4.7	2.1	1.9	.0	2.5	1.7	1.6	1.2	1.1	1.3
30. *	.0	1.9	1.9	2.9	1.6	.0	1.2	5.0	2.2	1.8	.0	2.5	1.5	1.4	1.2	1.1	1.3
35. *	.0	2.0	2.1	2.8	1.5	.0	1.2	4.7	2.4	1.9	.0	2.4	1.4	1.2	1.2	1.1	1.0
40. *	.0	2.0	2.0	2.6	1.3	.0	1.3	4.7	2.7	1.8	.0	2.2	1.3	1.2	1.1	1.0	1.0
45. *	.0	2.1	2.2	2.4	1.1	.0	1.3	4.5	3.1	1.8	.1	2.2	1.1	1.0	.9	.9	.9
50. *	.0	2.0	2.2	2.5	1.1	.0	1.3	4.8	3.2	1.6	.1	2.2	1.0	1.0	.9	.9	.9
55. *	.0	2.0	2.4	2.4	.9	.0	1.3	4.9	3.0	1.6	.1	2.2	1.0	.9	.8	.8	.8
60. *	.0	2.0	2.5	2.6	.9	.0	1.4	4.8	3.0	1.6	.1	2.4	1.0	.9	.9	.8	.8
65. *	.1	1.8	2.8	2.7	.9	.0	1.5	4.8	3.0	1.6	.2	2.4	.9	.8	.9	.8	.8
70. *	.4	1.8	2.9	2.7	1.0	.0	1.5	4.8	2.9	1.7	.4	2.3	.9	.8	.9	.9	.8
75. *	.7	1.9	3.1	2.7	.9	.0	1.4	4.7	2.7	1.8	.8	2.3	.8	.8	.8	.8	.8
80. *	1.2	1.7	3.2	2.7	.5	.1	1.9	4.4	2.4	1.7	1.3	2.4	.7	.5	.7	.5	.5

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

85.	*	1.8	1.6	3.1	3.1	.4	.1	2.2	4.1	2.0	1.5	2.0	2.4	.4	.4	.4	.4	.4
90.	*	2.7	1.3	3.0	3.5	.3	.3	2.3	3.6	1.9	1.1	2.7	2.9	.3	.3	.3	.3	.3
95.	*	3.2	.9	2.7	3.5	.1	.5	2.3	3.0	1.6	.7	3.4	3.3	.1	.1	.1	.1	.1
100.	*	3.6	.5	2.5	3.3	.0	.9	2.2	2.3	1.4	.5	4.0	3.7	.0	.0	.0	.0	.0
105.	*	3.7	.3	2.4	3.1	.1	1.1	2.1	1.9	1.3	.3	4.4	3.8	.0	.0	.0	.0	.0
110.	*	3.6	.1	2.4	2.5	.1	1.2	2.1	1.5	1.3	.1	4.5	3.9	.0	.0	.0	.0	.0
115.	*	3.3	.1	2.4	2.1	.1	1.3	1.9	1.2	1.3	.1	4.6	3.9	.0	.0	.0	.0	.0
120.	*	2.9	.1	2.3	1.9	.1	1.4	1.9	1.1	1.3	.1	4.4	3.8	.1	.0	.0	.0	.0
125.	*	2.6	.1	2.1	1.8	.1	1.4	2.3	.8	1.3	.0	4.5	3.2	.1	.0	.0	.0	.0
130.	*	2.3	.1	2.2	1.7	.1	1.4	2.4	.8	1.4	.0	4.3	2.8	.1	.0	.0	.0	.0
135.	*	1.8	.1	2.2	2.0	.2	1.3	2.6	.9	1.5	.0	4.1	2.6	.1	.0	.0	.0	.0
140.	*	1.6	.1	2.2	2.2	.2	1.3	2.6	.9	1.6	.0	4.0	2.3	.1	.0	.0	.0	.0
145.	*	1.4	.1	2.0	2.5	.2	1.4	2.8	.8	1.6	.0	3.8	2.1	.2	.0	.0	.0	.0
150.	*	1.4	.3	1.9	2.6	.4	1.6	2.7	.8	1.7	.0	3.7	1.9	.3	.1	.0	.0	.0
155.	*	1.6	.5	2.0	2.7	.5	1.9	2.7	.8	1.8	.0	3.6	2.1	.5	.2	.0	.0	.0
160.	*	1.8	.8	2.0	2.8	.8	2.4	2.6	.8	1.9	.0	3.5	2.2	.6	.3	.1	.1	.1
165.	*	2.1	1.4	2.0	2.8	1.3	3.0	2.6	.9	2.0	.1	3.7	2.2	1.1	.8	.4	.4	.4
170.	*	2.6	2.1	2.0	2.9	1.8	3.3	2.6	.7	2.0	.2	3.8	2.1	1.8	1.3	.8	.8	.8
175.	*	3.0	2.9	1.9	3.0	2.6	4.1	2.4	.6	1.9	.5	4.1	1.9	2.5	1.9	1.2	1.2	1.2
180.	*	3.1	3.7	1.6	2.7	3.2	4.1	2.3	.4	1.5	.8	4.4	1.6	3.1	2.5	1.8	1.7	1.6
185.	*	2.9	4.2	1.2	2.4	3.5	4.3	2.0	.3	1.0	.9	4.7	1.4	3.6	2.9	2.3	2.2	2.2
190.	*	2.6	4.6	.7	2.1	3.9	4.4	1.8	.1	.7	1.1	4.9	1.2	3.8	3.1	2.4	2.3	2.2
195.	*	2.4	4.5	.5	1.9	3.9	4.3	1.6	.0	.4	1.2	4.8	1.1	3.9	3.1	2.6	2.5	2.4
200.	*	2.2	4.5	.2	2.0	3.7	4.3	1.6	.0	.2	1.2	4.8	1.1	3.8	3.1	2.6	2.4	2.2
205.	*	2.1	4.4	.1	2.0	3.7	4.4	1.5	.0	.1	1.2	4.7	1.0	3.6	2.9	2.6	2.4	2.2
210.	*	1.9	4.3	.1	2.1	3.5	4.2	1.4	.0	.1	1.2	4.6	.9	3.5	2.8	2.5	2.3	2.2
215.	*	2.1	4.3	.1	2.2	3.4	4.3	1.5	.0	.1	1.3	4.3	.9	3.4	2.8	2.5	2.3	2.0
220.	*	2.1	4.1	.1	2.1	3.2	4.2	1.4	.1	.1	1.3	4.2	.9	3.2	2.6	2.5	2.3	2.0
225.	*	2.3	3.9	.1	2.0	3.0	4.1	1.4	.1	.1	1.4	4.3	.9	3.1	2.6	2.3	2.2	1.9
230.	*	2.5	3.7	.2	1.9	2.9	4.1	1.5	.1	.1	1.5	4.3	.8	3.0	2.5	2.3	2.1	1.8
235.	*	2.9	3.6	.1	1.9	2.9	4.0	1.6	.1	.0	1.6	4.2	.8	3.0	2.6	2.2	2.0	1.7
240.	*	3.0	3.5	.2	1.8	2.9	4.1	1.6	.2	.0	1.5	3.9	.8	2.8	2.5	2.2	2.1	1.7
245.	*	3.1	3.3	.4	1.8	2.7	4.0	1.6	.3	.0	1.7	4.2	.9	2.7	2.5	2.2	2.1	1.8
250.	*	3.2	3.3	.7	1.9	2.6	4.0	1.7	.5	.0	1.8	4.2	.8	2.8	2.5	2.2	2.0	1.8
255.	*	3.2	3.3	1.1	1.7	2.6	3.8	1.7	.8	.0	2.0	4.1	.8	2.8	2.5	2.3	2.2	1.9
260.	*	3.3	3.4	1.7	1.6	2.7	3.5	1.6	1.4	.0	2.2	3.9	.5	3.0	2.6	2.5	2.3	2.0
265.	*	3.4	4.0	2.7	1.5	2.8	3.5	1.4	2.0	.1	2.4	3.6	.4	3.2	2.8	2.6	2.4	2.2
270.	*	3.1	4.2	3.6	1.2	3.0	3.3	1.1	2.8	.2	3.0	3.2	.3	3.7	2.9	3.1	2.7	2.4
275.	*	3.2	4.3	4.2	.7	3.5	3.3	.7	3.3	.5	3.1	2.7	.1	4.0	3.4	3.4	3.2	2.8
280.	*	3.1	4.2	5.0	.5	3.9	3.2	.5	3.9	.8	2.9	2.2	.0	4.3	3.8	3.8	3.5	3.2
285.	*	3.1	3.7	5.3	.3	4.2	3.2	.3	4.3	.9	2.5	2.2	.0	4.8	4.0	4.2	3.8	3.6
290.	*	3.3	2.9	5.3	.1	4.5	3.4	.1	4.3	1.0	2.2	1.8	.0	5.0	4.2	4.5	4.1	3.8
295.	*	3.5	2.7	5.1	.1	4.9	3.5	.1	4.4	1.2	2.0	1.9	.0	5.1	4.5	4.4	4.3	4.2
300.	*	3.7	2.3	5.0	.1	5.2	3.7	.1	4.5	1.2	1.6	1.8	.0	5.3	4.9	4.5	4.4	4.2
305.	*	3.9	2.1	4.7	.1	5.1	3.8	.0	4.3	1.3	1.8	1.8	.1	5.3	5.0	4.4	4.2	4.2
310.	*	4.2	2.4	4.6	.1	5.3	4.0	.0	4.3	1.5	2.4	1.9	.1	5.3	5.1	4.4	4.5	4.4
315.	*	4.4	2.5	4.5	.2	5.5	4.3	.0	4.2	1.5	2.8	1.9	.2	5.6	5.5	4.7	4.7	4.6
320.	*	4.5	3.2	4.6	.6	5.9	4.3	.1	4.2	1.7	3.1	1.7	.6	5.6	5.9	4.8	4.7	4.5
325.	*	4.2	3.5	4.5	1.2	6.3	4.3	.2	4.2	1.9	3.2	1.5	1.2	6.3	6.0	5.2	5.1	5.2
330.	*	3.7	3.9	4.9	1.9	6.7	3.7	.5	4.3	2.3	3.3	1.2	1.9	6.5	6.6	5.1	5.3	5.4
335.	*	2.9	3.9	5.0	2.5	6.6	3.0	.9	4.3	2.6	2.9	.7	2.6	6.4	6.7	4.9	5.1	5.2

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

340.	*	2.1	3.2	5.3	3.0	6.2	2.1	1.1	4.6	3.0	2.5	.4	2.9	5.9	6.2	4.3	4.4	4.4
345.	*	1.1	2.6	5.3	3.2	5.4	1.2	1.3	4.7	2.9	2.2	.2	3.2	4.9	5.3	3.4	3.5	3.5
350.	*	.7	2.1	5.0	3.4	4.8	.7	1.5	4.9	3.2	2.2	.0	3.1	4.6	4.8	2.9	3.0	3.0
355.	*	.3	1.7	4.8	3.3	4.0	.3	1.5	5.1	3.0	1.9	.0	3.2	3.7	3.9	2.1	2.2	2.2
360.	*	.1	1.6	4.3	3.2	3.7	.1	1.5	5.1	2.7	1.9	.0	2.9	3.3	3.4	1.8	1.9	1.9
MAX	*	4.5	4.6	5.3	3.5	6.7	4.4	2.8	5.1	3.2	3.3	4.9	3.9	6.5	6.7	5.2	5.3	5.4
DEGR.	*	320	190	285	90	330	190	145	355	50	330	190	110	330	335	325	330	330

THE HIGHEST CONCENTRATION OF 6.70 PPM OCCURRED AT RECEPTOR REC5 .

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: PARKER & ILLIF

RUN: PARKER & ILLIF 2013 SCREENING

DATE : 9/14/99

TIME : 9:22:45

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

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VS = .0 CM/S      VD = .0 CM/S      Z0 = 175. CM
U = 1.0 M/S      CLAS = 4 (D)      ATIM = 60. MINUTES      MIXH = 1000. M      AMB = .0 PPM
  
```

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	(1)
1. PARKER NB APPR	*	1024.0	-1000.0	24.0	.0	*	1414.	315. AG	1593.	5.8	
2. PARKER NB Q	*	72.0	-49.0	1078.2	-1055.2	*	1423.	135. AG	403.	100.0	
3. PARKER NB Q LEF	*	65.0	-59.0	1941.6	-1935.6	*	2654.	135. AG	278.	100.0	
4. PARKER NB DEP.	*	24.0	.0	-976.0	1000.0	*	1414.	315. AG	2053.	5.8	
5. PARKER NB R	*	113.5	-54.0	313.5	-254.0	*	283.	135. AG	34.	5.8	
6. PARKER SB APPR	*	-1030.0	1000.0	-30.0	.0	*	1414.	135. AG	1291.	5.8	
7. PARKER SB Q	*	-92.5	62.0	-313.5	283.0	*	313.	315. AG	403.	100.0	
8. PARKER SB Q LEFT	*	-75.0	69.0	-1873.8	1858.0	*	2537.	315. AG	278.	100.0	
9. PARKER SB DEP.	*	-30.0	.0	970.0	-1000.0	*	1414.	135. AG	1919.	5.8	
10. ILLIF EB APPR.	*	-1000.0	-26.0	.0	-26.0	*	1000.	90. AG	1470.	6.8	
11. ILLIF EB QUEUE	*	-57.0	-26.0	-963.7	-26.0	*	907.	270. AG	409.	100.0	
12. ILLIF EB DEP.	*	.0	-26.0	1000.0	-26.0	*	1000.	90. AG	1947.	6.8	
13. ILLIF EB QUEUE LE	*	-75.0	.0	-977.6	-.3	*	903.	270. AG	297.	100.0	
14. ILLIF EB R	*	-1000.0	-48.5	.0	-48.5	*	1000.	90. AG	542.	6.8	
15. ILLIF EB QUEUE R	*	-26.0	-48.5	-248.3	-48.5	*	222.	270. AG	204.	100.0	
16. ILLIF WB APPR.	*	1000.0	34.0	.0	34.0	*	1000.	270. AG	1228.	6.8	
17. ILLIF WB QUEUE	*	41.0	34.0	305.9	34.0	*	265.	90. AG	409.	100.0	
18. ILLIF WB DEP.	*	.0	34.0	-1000.0	34.0	*	1000.	270. AG	1730.	6.8	
19. ILLIF WB QUEUE LE	*	58.0	7.5	114.8	7.5	*	57.	90. AG	297.	100.0	
20. ILLIF WB R	*	225.0	65.5	.0	65.5	*	225.	270. AG	276.	6.8	
21. ILLIF WB QUEUE R	*	.0	65.5	113.2	65.5	*	113.	90. AG	204.	100.0	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL	ARRIVAL
	*	LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	*	(SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		
2. PARKER NB Q	*	120	74	2.0	1593	2000	121.97	1	3
3. PARKER NB Q LEF	*	120	102	2.0	454	1900	121.97	2	3
7. PARKER SB Q	*	120	74	2.0	1291	2000	121.97	1	3
8. PARKER SB Q LEFT	*	120	102	2.0	443	1900	121.97	2	3
11. ILLIF EB QUEUE	*	120	75	2.0	1470	2000	121.97	2	3
13. ILLIF EB QUEUE LE	*	120	109	2.0	184	1900	121.97	2	3
15. ILLIF EB QUEUE R	*	120	75	2.0	542	2000	121.97	2	3
17. ILLIF WB QUEUE	*	120	75	2.0	1228	2000	121.97	2	3
19. ILLIF WB QUEUE LE	*	120	109	2.0	86	1900	121.97	2	3
21. ILLIF WB QUEUE R	*	120	75	2.0	276	2000	121.97	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*
1. REC 1 SE CORNER	*	120.0	-48.0	6.0	*
2. REC 2 (SW CORNER)	*	-17.5	-58.0	6.0	*
3. REC 3 (NW CORNER)	*	-140.5	64.0	6.0	*
4. REC 4 (NE CORNER)	*	-15.0	79.0	6.0	*
5. REC 5 (E MID-MAIN)	*	220.0	-48.0	6.0	*
6. REC 6 (W MID-MAIN)	*	-117.5	-58.0	6.0	*
7. REC 7 (N MID-LOCAL)	*	-240.5	164.0	6.0	*
8. REC 8 (S MID-LOCAL)	*	82.5	-158.0	6.0	*
9. REC 9	*	220.0	79.0	6.0	*
10. RECEPTOR 10	*	-115.0	179.0	6.0	*
11. REC 11	*	-117.5	-58.0	6.0	*
12. REC12	*	-240.5	64.0	6.0	*
13. REC13	*	220.0	-148.0	6.0	*
14. REC15	*	-80.0	-59.0	6.0	*
15. REC16	*	-80.0	-69.0	6.0	*
16. REC17	*	-70.0	-59.0	6.0	*
17. RECEPTOR 18	*	-70.0	-69.0	6.0	*
18. REC19	*	-60.0	-69.0	6.0	*
19. REC20	*	-60.0	-59.0	6.0	*
20. REC21	*	-50.0	-69.0	6.0	*
21. REC22	*	-50.0	-59.0	6.0	*

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: PARKER & ILLIF

RUN: PARKER & ILLIF 2013 SCREENING

MODEL RESULTS																	
ANGLE *	(PPM)																
(DEGR)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17
5. *	1.3	1.2	2.1	.0	1.1	3.5	2.1	2.2	.0	.0	3.5	1.1	.6	3.0	2.6	2.7	2.3
10. *	1.2	1.2	2.1	.0	1.1	3.4	2.1	2.2	.0	.0	3.4	1.1	.6	2.8	2.4	2.6	2.3
15. *	1.1	1.3	2.0	.0	1.1	3.2	1.9	2.1	.0	.0	3.2	1.0	.6	2.7	2.3	2.2	1.8
20. *	1.1	1.4	1.9	.0	1.1	3.1	1.9	2.0	.0	.0	3.1	1.0	.5	2.5	2.1	2.2	1.8
25. *	1.1	1.5	1.9	.0	1.1	3.0	1.9	2.0	.0	.0	3.0	1.0	.5	2.4	1.8	2.2	1.7
30. *	1.1	1.5	1.9	.0	1.1	3.1	1.9	2.0	.0	.0	3.1	.9	.4	2.4	1.8	2.1	1.7
35. *	1.2	1.6	1.9	.0	1.1	2.9	1.9	2.0	.0	.0	2.9	.9	.4	2.4	2.0	2.2	1.7
40. *	1.3	1.8	1.9	.0	1.1	3.1	1.9	2.0	.0	.0	3.1	.9	.4	2.3	1.9	2.2	1.8
45. *	1.3	1.8	1.9	.0	1.1	2.9	1.9	2.0	.0	.0	2.9	.9	.3	2.5	1.9	2.5	1.9
50. *	1.3	1.8	1.9	.0	1.0	3.3	1.9	1.9	.0	.0	3.3	.9	.3	2.7	2.0	2.5	1.9
55. *	1.4	2.2	1.9	.0	1.0	3.1	1.9	1.8	.0	.0	3.1	.9	.3	2.7	2.2	2.6	2.3
60. *	1.3	2.0	1.8	.0	.9	3.3	1.9	1.8	.0	.0	3.3	.9	.3	2.8	2.2	2.8	2.3
65. *	1.3	2.2	1.9	.1	1.0	3.2	1.9	1.8	.0	.0	3.2	1.0	.3	3.1	2.1	2.8	2.0
70. *	1.2	2.0	2.1	.2	.9	3.3	1.9	1.8	.0	.0	3.3	1.0	.3	2.9	2.0	2.8	2.0
75. *	1.2	2.2	2.1	.4	1.0	3.3	1.9	1.8	.0	.0	3.3	1.1	.3	2.7	2.0	2.7	2.0
80. *	1.1	2.2	2.2	.7	.9	3.0	2.1	1.8	.1	.0	3.0	1.3	.1	2.7	2.0	2.6	1.8
85. *	1.0	1.9	2.2	1.1	.9	2.9	2.1	1.8	.1	.0	2.9	1.6	.1	2.5	1.6	2.4	1.6
90. *	.8	1.9	2.7	1.5	.8	2.6	2.5	1.8	.4	.0	2.6	1.5	.1	2.1	1.4	2.0	1.9
95. *	.6	1.8	2.6	1.8	.5	2.3	2.6	1.7	.4	.3	2.3	1.8	.0	1.9	1.2	2.0	1.7
100. *	.4	1.7	2.7	2.2	.4	1.7	2.9	1.7	.7	.3	1.7	2.0	.0	1.6	1.1	1.9	1.7
105. *	.3	1.9	2.7	2.4	.3	1.6	2.9	2.0	.8	.5	1.6	2.2	.0	1.7	1.2	1.8	1.7
110. *	.2	2.0	2.5	2.3	.2	1.5	3.0	2.0	.9	.6	1.5	2.3	.0	1.6	1.1	1.6	1.6
115. *	.2	2.0	2.6	2.3	.1	1.3	3.3	2.0	1.1	.8	1.3	2.3	.1	1.6	1.3	1.6	1.9
120. *	.5	2.2	2.6	2.6	.1	1.3	3.2	2.2	1.2	.9	1.3	2.4	.4	1.6	1.4	1.6	1.9
125. *	1.0	2.1	2.7	2.7	.3	1.1	2.9	2.1	1.3	1.6	1.1	2.8	.8	1.4	1.2	1.5	1.7
130. *	1.4	2.0	2.8	2.9	.4	1.1	3.1	2.0	1.5	1.7	1.1	2.6	1.3	1.1	1.0	1.2	1.0
135. *	2.0	1.5	2.5	3.1	.7	.7	2.6	1.5	1.5	2.1	.7	2.3	2.0	.9	.7	1.0	.8
140. *	2.5	1.2	2.1	3.3	1.0	.4	2.1	1.1	1.8	2.2	.4	2.0	2.4	.6	.4	.7	.9
145. *	2.7	.7	1.9	3.1	1.1	.3	1.4	.7	2.0	2.2	.3	1.9	2.7	.3	.2	.3	.7
150. *	2.7	.4	1.8	2.6	1.3	.1	1.3	.4	2.1	1.8	.1	1.7	2.7	.0	.0	.0	.0
155. *	2.7	.1	1.4	2.1	1.3	.0	1.0	.1	2.1	1.9	.0	1.6	2.7	.0	.0	.0	.0
160. *	2.5	.1	1.5	1.6	1.3	.0	.8	.1	2.1	2.0	.0	1.5	2.5	.0	.0	.0	.0
165. *	2.4	.1	1.5	1.3	1.3	.0	.8	.1	2.1	2.1	.0	1.6	2.4	.0	.0	.0	.0
170. *	2.3	.0	1.6	1.3	1.3	.0	.8	.0	2.1	2.2	.0	1.6	2.3	.0	.0	.0	.0
175. *	2.2	.0	1.7	1.0	1.1	.0	.8	.0	2.2	2.1	.0	1.7	2.2	.0	.0	.0	.0
180. *	2.1	.0	1.7	1.3	1.1	.0	.8	.0	2.2	2.4	.0	1.6	2.1	.0	.0	.0	.0
185. *	1.9	.0	1.7	1.2	.9	.0	.8	.0	2.1	2.5	.0	1.6	1.9	.0	.0	.0	.0
190. *	1.9	.0	1.6	1.2	.9	.0	.7	.0	2.1	2.5	.0	1.5	1.9	.0	.0	.0	.0
195. *	1.9	.0	1.6	1.2	.9	.0	.7	.0	2.1	2.5	.0	1.4	1.9	.0	.0	.0	.0
200. *	1.9	.0	1.5	1.3	.9	.0	.7	.0	2.1	2.5	.0	1.3	1.9	.0	.0	.0	.0
205. *	1.9	.0	1.6	1.5	.9	.0	.7	.0	2.1	2.4	.0	1.4	1.9	.0	.0	.0	.0
210. *	1.9	.0	1.7	1.4	.9	.1	.7	.0	2.0	2.4	.1	1.5	1.9	.0	.0	.0	.0
215. *	1.9	.0	1.7	1.7	.9	.1	.8	.0	2.0	2.5	.1	1.5	1.9	.0	.0	.0	.0
220. *	1.9	.0	1.7	1.8	.9	.1	.8	.0	2.0	2.4	.1	1.6	1.9	.1	.0	.1	.0
225. *	1.9	.0	1.7	2.1	.9	.1	.8	.0	2.1	2.5	.1	1.6	1.9	.1	.0	.1	.0

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

230.	*	1.9	.0	1.7	2.2	1.0	.1	.9	.0	2.1	2.5	.1	1.6	1.9	.1	.0	.1	.0
235.	*	1.9	.0	1.8	2.3	1.0	.1	.9	.0	2.2	2.5	.1	1.7	1.9	.1	.0	.1	.0
240.	*	1.7	.1	1.8	2.3	1.0	.2	.9	.0	2.3	2.4	.2	1.8	1.9	.1	.0	.1	.0
245.	*	1.7	.3	1.8	2.5	1.0	.4	.8	.0	2.4	2.4	.4	1.8	1.9	.2	.0	.2	.0
250.	*	1.9	.5	2.0	2.6	1.0	.6	.8	.0	2.5	2.5	.6	1.9	1.9	.5	.1	.5	.1
255.	*	2.2	1.0	1.9	2.7	1.4	.9	.6	.0	2.5	2.3	.9	1.9	1.9	.9	.2	.9	.1
260.	*	2.5	1.5	1.7	2.6	1.7	1.5	.4	.0	2.4	2.3	1.5	1.6	2.0	1.3	.8	1.3	.8
265.	*	3.0	2.2	1.5	2.6	1.9	2.3	.3	.1	2.0	2.1	2.3	1.5	2.1	2.2	1.4	2.3	1.4
270.	*	3.1	3.0	1.2	2.4	2.0	3.1	.0	.4	2.0	2.0	3.1	1.2	2.4	2.8	1.8	2.8	1.4
275.	*	3.2	3.6	.8	2.1	2.7	3.7	.0	.6	1.5	1.9	3.7	.7	2.9	3.7	2.3	3.7	2.1
280.	*	3.3	3.8	.5	2.3	2.4	3.9	.0	.9	1.2	2.0	3.9	.5	3.0	3.9	2.8	3.9	2.8
285.	*	3.0	3.9	.2	2.1	2.9	4.1	.0	1.0	.7	1.9	4.1	.2	2.9	4.0	3.0	4.1	3.0
290.	*	2.6	3.4	.1	2.1	2.3	3.9	.0	1.3	.6	2.0	3.9	.1	3.1	3.8	3.0	3.8	3.0
295.	*	2.6	3.3	.3	2.2	2.3	3.8	.1	1.3	.5	2.0	3.8	.1	3.1	3.7	3.0	3.7	3.0
300.	*	2.7	3.2	.4	2.1	2.3	3.6	.3	1.3	.5	1.9	3.6	.0	3.1	3.6	2.7	3.6	2.8
305.	*	2.6	3.4	.8	2.0	2.3	3.6	.7	1.6	.4	1.7	3.6	.1	2.6	3.7	2.8	3.7	2.9
310.	*	2.5	3.2	1.2	1.8	2.2	3.4	1.0	1.7	.3	1.6	3.4	.1	2.5	3.7	3.1	3.8	3.1
315.	*	2.5	3.4	1.8	1.4	1.9	3.6	1.5	1.8	.1	1.2	3.6	.4	2.3	3.8	3.3	3.9	3.1
320.	*	2.3	3.4	2.2	.9	1.5	3.7	1.9	1.9	.1	.9	3.7	.5	1.6	3.8	3.4	4.1	3.6
325.	*	2.0	3.2	2.6	.6	1.4	3.6	2.2	1.9	.0	.5	3.6	.6	1.3	4.1	3.6	4.1	3.7
330.	*	1.8	2.8	2.7	.3	1.1	3.9	2.4	1.6	.0	.3	3.9	.8	1.1	4.2	3.7	4.2	3.7
335.	*	1.7	2.3	2.8	.1	1.1	3.8	2.5	1.6	.0	.1	3.8	.8	.7	4.1	3.6	4.1	3.6
340.	*	1.6	2.0	2.7	.1	1.1	3.8	2.5	1.3	.0	.1	3.8	.9	.6	4.1	3.6	4.0	3.6
345.	*	1.6	1.8	2.5	.0	1.1	3.9	2.5	1.5	.0	.0	3.9	1.0	.6	3.8	3.4	3.8	3.6
350.	*	1.4	1.6	2.5	.0	1.1	3.9	2.4	1.8	.0	.0	3.9	1.1	.7	3.7	3.3	3.5	3.1
355.	*	1.4	1.2	2.3	.0	1.1	3.8	2.3	2.0	.0	.0	3.8	1.1	.7	3.4	2.9	3.3	2.9
360.	*	1.4	1.2	2.3	.0	1.1	3.8	2.3	2.2	.0	.0	3.8	1.1	.7	3.3	2.8	3.1	2.9
MAX	*	3.3	3.9	2.8	3.3	2.9	4.1	3.3	2.2	2.5	2.5	4.1	2.8	3.1	4.2	3.7	4.2	3.7
DEGR.	*	280	285	130	140	285	285	115	5	250	185	285	125	290	330	330	330	325

THE HIGHEST CONCENTRATION OF 4.30 PPM OCCURRED AT RECEPTOR REC19.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: UNIVERSITY AND ARAPAHOE

RUN: UNIVERSITY AND ARAPAHOE 2013 SCREENING

DATE : 9/14/99

TIME : 8:18:46

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	(1
1. UNIVERSITY NB APPR	*	28.0	-1000.0	28.0	.0	*	1000.	360. AG	1704.	6.5	
2. UNIVERSITY NB Q	*	28.0	-66.0	28.0	-2003.0	*	1937.	180. AG	404.	100.0	
3. UNIVERSITY NB Q LEF*	*	8.0	-66.0	8.0	-1739.7	*	1674.	180. AG	285.	100.0	
4. UNIVERSITY NB DEP.	*	28.0	.0	28.0	1000.0	*	1000.	360. AG	2851.	6.5	
5. UNIVERSITY SB APR	*	-26.0	1000.0	-26.0	.0	*	1000.	180. AG	2009.	6.5	
6. UNIVERSITY SB Q	*	-26.0	69.0	-26.0	2557.1	*	2488.	360. AG	371.	100.0	
7. UNIVERSITY SB Q LEFT*	*	.0	69.0	.0	2449.7	*	2381.	360. AG	268.	100.0	
8. UNIVERSITY SB DP.	*	-26.0	.0	-26.0	-1000.0	*	1000.	180. AG	2986.	6.5	
9. UNIVERSITY SB R	*	-45.5	344.0	-45.5	.0	*	344.	180. AG	513.	6.5	
10. ARAPAHOE EB APPR.	*	-1000.0	-37.0	.0	-37.0	*	1000.	90. AG	1111.	7.7	
11. ARAPAHOE EB QUEUE	*	-53.0	-37.0	-1098.1	-37.0	*	1045.	270. AG	477.	100.0	
12. ARAPAHOE .EB DEP.	*	.0	-37.0	1000.0	-37.0	*	1000.	90. AG	1768.	7.7	
13. ARAPAHOE EB QUEUE LE*	*	-53.0	-13.0	-732.3	-13.0	*	679.	270. AG	570.	100.0	
14. ARAPAHOE EB R	*	-428.0	-57.5	.0	-57.5	*	428.	90. AG	444.	7.7	
15. ARAPAHOE WB APPR.	*	1000.0	37.0	.0	37.0	*	1000.	270. AG	1485.	7.7	
16. ARAPAHOE WB QUEUE	*	43.0	37.0	5918.0	38.8	*	5875.	90. AG	570.	100.0	
17. ARAPAHOE WB DEP.	*	.0	37.0	-1000.0	37.0	*	1000.	270. AG	2334.	7.7	
18. ARAPAHOE WB QUEUE LE*	*	43.0	13.0	147.7	13.0	*	105.	90. AG	477.	100.0	
19. UNIVERSITY SB R QUEU*	*	-45.5	69.0	-45.5	226.1	*	157.	360. AG	186.	100.0	
20. ARAPAHOE EB R Q	*	-53.0	-57.5	-257.8	-57.6	*	205.	270. AG	239.	100.0	
21. ARAPAHOE WB FR	*	343.0	59.0	.0	59.0	*	343.	270. AG	664.	7.7	

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. UNIVERSITY NB Q	*	100	61	2.0	1704	2000	123.56	1	3
3. UNIVERSITY NB Q LEF*	*	100	86	2.0	335	1900	123.56	2	3
6. UNIVERSITY SB Q	*	100	56	2.0	2009	2000	123.56	1	3
7. UNIVERSITY SB Q LEFT*	*	100	81	2.0	494	1900	123.56	2	3
11. ARAPAHOE EB QUEUE	*	100	72	2.0	1111	2000	123.56	2	3
13. ARAPAHOE EB QUEUE LE*	*	100	86	2.0	483	1900	123.56	2	3
16. ARAPAHOE WB QUEUE	*	100	86	2.0	1485	2000	123.56	2	3
18. ARAPAHOE WB QUEUE LE*	*	100	72	2.0	533	1900	123.56	2	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

19. UNIVERSITY SB R QUEU*	100	56	2.0	513	2000	123.56	1	3
20. ARAPAHOE EB R Q *	100	72	2.0	444	2000	123.56	2	3

RECEPTOR LOCATIONS					
RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*
1. REC 1 (SE CORNER)	*	52.0	-60.0	6.0	*
2. REC 2 (SW CORNER)	*	-50.0	-65.0	6.0	*
3. REC 3 (NW CORNER)	*	-54.0	60.0	6.0	*
4. REC 4 (NE CORNER)	*	50.0	70.0	6.0	*
5. REC 5 (E MID-MAIN)	*	52.0	-160.0	6.0	*
6. REC 6 (W MID-MAIN)	*	-54.0	160.0	6.0	*
7. REC 7 (N MID-LOCAL)	*	-154.0	60.0	6.0	*
8. REC 8 (S MID-LOCAL)	*	-150.0	-65.0	6.0	*
9. REC9	*	50.0	170.0	6.0	*
10. REC10	*	-50.0	-160.0	6.0	*
11. REC11	*	152.0	-60.0	6.0	*
12. REC12	*	150.0	70.0	6.0	*
13. REC13	*	-140.0	-65.0	6.0	*
14. REC14	*	-160.0	-65.0	6.0	*
15. REC15	*	-140.0	-75.0	6.0	*
16. REC16	*	-150.0	-75.0	6.0	*
17. REC17	*	-160.0	-75.0	6.0	*
18. REC18	*	-60.0	-65.0	6.0	*
19. REC19	*	-50.0	-75.0	6.0	*
20. REC20	*	-60.0	-75.0	6.0	*
21. REC21	*	-70.0	-65.0	6.0	*
22. REC22	*	-70.0	-75.0	6.0	*

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: UNIVERSITY AND ARAPAHOE

RUN: UNIVERSITY AND ARAPAHOE 2013 SCREENING

WIND * CONCENTRATION																		
ANGLE *		(PPM)																
(DEGR)*		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17
5.	*	3.0	3.9	3.8	1.5	2.4	3.8	.8	4.5	1.5	3.0	1.8	.3	4.6	4.5	4.0	3.9	3.9
10.	*	2.7	3.6	4.1	1.0	2.0	4.1	1.0	4.8	1.0	2.8	1.5	.1	4.9	4.5	4.4	4.3	4.0
15.	*	2.3	3.2	4.2	.6	1.5	4.2	1.2	4.8	.6	2.7	1.3	.0	4.9	4.8	4.4	4.4	4.4
20.	*	2.0	2.8	3.9	.3	1.2	4.1	1.2	4.8	.3	2.7	1.3	.0	4.8	4.8	4.4	4.4	4.4
25.	*	2.2	2.2	3.7	.2	1.0	3.9	1.3	4.9	.2	2.2	1.3	.0	5.0	4.8	4.3	4.2	4.2
30.	*	2.1	2.1	3.4	.1	1.0	3.8	1.2	4.8	.1	2.1	1.4	.0	4.8	4.8	4.2	4.2	4.2
35.	*	2.1	2.2	3.2	.1	.8	3.6	1.1	4.8	.1	2.4	1.5	.0	4.8	4.9	4.1	4.1	4.1
40.	*	2.1	2.3	2.9	.1	.9	3.5	1.1	4.9	.1	2.6	1.4	.0	4.8	4.9	4.1	4.2	4.2
45.	*	2.0	2.3	2.8	.1	.8	3.2	1.3	4.9	.1	2.6	1.4	.0	4.8	4.9	3.9	4.0	4.2
50.	*	2.1	2.6	2.5	.1	.8	3.0	1.3	5.1	.1	2.8	1.5	.0	5.1	5.0	4.0	4.2	4.2
55.	*	2.0	2.7	2.4	.1	.8	2.9	1.3	5.0	.1	2.7	1.6	.0	4.9	5.2	3.6	3.9	3.9
60.	*	1.9	2.8	2.1	.0	.8	2.9	1.3	4.8	.0	2.6	1.6	.0	4.8	4.9	3.8	3.8	3.9
65.	*	2.0	3.0	2.0	.1	.9	2.9	1.4	5.0	.0	2.6	1.8	.1	5.0	5.0	3.7	3.7	3.8
70.	*	1.9	3.0	2.3	.3	.9	2.9	1.2	5.2	.0	2.6	1.8	.3	4.9	5.2	3.6	3.7	3.7
75.	*	2.1	3.3	2.3	.6	.9	2.8	1.5	5.0	.1	2.7	2.0	.6	4.7	5.1	3.3	3.4	3.7
80.	*	2.0	3.2	2.8	1.2	.9	3.0	1.9	4.9	.2	2.7	2.0	1.1	4.7	4.9	3.2	3.5	3.4
85.	*	1.8	3.0	3.2	1.9	.6	3.2	2.6	4.3	.4	2.4	1.8	1.7	4.1	4.4	2.7	2.7	2.9
90.	*	1.5	2.7	3.8	2.4	.5	3.6	3.0	3.8	.7	2.3	1.5	2.3	3.7	3.9	2.4	2.4	2.9
95.	*	1.1	2.3	4.0	2.8	.2	3.8	2.9	3.0	.8	2.0	1.0	2.8	3.0	3.0	1.6	1.6	1.8
100.	*	.7	2.0	3.8	3.2	.1	3.9	2.5	2.3	1.0	1.9	.7	3.1	2.3	2.2	1.3	1.3	1.3
105.	*	.3	1.9	3.5	3.2	.0	3.9	2.4	1.7	1.0	1.8	.3	3.0	1.8	2.0	1.2	1.1	1.3
110.	*	.2	1.8	3.1	3.2	.0	4.1	2.3	1.4	1.1	1.7	.2	2.9	1.4	1.4	.8	.8	.8
115.	*	.1	1.7	2.5	3.2	.0	4.1	2.2	1.2	1.0	1.8	.1	2.8	1.3	1.2	.9	.8	.8
120.	*	.1	1.8	2.4	3.1	.0	4.2	2.2	1.0	1.0	1.8	.1	2.6	1.2	1.0	1.0	.8	.8
125.	*	.1	1.9	2.2	3.1	.0	4.1	2.2	1.1	1.2	1.9	.1	2.4	1.2	1.0	1.0	.9	.8
130.	*	.0	1.9	2.1	3.1	.0	4.0	2.5	1.1	1.1	1.9	.0	2.3	1.1	.9	1.0	1.0	.8
135.	*	.0	2.0	1.9	3.2	.0	4.1	2.7	1.1	1.1	2.0	.0	2.3	1.2	1.1	1.1	1.0	1.0
140.	*	.0	2.2	2.2	3.1	.0	4.1	2.9	1.1	1.1	2.2	.0	2.2	1.2	1.1	1.1	1.0	1.0
145.	*	.0	2.2	2.1	3.0	.0	4.3	3.2	1.2	1.2	2.2	.0	2.1	1.2	1.1	1.1	1.1	1.0
150.	*	.1	2.3	2.5	2.9	.1	4.3	3.3	1.2	1.2	2.3	.0	2.0	1.2	1.2	1.1	1.1	1.3
155.	*	.2	2.3	2.6	3.0	.2	4.1	3.3	1.1	1.2	2.3	.0	2.0	1.1	1.1	1.1	1.1	1.3
160.	*	.3	2.6	3.1	3.1	.3	4.2	3.2	1.1	1.4	2.6	.0	2.1	1.2	1.1	1.2	1.1	1.3
165.	*	.7	2.7	3.3	3.3	.7	4.3	3.2	1.1	1.8	2.7	.0	2.1	1.1	1.0	1.1	1.1	1.0
170.	*	1.3	2.7	3.6	3.9	1.3	4.1	3.2	1.0	2.2	2.7	.1	2.3	1.0	.9	1.0	1.0	.9
175.	*	2.0	2.5	3.5	4.2	2.0	4.2	3.1	.8	2.6	2.5	.3	2.6	.8	.6	.8	.8	.8
180.	*	2.7	1.9	3.3	4.5	2.6	3.6	2.7	.4	2.7	1.9	.6	3.1	.4	.4	.4	.4	.4
185.	*	3.2	1.4	3.0	4.5	3.2	2.9	2.6	.3	2.9	1.4	.8	3.4	.3	.2	.3	.3	.3
190.	*	3.5	.9	2.7	4.4	3.5	2.4	2.2	.0	2.8	.8	1.0	3.6	.0	.0	.0	.0	.0
195.	*	3.5	.5	2.4	3.7	3.5	1.9	2.1	.0	2.8	.5	1.3	3.9	.0	.0	.0	.0	.0
200.	*	3.4	.2	2.2	3.1	3.4	1.5	2.3	.0	2.7	.2	1.3	3.9	.0	.0	.0	.0	.0
205.	*	3.1	.1	2.2	2.9	3.2	1.4	2.3	.0	2.7	.1	1.2	3.9	.0	.0	.0	.0	.0
210.	*	3.0	.1	2.3	2.6	3.1	1.4	2.3	.1	2.4	.1	1.2	3.9	.1	.1	.0	.0	.0
215.	*	2.9	.1	2.4	2.7	3.0	1.4	2.4	.1	2.8	.1	1.2	3.8	.1	.1	.0	.0	.0
220.	*	2.7	.1	2.4	2.3	2.8	1.4	2.3	.1	3.1	.1	1.2	3.7	.1	.1	.0	.0	.0
225.	*	2.5	.2	2.5	2.4	2.6	1.3	2.4	.1	3.0	.1	1.2	3.7	.1	.1	.0	.0	.0

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

230.	*	2.3	.2	2.5	2.8	2.5	1.2	2.4	.1	3.2	.1	.9	3.7	.1	.1	.0	.0	.0
235.	*	2.2	.1	2.8	2.9	2.4	1.3	2.6	.2	3.2	.0	.9	4.0	.2	.2	.0	.0	.0
240.	*	2.0	.2	2.7	3.2	2.4	1.3	2.6	.2	3.3	.0	1.0	3.9	.2	.2	.0	.0	.0
245.	*	2.1	.5	2.9	3.3	2.3	1.3	2.8	.5	3.2	.0	1.0	4.0	.5	.5	.0	.0	.0
250.	*	2.2	.8	2.9	3.6	2.3	1.2	2.8	.8	3.2	.0	1.2	3.9	.8	.8	.1	.1	.1
255.	*	2.5	1.3	2.8	3.7	2.2	1.0	2.7	1.3	2.9	.0	1.5	3.8	1.3	1.2	.4	.4	.4
260.	*	2.9	2.2	2.7	3.4	2.3	.7	2.5	2.1	2.8	.1	1.9	3.4	2.1	2.1	.9	.9	.9
265.	*	3.6	3.2	2.3	3.3	2.5	.5	2.2	2.9	2.4	.2	2.1	3.2	2.9	2.9	1.7	1.7	1.7
270.	*	4.1	4.0	1.8	2.8	2.9	.3	1.7	3.9	2.2	.3	2.9	2.4	3.9	3.9	2.3	2.3	2.3
275.	*	4.3	5.0	1.2	2.4	3.3	.1	1.1	4.7	2.0	.8	2.9	2.0	4.8	4.7	3.1	3.1	3.1
280.	*	4.1	5.4	.7	2.1	3.4	.0	.7	5.1	1.9	1.0	2.8	1.4	5.1	5.1	3.7	3.6	3.6
285.	*	3.7	5.5	.4	1.9	3.7	.0	.3	5.5	1.9	1.4	2.5	1.2	5.5	5.5	4.0	3.9	3.9
290.	*	3.1	5.3	.2	1.9	3.9	.0	.2	5.3	1.8	1.5	2.3	1.0	5.4	5.3	4.0	4.0	4.0
295.	*	2.7	5.1	.1	1.9	4.0	.0	.1	5.2	1.8	1.6	2.1	.9	5.2	5.2	4.0	3.9	3.9
300.	*	2.1	4.9	.1	1.9	4.0	.0	.1	5.1	1.8	1.7	2.0	.9	5.1	5.1	4.0	3.9	3.9
305.	*	1.9	4.5	.1	1.9	4.0	.0	.1	4.7	1.9	1.7	2.3	.9	4.7	4.7	3.8	3.8	3.8
310.	*	2.0	4.3	.1	2.1	3.8	.0	.1	4.6	2.0	1.8	2.2	.9	4.6	4.6	3.7	3.7	3.7
315.	*	1.8	4.1	.1	2.1	3.6	.0	.1	4.3	1.9	1.7	2.6	.9	4.3	4.3	3.6	3.6	3.6
320.	*	1.8	3.8	.0	2.3	3.5	.1	.0	4.1	2.1	1.8	2.7	.9	4.1	4.1	3.4	3.4	3.4
325.	*	2.0	3.7	.0	2.3	3.6	.1	.0	4.0	2.2	1.6	3.0	1.0	4.0	4.0	3.1	3.1	3.1
330.	*	2.0	3.5	.1	2.5	3.6	.1	.0	3.8	2.4	1.6	2.9	1.0	3.8	3.8	3.1	3.1	3.1
335.	*	2.5	3.1	.3	2.5	3.4	.3	.0	3.7	2.4	1.6	2.9	1.1	3.7	3.7	3.1	3.1	3.1
340.	*	2.9	3.0	.5	2.5	3.4	.4	.0	3.6	2.5	1.7	2.9	1.1	3.6	3.6	3.1	3.1	3.1
345.	*	3.3	3.2	1.0	2.8	3.5	1.0	.0	3.5	2.8	1.9	2.8	1.1	3.5	3.5	3.1	3.1	3.1
350.	*	3.5	3.7	1.8	2.7	3.4	1.7	.1	3.8	2.6	2.2	2.7	1.0	3.8	3.8	3.2	3.2	3.2
355.	*	3.4	3.8	2.4	2.5	3.1	2.3	.3	4.0	2.5	2.5	2.5	.8	4.1	4.0	3.5	3.4	3.4
360.	*	3.5	4.0	3.3	2.0	2.9	3.2	.5	4.4	2.0	2.7	2.2	.5	4.5	4.3	3.9	3.8	3.7
MAX	*	4.3	5.5	4.2	4.5	4.0	4.3	3.3	5.5	3.3	3.0	3.0	4.0	5.5	5.5	4.4	4.4	4.4
DEGR.	*	275	285	15	180	295	145	150	285	240	5	325	235	285	285	10	15	15

THE HIGHEST CONCENTRATION OF 5.60 PPM OCCURRED AT RECEPTOR REC18.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAL3QHCR (Dated: 95221)

DATE : 9/14/99
TIME : 8: 3:10

JOB: UNIVERSITY & FIRST 2013 SCREENING

RUN: UNIVERSITY & FIRST 2013

=====
General Information
=====

Run start date: 1/ 2/99 Julian: 2
 end date: 1/ 2/99 Julian: 2

A Tier 1 approach was used for input data preparation.

The MODE flag has been set to C for calculating CO averages.

Ambient background concentrations are included in the averages below.

Site & Meteorological Constants

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM ATIM = 60.

Met. Sfc. Sta. Id & Yr = 99999 99
Upper Air Sta. Id & Yr = 99999 99

Rural mixing heights were processed.

In 1999, Julian day 1 is a Friday.

Link Data Constants - (Variable data in *.LNK file)

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	H	W
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(FT)	(FT)
	*					*					
1. UNIVERSITY NB APPR	*	42.0	-1000.0	42.0	.0	*	1000.	360.	AG	.0	56.0
2. UNIVERSITY NB Q	*	42.0	-50.0	42.0	-1000.0	*	950.	180.	AG	.0	36.0
3. UNIVERSITY NB Q LEF	*	12.0	-50.0	12.0	-300.0	*	250.	180.	AG	.0	24.0
4. UNIVERSITY NB DEP.	*	42.0	.0	42.0	1000.0	*	1000.	360.	AG	.0	56.0
5. UNIVERSITY NB R	*	66.0	-1000.0	66.0	.0	*	1000.	360.	AG	.0	12.0
6. UNIVERSITY NB Q R	*	66.0	-53.1	66.0	-1003.1	*	950.	180.	AG	.0	12.0
7. UNIVERSITY SB APPR	*	-42.0	1000.0	-42.0	.0	*	1000.	180.	AG	.0	56.0
8. UNIVERSITY SB Q	*	-42.0	60.0	-42.0	1000.0	*	940.	360.	AG	.0	36.0
9. UNIVERSITY SB Q LEFT	*	-12.0	60.0	-12.0	1000.0	*	940.	360.	AG	.0	24.0
10. UNIVERSITY SB DEP.	*	-42.0	.0	-42.0	-1000.0	*	1000.	180.	AG	.0	56.0
11. UNIVERSITY SB R	*	-66.0	1000.0	-66.0	.0	*	1000.	180.	AG	.0	12.0
12. UNIVERSITY SB Q R	*	-66.0	60.0	-66.0	1000.0	*	940.	360.	AG	.0	12.0

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

13. FIRST EB APPR.	*	-1000.0	-25.0	.0	-25.0 *	1000.	90.	AG	.0	50.0
14. FIRST EB QUEUE	*	-72.0	-25.0	-1000.0	-25.0 *	928.	270.	AG	.0	30.0
15. FIRST .EB DEP.	*	.0	-25.0	1000.0	-25.0 *	1000.	90.	AG	.0	50.0

CAL3QHCR (Dated: 95221)

DATE : 9/14/99
 TIME : 8: 3:10

JOB: UNIVERSITY & FIRST 2013 SCREENING

RUN: UNIVERSITY & FIRST 2013

Link Data Constants - (Variable data in *.LNK file)

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	H	W
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(FT)	(FT)
16. FIRST EB QUEUE LEF	*	-72.0	.0	-322.0	.0	*	250.	270.	AG	.0	10.0
17. FIRST EB R	*	-372.0	-45.0	-66.0	-45.0	*	306.	90.	AG	.0	10.0
18. FIRST EB QUEUE R	*	-72.0	-45.0	-372.0	-45.0	*	300.	270.	AG	.0	10.0
19. FIRST WB APPR.	*	1000.0	35.0	.0	35.0	*	1000.	270.	AG	.0	50.0
20. FIRST WB QUEUE	*	72.0	35.0	1000.0	35.0	*	928.	90.	AG	.0	30.0
21. FIRST WB DEP.	*	.0	35.0	-1000.0	35.0	*	1000.	270.	AG	.0	50.0
22. FIRST WB QUEUE LEF	*	72.0	10.0	447.0	10.0	*	375.	90.	AG	.0	10.0
23. FIRST WB R	*	222.0	55.0	67.0	55.0	*	155.	270.	AG	.0	10.0
24. FIRST WB QUEUE R	*	72.0	55.0	222.0	55.0	*	150.	90.	AG	.0	10.0

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Receptor Data

RECEPTOR	*	COORDINATES (FT)		
		X	Y	Z
1. REC 1 (SE CORNER)	*	72.0	-50.0	6.0
2. REC 2 (SW CORNER)	*	-72.0	-50.0	6.0
3. REC 3 (NW CORNER)	*	-72.0	60.0	6.0
4. REC 4 (NE CORNER)	*	72.0	60.0	6.0
5. REC 5 (E NB)	*	72.0	-150.0	6.0
6. REC 6 (W NB DEP)	*	-72.0	160.0	6.0
7. REC 7 (N WB DEP)	*	-172.0	60.0	6.0
8. REC 8 (S EB)	*	-172.0	-50.0	6.0
9. REC9 (E NB DEP)	*	72.0	160.0	6.0
10. REC10 (W SB DEP)	*	-72.0	-150.0	6.0
11. REC11 (S EB DEP)	*	172.0	-50.0	6.0
12. REC12 (N WB)	*	172.0	60.0	6.0
13. REC13	*	72.0	70.0	6.0
14. REC14	*	82.0	60.0	6.0
15. REC15	*	82.0	70.0	6.0
16. REC16	*	-82.0	60.0	6.0
17. REC17	*	-72.0	70.0	6.0
18. REC18	*	-82.0	70.0	6.0
19. REC19	*	-72.0	80.0	6.0
20. REC20	*	-82.0	80.0	6.0

CAL3QHCR (Dated: 95221)

DATE : 9/14/99
 TIME : 8: 3:10

JOB: UNIVERSITY & FIRST 2013 SCREENING

RUN: UNIVERSITY & FIRST 2013

Model Results

Remarks : In search of the wind direction corresponding to the maximum concentration, only the first direction, of the directions with the same maximum concentrations, is indicated as the maximum.

* MAXIMUM HOURLY CONCENTRATIONS WITH ANY AMBIENT BACKGROUND CONCENTRATIONS (BKG) ADDED										
* (PPM)										
	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10
MAX+BKG *	4.4	4.2	5.1	5.0	3.0	4.9	3.5	5.8	3.0	2.9
- BKG *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX *	4.4	4.2	5.1	5.0	3.0	4.9	3.5	5.8	3.0	2.9
WIND DIR*	186	13	32	186	186	141	141	41	186	41
JULIAN *	2	2	2	2	2	2	2	2	2	2

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

HOURL	*	13	19	12	13	13	14	14	22	13	22
	*	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
-----*											
MAX+BKG	*	2.8	4.6	4.6	5.9	5.1	3.8	4.9	3.6	4.7	3.4
- BKG	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
-----*											
MAX	*	2.8	4.6	4.6	5.9	5.1	3.8	4.9	3.6	4.7	3.4
WIND DIR	*	41	186	186	186	186	41	32	41	32	141
JULIAN	*	2	2	2	2	2	2	2	2	2	2
HOURL	*	22	13	13	13	13	22	12	22	12	14

THE HIGHEST CONCENTRATION OF 5.90 PPM OCCURRED AT RECEPTOR REC14.

CAL3QHCR (Dated: 95221)

Output Section
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NOTES PERTAINING TO THE REPORT

1. THE HIGHEST AVERAGE IN EACH OF THE FIRST TWO COLUMNS OF EACH TABLE BELOW ARE SUFFIXED BY AN ASTERISK FOR PM OUTPUT, THERE IS ONLY ONE COLUMN AND ASTERISK FOR THE ANNUAL AVERAGE/PERIOD OF CONCERN TABLE.
2. THE NUMBERS IN PARENTHESES ARE THE JULIAN DAY AND ENDING HOUR FOR THE PRECEDING AVERAGE.
3. THE NUMBER OF CALM HOURS USED IN PRODUCING EACH AVERAGE ARE PREFIXED BY A C.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

PRIMARY AVERAGES.

MAXIMUM 8-HOUR RUNNING NONOVERLAPPING AVERAGE CONCENTRATIONS
 IN PARTS PER MILLION (PPM),
 INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Receptor Number	Highest Ending			Second highest Ending		
	Conc	Day Hr	Calm	Conc	Day Hr	Calm
1	2.11	(2,24)	C 0	2.02	(2,13)	C 0
2	2.91	(2,24)	C 0	2.17	(2, 8)	C 0
3	4.19*	(2,24)	C 0	3.34	(2,15)	C 0
4	3.25	(2,19)	C 0	1.58	(2,23)	C 0
5	1.44	(2,24)	C 0	1.17	(2,13)	C 0
6	3.64	(2,19)	C 0	2.90	(2,16)	C 0
7	2.33	(2,18)	C 0	1.40	(2,15)	C 0
8	3.61	(2,24)	C 0	3.15	(2,12)	C 0
9	1.56	(2,19)	C 0	.74	(2,23)	C 0
10	2.22	(2,24)	C 0	1.59	(2,15)	C 0
11	1.83	(2,24)	C 0	1.64	(2,12)	C 0
12	3.13	(2,18)	C 0	1.50	(2,23)	C 0
13	2.90	(2,19)	C 0	1.39	(2,23)	C 0
14	3.50	(2,19)	C 0	1.64	(2,23)	C 0
15	2.98	(2,19)	C 0	1.35	(2,23)	C 0
16	3.09	(2,23)	C 0	2.74	(2,16)	C 0
17	4.14	(2,24)	C 0	3.36	(2,15)	C 0
18	2.95	(2,23)	C 0	2.56	(2,16)	C 0
19	4.08	(2,24)	C 0	3.46*	(2,16)	C 0
20	2.83	(2,19)	C 0	2.48	(2,16)	C 0

FIVE HIGHEST 1-HOUR END-TO-END AVERAGE CONCENTRATIONS IN PARTS PER MILLION
 INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Rcpt No.	Highest Ending			Second Highest Ending			Third Highest Ending			Fourth Highest Ending			Fifth High Ending	
	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr
1	4.40	(2,13)	C 0	2.90	(2,22)	C 0	2.70	(2,12)	C 0	2.70	(2,19)	C 0	2.70	(2,19)

CAL3QHCR (Dated: 95221)

DATE : 9/14/99
 TIME : 8: 3:10

JOB: UNIVERSITY & FIRST 2013 SCREENING

RUN: UNIVERSITY & FIRST 2013

FIVE HIGHEST 1-HOUR END-TO-END AVERAGE CONCENTRATIONS IN PARTS PER MILLION
 INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Rcpt No.	Highest Ending			Second Highest Ending			Third Highest Ending			Fourth Highest Ending			Fifth High Ending	
	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

No.	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	I
2	4.20	(2,19)	C 0	4.00	(2,24)	C 0	3.50	(2, 1)	C 0	2.90	(2,12)	C 0	2.90	(
3	5.10	(2,12)	C 0	5.00	(2,23)	C 0	4.90	(2,22)	C 0	4.50	(2,19)	C 0	4.20	(
4	5.00	(2,13)	C 0	4.60	(2,14)	C 0	4.40	(2,18)	C 0	4.20	(2,15)	C 0	4.20	(
5	3.00	(2,13)	C 0	2.40	(2,19)	C 0	2.30	(2,24)	C 0	2.00	(2, 1)	C 0	1.60	(
6	4.90	(2,14)	C 0	4.80	(2,18)	C 0	4.10	(2,15)	C 0	4.10	(2,17)	C 0	3.50	(
7	3.50	(2,14)	C 0	3.40	(2,18)	C 0	2.80	(2,15)	C 0	2.80	(2,17)	C 0	2.40	(
8	5.80	(2,22)	C 0	5.30*	(2,12)	C 0	5.20	(2,23)	C 0	4.60	(2,20)	C 0	4.20	(
9	3.00	(2,13)	C 0	2.10	(2,15)	C 0	2.10	(2,17)	C 0	1.80	(2,18)	C 0	1.70	(
10	2.90	(2,22)	C 0	2.70	(2,12)	C 0	2.60	(2,19)	C 0	2.60	(2,23)	C 0	2.30	(
11	2.80	(2,22)	C 0	2.60	(2,12)	C 0	2.60	(2,23)	C 0	2.40	(2,19)	C 0	2.40	(
12	4.60	(2,13)	C 0	4.40	(2,18)	C 0	4.30	(2,14)	C 0	4.20	(2,15)	C 0	4.20	(
13	4.60	(2,13)	C 0	3.90	(2,15)	C 0	3.90	(2,17)	C 0	3.80	(2,14)	C 0	3.70	(
14	5.90*	(2,13)	C 0	4.70	(2,14)	C 0	4.60	(2,18)	C 0	4.50	(2,15)	C 0	4.50	(
15	5.10	(2,13)	C 0	4.00	(2,14)	C 0	3.90	(2,15)	C 0	3.90	(2,17)	C 0	3.70	(
16	3.80	(2,22)	C 0	3.70	(2,12)	C 0	3.70	(2,23)	C 0	3.30	(2,15)	C 0	3.30	(
17	4.90	(2,12)	C 0	4.90	(2,23)	C 0	4.80	(2,22)	C 0	4.20	(2,19)	C 0	4.00	(
18	3.60	(2,22)	C 0	3.40	(2,12)	C 0	3.40	(2,23)	C 0	3.20	(2,18)	C 0	3.10	(
19	4.70	(2,12)	C 0	4.70	(2,23)	C 0	4.60	(2,22)	C 0	4.50	(2,14)	C 0	4.30	(
20	3.40	(2,14)	C 0	3.30	(2,22)	C 0	3.20	(2,12)	C 0	3.20	(2,18)	C 0	3.10	(

CALM DURATION FREQUENCY

Hours of Consecutive Calm Winds Frequency of Occurrence (Julian day/hour ending) of Significant Occurrences

No calm wind hours were encountered during this processing period.

Program terminated normally
CAL3QHCR (Dated: 95221)
DATE : 8/ 5/99
TIME : 10:39:57

JOB: UNIVERSITY & FIRST 2006 SCREENING

RUN: UNIVERSITY & FIRST 2006

=====
General Information
=====

Run start date: 1/ 2/99 Julian: 2
end date: 1/ 2/99 Julian: 2

A Tier 1 approach was used for input data preparation.

The MODE flag has been set to C for calculating CO averages.

Ambient background concentrations are included in the averages below.

Site & Meteorological Constants

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM ATIM = 60.

Met. Sfc. Sta. Id & Yr = 99999 99
Upper Air Sta. Id & Yr = 99999 99

Urban mixing heights were processed.

In 1999, Julian day 1 is a Friday.

Link Data Constants - (Variable data in *.LNK file)

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	H	W
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(FT)	(FT)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1. UNIVERSITY NB APPR	*	42.0	-1000.0	42.0	.0	*	1000.	360.	AG	.0	56.0
2. UNIVERSITY NB Q	*	42.0	-50.0	42.0	-1000.0	*	950.	180.	AG	.0	36.0
3. UNIVERSITY NB Q LEF*	*	12.0	-50.0	12.0	-300.0	*	250.	180.	AG	.0	24.0
4. UNIVERSITY NB DEP.	*	42.0	.0	42.0	1000.0	*	1000.	360.	AG	.0	56.0
5. UNIVERSITY NB R	*	66.0	-1000.0	66.0	.0	*	1000.	360.	AG	.0	12.0
6. UNIVERSITY NB Q R	*	66.0	-53.1	66.0	-1003.1	*	950.	180.	AG	.0	12.0
7. UNIVERSITY SB APPR	*	-42.0	1000.0	-42.0	.0	*	1000.	180.	AG	.0	56.0
8. UNIVERSITY SB Q	*	-42.0	60.0	-42.0	1000.0	*	940.	360.	AG	.0	36.0
9. UNIVERSITY SB Q LEFT*	*	-12.0	60.0	-12.0	1000.0	*	940.	360.	AG	.0	24.0
10. UNIVERSITY SB DEP.	*	-42.0	.0	-42.0	-1000.0	*	1000.	180.	AG	.0	56.0
11. UNIVERSITY SB R	*	-66.0	1000.0	-66.0	.0	*	1000.	180.	AG	.0	12.0
12. UNIVERSITY SB Q R	*	-66.0	60.0	-66.0	1000.0	*	940.	360.	AG	.0	12.0
13. FIRST EB APPR.	*	-1000.0	-25.0	.0	-25.0	*	1000.	90.	AG	.0	50.0
14. FIRST EB QUEUE	*	-72.0	-25.0	-1000.0	-25.0	*	928.	270.	AG	.0	30.0
15. FIRST .EB DEP.	*	.0	-25.0	1000.0	-25.0	*	1000.	90.	AG	.0	50.0

CAL3QHCR (Dated: 95221)

DATE : 8/ 5/99
TIME : 10:39:57

JOB: UNIVERSITY & FIRST 2006 SCREENING

RUN: UNIVERSITY & FIRST 2006

Link Data Constants - (Variable data in *.LNK file)

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	H	W
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(FT)	(FT)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
16. FIRST EB QUEUE LEF	*	-72.0	.0	-322.0	.0	*	250.	270.	AG	.0	10.0
17. FIRST EB R	*	-372.0	-45.0	-66.0	-45.0	*	306.	90.	AG	.0	10.0
18. FIRST EB QUEUE R	*	-72.0	-45.0	-372.0	-45.0	*	300.	270.	AG	.0	10.0
19. FIRST WB APPR.	*	1000.0	35.0	.0	35.0	*	1000.	270.	AG	.0	50.0
20. FIRST WB QUEUE	*	72.0	35.0	1000.0	35.0	*	928.	90.	AG	.0	30.0
21. FIRST WB DEP.	*	.0	35.0	-1000.0	35.0	*	1000.	270.	AG	.0	50.0

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

22. FIRST WB QUEUE LEF	*	72.0	10.0	447.0	10.0 *	375.	90.	AG	.0	10.0
23. FIRST WB R	*	222.0	55.0	67.0	55.0 *	155.	270.	AG	.0	10.0
24. FIRST WB QUEUE R	*	72.0	55.0	222.0	55.0 *	150.	90.	AG	.0	10.0

Receptor Data

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-----
      RECEPTOR      *      COORDINATES (FT)
                        *      X      Y      Z
-----
1. REC 1 (SE CORNER) *      72.0      -50.0      6.0
2. REC 2 (SW CORNER) *      -72.0      -50.0      6.0
3. REC 3 (NW CORNER) *      -72.0      60.0      6.0
4. REC 4 (NE CORNER) *      72.0      60.0      6.0
5. REC 5 (E NB)      *      72.0      -150.0      6.0
6. REC 6 (W NB DEP)  *      -72.0      160.0      6.0
7. REC 7 (N WB DEP)  *      -172.0      60.0      6.0
8. REC 8 (S EB )     *      -172.0      -50.0      6.0
9. REC9 (E NB DEP)   *      72.0      160.0      6.0
10. REC10 (W SB DEP) *      -72.0      -150.0      6.0
11. REC11 (S EB DEP) *      172.0      -50.0      6.0
12. REC12 (N WB )    *      172.0      60.0      6.0
13. REC13             *      72.0      70.0      6.0
14. REC14             *      82.0      60.0      6.0
15. REC15             *      82.0      70.0      6.0
16. REC16             *      -82.0      60.0      6.0
17. REC17             *      -72.0      70.0      6.0
18. REC18             *      -82.0      70.0      6.0
19. REC19             *      -72.0      80.0      6.0
20. REC20             *      -82.0      80.0      6.0
                                CAL3QHCR (Dated: 95221)

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DATE : 8/ 5/99
TIME : 10:39:57

JOB: UNIVERSITY & FIRST 2006 SCREENING

RUN: UNIVERSITY & FIRST 2006

Model Results

Remarks : In search of the wind direction corresponding to the maximum concentration, only the first direction, of the directions with the same maximum concentrations, is indicated as the maximum.

* MAXIMUM HOURLY CONCENTRATIONS WITH ANY AMBIENT BACKGROUND CONCENTRATIONS (BKG) ADDED

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

	*	(PPM)									
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10
MAX+BKG	*	4.6	4.6	5.1	5.4	3.3	5.2	3.6	6.1	3.2	3.1
- BKG	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX	*	4.6	4.6	5.1	5.4	3.3	5.2	3.6	6.1	3.2	3.1
WIND DIR	*	186	13	32	186	186	146	141	41	186	41
JULIAN	*	2	2	2	2	2	2	2	2	2	2
HOURL	*	13	19	12	13	13	18	14	22	13	22
	*	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
MAX+BKG	*	3.0	4.8	4.8	6.3	5.5	4.0	4.9	3.7	4.7	3.4
- BKG	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX	*	3.0	4.8	4.8	6.3	5.5	4.0	4.9	3.7	4.7	3.4
WIND DIR	*	41	186	186	186	186	41	32	41	32	141
JULIAN	*	2	2	2	2	2	2	2	2	2	2
HOURL	*	22	13	13	13	13	22	12	22	12	14

THE HIGHEST CONCENTRATION OF 6.30 PPM OCCURRED AT RECEPTOR REC14.

CAL3QHCR (Dated: 95221)

DATE : 8/ 5/99
TIME : 10:39:58

JOB: UNIVERSITY & FIRST 2006 SCREENING

RUN: UNIVERSITY & FIRST 2006

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Output Section
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NOTES PERTAINING TO THE REPORT

1. THE HIGHEST AVERAGE IN EACH OF THE FIRST TWO COLUMNS OF EACH TABLE BELOW ARE SUFFIXED BY AN ASTERISK (*). FOR PM OUTPUT, THERE IS ONLY ONE COLUMN AND ASTERISK FOR THE ANNUAL AVERAGE/PERIOD OF CONCERN TAI
2. THE NUMBERS IN PARENTHESES ARE THE JULIAN DAY AND ENDING HOUR FOR THE PRECEDING AVERAGE.
3. THE NUMBER OF CALM HOURS USED IN PRODUCING EACH AVERAGE ARE PREFIXED BY A C.

PRIMARY AVERAGES.

MAXIMUM 8-HOUR RUNNING NONOVERLAPPING AVERAGE CONCENTRATIONS
IN PARTS PER MILLION (PPM),
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Receptor Number	Conc	Highest Ending			Second highest Ending		
		Day	Hr	Calm	Day	Hr	Calm
1	2.28	(2,	24)	C 0	2.24	(2,	13)
2	3.10	(2,	24)	C 0	2.35	(2,	8)

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

3	4.30	(2,24)	C 0	3.42	(2,15)	C 0
4	3.50	(2,19)	C 0	1.70	(2,23)	C 0
5	1.54	(2,24)	C 0	1.27	(2,13)	C 0
6	3.84	(2,19)	C 0	3.04	(2,16)	C 0
7	2.44	(2,18)	C 0	1.45	(2,15)	C 0
8	3.84	(2,24)	C 0	3.34	(2,12)	C 0
9	1.63	(2,19)	C 0	.76	(2,23)	C 0
10	2.40	(2,24)	C 0	1.71	(2,15)	C 0
11	1.96	(2,24)	C 0	1.75	(2,12)	C 0
12	3.25	(2,18)	C 0	1.55	(2,23)	C 0
13	3.10	(2,19)	C 0	1.50	(2,23)	C 0
14	3.74	(2,19)	C 0	1.74	(2,23)	C 0
15	3.23	(2,19)	C 0	1.48	(2,23)	C 0
16	3.21	(2,23)	C 0	2.81	(2,16)	C 0
17	4.32*	(2,24)	C 0	3.50	(2,16)	C 0
18	3.06	(2,18)	C 0	2.69	(2,16)	C 0
19	4.27	(2,24)	C 0	3.56*	(2,16)	C 0
20	2.97	(2,18)	C 0	2.57	(2,16)	C 0

FIVE HIGHEST 1-HOUR END-TO-END AVERAGE CONCENTRATIONS IN PARTS PER MILLION
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Rcptr No.	Highest Ending			Second Highest Ending			Third Highest Ending			Fourth Highest Ending			Fifth Highest Ending		
	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm	Conc	Day Hr	Calm
1	4.60	(2,13)	C 0	3.10	(2,22)	C 0	3.00	(2,12)	C 0	3.00	(2,23)	C 0	2.90	(2,13)	C 0
2	4.60	(2,19)	C 0	4.20	(2,24)	C 0	3.70	(2, 1)	C 0	3.30	(2,23)	C 0	3.10	(2,19)	C 0
3	5.10	(2,12)	C 0	5.10	(2,23)	C 0	5.00	(2,22)	C 0	4.60	(2,19)	C 0	4.50	(2,12)	C 0
4	5.40	(2,13)	C 0	5.00	(2,14)	C 0	4.80	(2,18)	C 0	4.50	(2,15)	C 0	4.50	(2,13)	C 0
5	3.30	(2,13)	C 0	2.60	(2,24)	C 0	2.40	(2,19)	C 0	2.10	(2, 1)	C 0	1.60	(2,13)	C 0
6	5.20	(2,18)	C 0	5.10	(2,14)	C 0	4.20	(2,15)	C 0	4.20	(2,17)	C 0	3.70	(2,18)	C 0
7	3.60	(2,14)	C 0	3.60	(2,18)	C 0	3.00	(2,15)	C 0	3.00	(2,17)	C 0	2.40	(2,14)	C 0
8	6.10	(2,22)	C 0	5.70*	(2,12)	C 0	5.70	(2,23)	C 0	4.70	(2,20)	C 0	4.60	(2,22)	C 0
9	3.20	(2,13)	C 0	2.10	(2,15)	C 0	2.10	(2,17)	C 0	1.90	(2,14)	C 0	1.90	(2,13)	C 0
10	3.10	(2,22)	C 0	2.90	(2,23)	C 0	2.80	(2,12)	C 0	2.80	(2,19)	C 0	2.40	(2,22)	C 0
11	3.00	(2,22)	C 0	2.80	(2,12)	C 0	2.80	(2,19)	C 0	2.80	(2,23)	C 0	2.40	(2,22)	C 0
12	4.80	(2,13)	C 0	4.50	(2,14)	C 0	4.40	(2,15)	C 0	4.40	(2,17)	C 0	4.40	(2,13)	C 0
13	4.80	(2,13)	C 0	4.20	(2,14)	C 0	4.10	(2,15)	C 0	4.10	(2,17)	C 0	4.10	(2,13)	C 0
14	6.30*	(2,13)	C 0	5.00	(2,14)	C 0	4.90	(2,15)	C 0	4.90	(2,17)	C 0	4.90	(2,13)	C 0
15	5.50	(2,13)	C 0	4.30	(2,15)	C 0	4.30	(2,17)	C 0	4.20	(2,14)	C 0	4.00	(2,13)	C 0
16	4.00	(2,22)	C 0	3.70	(2,12)	C 0	3.70	(2,23)	C 0	3.40	(2,15)	C 0	3.40	(2,22)	C 0
17	4.90	(2,12)	C 0	4.90	(2,23)	C 0	4.80	(2,22)	C 0	4.40	(2,19)	C 0	4.30	(2,12)	C 0
18	3.70	(2,22)	C 0	3.40	(2,12)	C 0	3.40	(2,15)	C 0	3.40	(2,17)	C 0	3.40	(2,22)	C 0
19	4.70	(2,12)	C 0	4.70	(2,18)	C 0	4.70	(2,22)	C 0	4.70	(2,23)	C 0	4.60	(2,12)	C 0
20	3.40	(2,14)	C 0	3.40	(2,18)	C 0	3.40	(2,22)	C 0	3.20	(2,12)	C 0	3.20	(2,14)	C 0

CAL3QHCR (Dated: 95221)

DATE : 8/ 5/99
TIME : 10:39:58

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: UNIVERSITY & FIRST 2006 SCREENING

RUN: UNIVERSITY & FIRST 2006

CALM DURATION FREQUENCY

Hours of Consecutive Calm Winds	Frequency of Occurrence	(Julian day/hour ending) of Significant Occurrences
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No calm wind hours were encountered during this processing period.

Program terminated normally

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: HAMPDEN 2006 SCREENING

RUN: HAMPDEN 2006

DATE : 8/ 3/99

TIME : 13: 3:35

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	(I
1. UNIVERSITY NB APPR	*	32.0	-1000.0	32.0	.0	*	1000.	360. AG	1104.	8.7	
2. UNIVERSITY NB Q	*	32.0	-59.0	32.0	-291.4	*	232.	180. AG	446.	100.0	
3. UNIVERSITY NB Q LEF*	*	9.0	-59.0	9.0	-719.1	*	660.	180. AG	609.	100.0	
4. UNIVERSITY NB DEP.	*	32.0	.0	32.0	1000.0	*	1000.	360. AG	1459.	8.7	
5. UNIVERSITY NB FR	*	52.0	-1000.0	52.0	.0	*	1000.	360. AG	371.	8.7	
6. UNIVERSITY SB APPR	*	-24.0	1000.0	-24.0	.0	*	1000.	180. AG	1175.	8.7	
7. UNIVERSITY SB Q	*	-24.0	74.0	-24.0	454.2	*	380.	360. AG	469.	100.0	
8. UNIVERSITY SB Q LEFT*	*	.0	74.0	.0	620.5	*	547.	360. AG	316.	100.0	
9. UNIVERSITY SB DEP.	*	-24.0	.0	-24.0	-1000.0	*	1000.	180. AG	2039.	8.7	
10. UNIVERSITY SB FR	*	-49.0	1000.0	-49.0	.0	*	1000.	180. AG	176.	8.7	
11. HAMPDEN EB APPR.	*	-1000.0	-29.5	.0	-29.5	*	1000.	90. AG	2238.	7.3	
12. HAMPDEN EB QUEUE	*	-60.0	-29.5	-615.4	-29.5	*	555.	270. AG	626.	100.0	
13. HAMPDEN .EB DEP.	*	.0	-29.5	1000.0	-29.5	*	1000.	90. AG	2759.	7.3	
14. HAMPDEN EB QUEUE LEF*	*	-60.0	.0	-989.2	-.2	*	929.	270. AG	307.	100.0	
15. HAMPDEN EB FR	*	-335.0	-53.0	.0	-53.0	*	335.	90. AG	298.	7.3	
16. HAMPDEN WB APPR.	*	1000.0	43.0	.0	43.0	*	1000.	270. AG	2505.	7.3	
17. HAMPDEN WB QUEUE	*	60.0	43.0	868.3	43.0	*	808.	90. AG	591.	100.0	
18. HAMPDEN WB DEP.	*	.0	43.0	-1000.0	43.0	*	1000.	270. AG	3126.	7.3	
19. HAMPDEN WB QUEUE LEF*	*	60.0	12.0	895.0	12.0	*	835.	90. AG	591.	100.0	
20. HAMPDEN WB R	*	60.0	96.0	95.0	61.0	*	49.	135. AG	123.	7.3	
21. HAMPDEN WB QUEUE R	*	60.0	96.0	92.3	63.7	*	46.	135. AG	197.	100.0	

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. UNIVERSITY NB Q	*	120	77	2.0	1104	2000	129.64	2	3
3. UNIVERSITY NB Q LEF*	*	120	105	2.0	445	1900	129.64	2	3
7. UNIVERSITY SB Q	*	120	81	2.0	1175	2000	129.64	2	3
8. UNIVERSITY SB Q LEFT*	*	120	109	2.0	151	1900	129.64	2	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

12.	HAMPDEN	EB	QUEUE	*	120	72	2.0	2238	2000	129.64	1	3
14.	HAMPDEN	EB	QUEUE	LEF*	120	106	2.0	232	1900	129.64	2	3
17.	HAMPDEN	WB	QUEUE	*	120	68	2.0	2505	2000	129.64	1	3
19.	HAMPDEN	WB	QUEUE	LEF*	120	102	2.0	566	1900	129.64	2	3
21.	HAMPDEN	WB	QUEUE	R *	120	68	2.0	123	2000	129.64	1	3

RECEPTOR LOCATIONS

RECEPTOR	*	X	COORDINATES (FT)	Z	*
	*		Y		*
1. REC 1 (SE CORNER)	*	60.0	-59.0	6.0	*
2. REC 2 (SW CORNER)	*	-48.0	-60.0	6.0	*
3. REC 3 (NW CORNER)	*	-60.0	72.0	6.0	*
4. REC 4 (NE CORNER)	*	99.0	74.0	6.0	*
5. REC 5 (E MID-MAIN)	*	60.0	-159.0	6.0	*
6. REC 6 (W MID-MAIN)	*	-48.0	-159.0	6.0	*
7. REC 7 (N MID-LOCAL)	*	-170.0	74.0	6.0	*
8. REC 8 (S MID-LOCAL)	*	-170.0	-60.0	6.0	*
9. REC9	*	54.0	172.0	6.0	*
10. REC10	*	-60.0	172.0	6.0	*
11. REC11	*	154.0	74.0	6.0	*
12. REC12	*	170.0	-60.0	6.0	*
13. REC13	*	99.0	84.0	6.0	*
14. REC14	*	109.0	74.0	6.0	*
15. REC15	*	109.0	84.0	6.0	*
16. REC16	*	89.0	84.0	6.0	*

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: HAMPDEN 2006 SCREENING
WIND ANGLE RANGE: 5.-360.

RUN: HAMPDEN 2006

ANGLE * (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16
5.	* 2.9	3.2	2.0	.2	2.0	2.6	.2	3.4	.8	1.8	.0	2.5	.1	.1	.1	.2
10.	* 2.7	2.9	2.3	.1	1.9	2.4	.4	3.5	.5	2.2	.0	2.5	.1	.0	.0	.1
15.	* 2.5	3.0	2.5	.0	1.6	2.4	.5	3.7	.3	2.3	.0	2.5	.0	.0	.0	.0
20.	* 2.5	2.6	2.6	.0	1.5	2.5	.7	3.8	.2	2.5	.0	2.5	.0	.0	.0	.0
25.	* 2.5	2.5	2.6	.0	1.5	2.7	.8	3.8	.1	2.5	.0	2.6	.0	.0	.0	.0
30.	* 2.6	2.2	2.5	.0	1.5	2.8	.8	3.9	.1	2.5	.0	2.6	.0	.0	.0	.0
35.	* 2.6	2.4	2.5	.0	1.5	2.9	.9	3.9	.1	2.4	.0	2.6	.0	.0	.0	.0
40.	* 2.7	2.3	2.3	.0	1.5	3.3	.9	3.8	.0	2.2	.0	2.7	.0	.0	.0	.0
45.	* 2.8	2.5	2.3	.0	1.5	3.6	1.0	4.1	.0	2.2	.0	2.8	.0	.0	.0	.0
50.	* 3.0	2.6	2.2	.0	1.6	3.7	1.0	3.9	.0	2.1	.0	2.9	.0	.0	.0	.0
55.	* 3.0	3.0	2.2	.1	1.7	3.9	1.0	4.1	.0	2.1	.1	3.0	.0	.1	.0	.0
60.	* 3.2	3.3	2.1	.1	1.7	4.0	.9	4.4	.0	2.1	.1	3.0	.0	.1	.0	.0
65.	* 3.3	3.6	2.2	.2	1.6	3.9	.9	4.2	.0	2.1	.2	3.2	.0	.2	.0	.0
70.	* 3.4	3.9	2.2	.4	1.5	3.7	1.1	4.4	.0	2.1	.4	3.3	.2	.4	.2	.2
75.	* 3.4	4.2	2.5	.8	1.2	3.6	1.4	4.4	.0	2.1	.7	3.1	.4	.8	.4	.5
80.	* 3.1	4.3	3.1	1.4	.9	3.2	1.9	4.4	.1	2.2	1.3	2.9	.9	1.4	.9	.9
85.	* 2.6	4.0	3.7	2.3	.7	3.1	2.4	3.8	.3	2.4	2.3	2.4	1.6	2.3	1.5	1.6
90.	* 2.0	3.7	4.4	3.3	.3	2.6	2.9	3.3	.4	2.7	3.1	1.7	2.3	3.3	2.3	2.3
95.	* 1.4	3.2	4.6	4.0	.2	2.5	3.3	2.4	.9	3.1	4.0	1.2	3.1	4.0	3.1	3.2
100.	* .8	2.5	4.6	4.6	.0	2.2	3.1	1.9	1.3	3.4	4.6	.7	3.7	4.6	3.7	3.7
105.	* .4	2.3	4.4	4.9	.0	2.2	2.9	1.5	1.7	3.8	4.8	.4	4.1	4.8	4.1	4.1
110.	* .2	2.1	3.7	4.9	.0	2.2	2.8	1.2	1.9	4.0	4.9	.2	4.0	4.9	4.0	4.0
115.	* .1	2.2	3.3	4.7	.0	2.2	2.5	1.1	1.9	4.1	4.7	.1	3.9	4.7	3.9	3.9
120.	* .1	2.3	2.6	4.6	.0	2.4	2.4	1.2	1.9	4.0	4.6	.1	3.8	4.6	3.8	3.8
125.	* .1	2.4	2.4	4.2	.0	2.4	2.4	1.1	1.9	3.8	4.2	.1	3.6	4.2	3.6	3.6
130.	* .1	2.4	2.2	4.1	.0	2.4	2.6	1.1	1.9	3.7	4.1	.0	3.5	4.1	3.5	3.5
135.	* .1	2.6	2.2	3.8	.0	2.5	2.9	1.0	1.8	3.3	3.8	.0	3.4	3.8	3.4	3.4
140.	* .0	2.7	2.2	3.7	.0	2.5	2.9	1.0	1.6	3.2	3.7	.0	3.2	3.7	3.2	3.3
145.	* .0	2.6	2.3	3.6	.0	2.4	3.0	.9	1.8	3.2	3.6	.0	3.2	3.6	3.2	3.3
150.	* .0	2.8	2.5	3.5	.0	2.5	2.9	.9	1.8	3.0	3.5	.0	3.1	3.5	3.1	3.3
155.	* .0	2.8	2.8	3.3	.0	2.6	3.0	.8	1.7	2.9	3.3	.0	3.1	3.3	3.1	3.3
160.	* .3	2.7	3.0	3.3	.2	2.5	2.8	.7	1.8	3.0	3.3	.0	3.0	3.3	3.0	3.3
165.	* .5	2.7	3.2	3.3	.4	2.4	2.7	.6	1.9	2.8	3.3	.0	3.0	3.3	3.0	3.5
170.	* 1.0	2.5	3.2	3.5	.7	2.3	2.6	.5	2.4	2.4	3.3	.0	3.2	3.4	3.1	3.7
175.	* 1.6	2.1	3.0	3.9	1.3	1.9	2.3	.2	2.4	2.5	3.5	.0	3.6	3.9	3.5	4.2
180.	* 2.2	1.7	2.7	4.3	2.0	1.6	2.2	.2	2.7	2.2	3.8	.1	3.9	4.1	3.7	4.6
185.	* 2.9	1.2	2.4	4.8	2.4	1.2	2.0	.0	2.7	1.8	4.0	.4	4.4	4.7	4.3	4.8
190.	* 3.4	.7	2.2	4.9	3.0	.7	2.0	.0	2.8	1.4	4.1	.5	4.6	4.8	4.5	4.9
195.	* 3.7	.4	2.1	5.1	3.3	.4	1.9	.0	2.6	1.2	4.3	.7	4.7	4.8	4.5	5.1
200.	* 3.8	.2	2.0	4.9	3.6	.2	2.0	.0	2.1	1.1	4.5	.9	4.7	4.8	4.6	4.8
205.	* 3.8	.1	2.0	4.7	3.6	.1	2.0	.0	2.2	1.2	4.6	1.0	4.4	4.8	4.3	4.2
210.	* 3.5	.1	2.0	4.5	3.4	.1	2.0	.0	2.2	1.2	4.8	1.1	4.0	4.4	3.9	3.8
215.	* 3.5	.1	2.1	4.1	3.4	.1	2.1	.0	2.2	1.2	4.6	1.2	3.7	4.4	3.7	3.5
220.	* 3.4	.1	2.4	3.9	3.3	.1	2.3	.0	2.5	1.2	4.6	1.2	3.1	4.1	3.4	3.1
225.	* 3.2	.1	2.4	3.8	3.1	.1	2.4	.0	2.8	1.3	4.5	1.2	3.0	3.6	3.1	2.9
230.	* 3.1	.0	2.5	3.8	3.0	.0	2.4	.0	2.9	1.3	4.2	1.2	3.0	3.7	3.2	2.9

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

235.	*	3.0	.0	2.5	3.6	2.9	.0	2.5	.0	2.9	1.2	4.3	1.3	2.9	3.7	3.0	2.9
240.	*	2.9	.1	2.7	3.7	2.9	.0	2.6	.1	2.8	1.2	4.4	1.3	3.0	3.7	3.0	3.1
245.	*	2.9	.2	2.8	3.8	2.9	.0	2.6	.2	3.0	1.2	4.1	1.3	3.1	3.7	3.2	3.3
250.	*	2.9	.3	2.8	3.9	2.8	.0	2.6	.3	2.8	1.0	4.1	1.4	3.2	3.9	3.2	3.6
255.	*	3.1	.7	2.8	3.9	2.8	.0	2.5	.6	2.5	.8	4.0	1.6	3.3	3.8	3.3	3.5
260.	*	3.4	1.3	2.4	3.9	2.8	.0	2.3	1.2	2.5	.7	3.5	2.1	3.1	3.8	3.1	3.3
265.	*	3.7	2.0	2.1	3.4	3.0	.1	1.9	1.9	2.2	.5	3.3	2.3	2.8	3.2	2.7	3.2
270.	*	4.2	2.9	1.7	3.0	3.3	.4	1.4	2.8	2.0	.2	2.6	2.6	2.5	2.7	2.4	2.7
275.	*	4.4	3.6	1.2	2.6	3.4	.6	1.0	3.4	1.8	.1	2.3	2.8	2.1	2.6	2.0	2.4
280.	*	4.3	4.1	.8	2.3	3.9	.9	.6	3.9	1.7	.0	1.7	2.7	1.7	2.0	1.6	2.1
285.	*	3.8	4.2	.4	1.9	4.0	1.2	.3	4.2	1.6	.0	1.2	2.7	1.4	1.6	1.2	1.9
290.	*	3.3	4.1	.2	1.8	4.2	1.4	.2	4.2	1.6	.0	1.1	2.6	1.5	1.5	1.3	1.8
295.	*	2.8	3.9	.2	1.8	4.4	1.5	.1	4.1	1.7	.0	1.1	2.4	1.3	1.5	1.2	1.6
300.	*	2.6	3.8	.1	1.7	4.4	1.5	.1	4.0	1.7	.0	1.0	2.5	1.3	1.5	1.2	1.6
305.	*	2.2	3.5	.1	1.5	4.1	1.5	.1	3.7	1.7	.0	1.0	2.6	1.2	1.3	1.2	1.5
310.	*	1.9	3.2	.1	1.4	4.0	1.4	.1	3.6	1.8	.0	.9	2.6	1.2	1.2	1.1	1.4
315.	*	1.9	3.2	.1	1.4	4.0	1.5	.1	3.5	1.9	.0	.9	3.0	1.2	1.2	1.1	1.4
320.	*	2.3	2.9	.1	1.4	3.8	1.4	.0	3.3	1.9	.0	.9	3.3	1.2	1.1	1.1	1.5
325.	*	2.1	2.7	.1	1.3	3.9	1.4	.0	3.1	2.0	.0	.9	3.3	1.2	1.2	1.2	1.5
330.	*	2.5	2.5	.0	1.4	3.7	1.4	.0	3.1	2.0	.0	.8	3.3	1.3	1.2	1.2	1.4
335.	*	2.5	2.3	.0	1.3	3.6	1.3	.0	3.0	2.0	.0	.7	3.2	1.2	1.1	1.1	1.4
340.	*	2.9	2.3	.1	1.2	3.3	1.4	.0	3.0	2.0	.1	.7	3.1	1.2	1.0	1.0	1.3
345.	*	3.1	2.3	.2	1.0	3.5	1.5	.0	3.0	1.9	.2	.6	3.2	1.0	.9	.9	1.1
350.	*	3.2	2.5	.6	.8	3.1	1.6	.0	3.0	1.7	.5	.4	2.9	.8	.7	.6	.9
355.	*	3.1	2.7	1.0	.6	2.6	2.0	.0	3.0	1.3	.9	.2	2.7	.6	.5	.5	.7
360.	*	2.9	2.8	1.4	.5	2.2	2.2	.0	3.1	1.1	1.3	.1	2.6	.4	.2	.2	.5
MAX	*	4.4	4.3	4.6	5.1	4.4	4.0	3.3	4.4	3.0	4.1	4.9	3.3	4.7	4.9	4.6	5.1
DEGR.	*	275	80	95	195	295	60	95	60	245	115	110	70	195	110	200	195

THE HIGHEST CONCENTRATION OF 5.10 PPM OCCURRED AT RECEPTOR REC4 .

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: PARKER & ILLIF
 DATE : 8/ 3/99
 TIME : 12:24:43

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
 RUN: PARKER & ILLIF 2006 SCREENING

The MODE flag has been set to C for calculating CO averages.
 SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	(I
1. PARKER NB APPR	*	1024.0	-1000.0	24.0	.0	*	1414.	315. AG	1555.	6.3	
2. PARKER NB Q	*	72.0	-49.0	938.1	-915.1	*	1225.	135. AG	429.	100.0	
3. PARKER NB Q LEF	*	65.0	-59.0	1858.9	-1852.9	*	2537.	135. AG	296.	100.0	
4. PARKER NB DEP.	*	24.0	.0	-976.0	1000.0	*	1414.	315. AG	2004.	6.3	
5. PARKER NB R	*	113.5	-54.0	313.5	-254.0	*	283.	135. AG	33.	6.3	
6. PARKER SB APPR	*	-1030.0	1000.0	-30.0	.0	*	1414.	135. AG	1260.	6.3	
7. PARKER SB Q	*	-92.5	62.0	-300.2	269.7	*	294.	315. AG	429.	100.0	
8. PARKER SB Q LEFT	*	-75.0	69.0	-1798.4	1782.9	*	2431.	315. AG	296.	100.0	
9. PARKER SB DEP.	*	-30.0	.0	970.0	-1000.0	*	1414.	135. AG	1873.	6.3	
10. ILLIF EB APPR.	*	-1000.0	-26.0	.0	-26.0	*	1000.	90. AG	1435.	7.3	
11. ILLIF EB QUEUE	*	-57.0	-26.0	-776.9	-26.0	*	720.	270. AG	435.	100.0	
12. ILLIF .EB DEP.	*	.0	-26.0	1000.0	-26.0	*	1000.	90. AG	1900.	7.3	
13. ILLIF EB QUEUE LE	*	-75.0	.0	-923.6	-.3	*	849.	270. AG	316.	100.0	
14. ILLIF EB R	*	-1000.0	-48.5	.0	-48.5	*	1000.	90. AG	529.	7.3	
15. ILLIF EB QUEUE R	*	-26.0	-48.5	-242.9	-48.5	*	217.	270. AG	217.	100.0	
16. ILLIF WB APPR.	*	1000.0	34.0	.0	34.0	*	1000.	270. AG	1198.	7.3	
17. ILLIF WB QUEUE	*	41.0	34.0	291.6	34.0	*	251.	90. AG	435.	100.0	
18. ILLIF WB DEP.	*	.0	34.0	-1000.0	34.0	*	1000.	270. AG	1689.	7.3	
19. ILLIF WB QUEUE LE	*	58.0	7.5	112.4	7.5	*	54.	90. AG	316.	100.0	
20. ILLIF WB R	*	225.0	65.5	.0	65.5	*	225.	270. AG	269.	7.3	
21. ILLIF WB QUEUE R	*	.0	65.5	110.3	65.5	*	110.	90. AG	217.	100.0	

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. PARKER NB Q	*	120	74	2.0	1555	2000	129.64	1	3
3. PARKER NB Q LEF	*	120	102	2.0	443	1900	129.64	2	3
7. PARKER SB Q	*	120	74	2.0	1260	2000	129.64	1	3
8. PARKER SB Q LEFT	*	120	102	2.0	433	1900	129.64	2	3
11. ILLIF EB QUEUE	*	120	75	2.0	1435	2000	129.64	2	3
13. ILLIF EB QUEUE LE	*	120	109	2.0	179	1900	129.64	2	3
15. ILLIF EB QUEUE R	*	120	75	2.0	529	2000	129.64	2	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

17. ILLIF WB QUEUE	*	120	75	2.0	1198	2000	129.64	2	3
19. ILLIF WB QUEUE LE	*	120	109	2.0	84	1900	129.64	2	3
21. ILLIF WB QUEUE R	*	120	75	2.0	269	2000	129.64	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*
1. REC 1 SE CORNER	*	120.0	-48.0	6.0	*
2. REC 2 (SW CORNER)	*	-17.5	-58.0	6.0	*
3. REC 3 (NW CORNER)	*	-140.5	64.0	6.0	*
4. REC 4 (NE CORNER)	*	-15.0	79.0	6.0	*
5. REC 5 (E MID-MAIN)	*	220.0	-48.0	6.0	*
6. REC 6 (W MID-MAIN)	*	-117.5	-58.0	6.0	*
7. REC 7 (N MID-LOCAL)	*	-240.5	164.0	6.0	*
8. REC 8 (S MID-LOCAL)	*	82.5	-158.0	6.0	*
9. REC 9	*	220.0	79.0	6.0	*
10. RECEPTOR 10	*	-115.0	179.0	6.0	*
11. REC 11	*	-117.5	-58.0	6.0	*
12. REC12	*	-240.5	64.0	6.0	*
13. REC13	*	220.0	-148.0	6.0	*
14. REC15	*	-80.0	-59.0	6.0	*
15. REC16	*	-80.0	-69.0	6.0	*
16. REC17	*	-70.0	-59.0	6.0	*
17. RECEPTOR 18	*	-70.0	-69.0	6.0	*
18. REC19	*	-60.0	-69.0	6.0	*
19. REC20	*	-60.0	-59.0	6.0	*
20. REC21	*	-50.0	-69.0	6.0	*
21. REC22	*	-50.0	-59.0	6.0	*

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: PARKER & ILLIF																
RUN: PARKER & ILLIF 2006 SCREENING																
ANGLE *	(PPM)															
(DEGR)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16
*																
5.	*	1.6	1.3	2.3	.0	1.4	3.7	2.3	2.2	.0	.0	3.7	1.2	.6	3.3	2.8
10.	*	1.4	1.3	2.2	.0	1.2	3.6	2.2	2.4	.0	.0	3.6	1.2	.6	2.9	2.4
15.	*	1.3	1.3	2.1	.0	1.2	3.4	2.1	2.4	.0	.0	3.4	1.1	.6	2.8	2.4
20.	*	1.2	1.4	2.1	.0	1.2	3.3	2.1	2.3	.0	.0	3.3	1.1	.5	2.5	2.1
25.	*	1.3	1.5	2.0	.0	1.2	3.1	1.9	2.3	.0	.0	3.1	1.1	.5	2.5	2.2
30.	*	1.4	1.7	1.9	.0	1.2	3.1	1.9	2.3	.0	.0	3.1	1.1	.4	2.5	2.1
35.	*	1.4	1.8	2.0	.0	1.2	3.1	1.9	2.2	.0	.0	3.1	1.1	.4	2.7	2.1
40.	*	1.4	1.9	2.1	.0	1.1	3.2	2.1	2.3	.0	.0	3.2	1.1	.3	2.7	2.0
45.	*	1.4	2.0	2.1	.0	1.0	3.1	2.1	2.2	.0	.0	3.1	1.1	.3	2.7	2.2
50.	*	1.4	2.2	2.0	.0	1.0	3.3	2.1	2.2	.0	.0	3.3	1.1	.3	2.9	2.1
55.	*	1.4	2.2	1.9	.0	.9	3.3	1.9	2.0	.0	.0	3.3	1.1	.3	2.8	2.2
60.	*	1.4	2.1	1.9	.0	.9	3.4	1.9	2.0	.0	.0	3.4	1.1	.3	2.9	2.2
65.	*	1.3	2.2	2.0	.1	.9	3.4	2.1	1.8	.0	.0	3.4	1.2	.3	3.1	2.3
70.	*	1.3	2.0	2.2	.2	.9	3.5	2.1	1.9	.0	.0	3.5	1.0	.3	2.9	2.1
75.	*	1.2	2.3	2.2	.4	1.0	3.4	2.1	2.0	.0	.0	3.4	1.1	.3	2.9	2.2
80.	*	1.1	2.3	2.3	.7	1.0	3.2	2.2	1.9	.1	.0	3.2	1.4	.2	2.9	2.0
85.	*	1.0	2.1	2.6	1.2	.9	2.9	2.3	1.8	.1	.0	2.9	1.6	.1	2.5	1.7
90.	*	.8	2.0	2.7	1.6	.8	2.6	2.7	1.8	.3	.0	2.6	1.6	.1	2.3	1.5
95.	*	.7	2.0	2.8	2.0	.7	2.3	2.8	1.8	.5	.3	2.3	2.0	.0	2.2	1.2
100.	*	.4	2.0	2.7	2.2	.4	1.9	3.0	2.0	.6	.3	1.9	2.3	.0	1.9	1.2
105.	*	.3	1.9	2.7	2.4	.3	1.8	3.1	2.0	.7	.5	1.8	2.3	.0	1.8	1.4
110.	*	.2	2.1	2.6	2.4	.2	1.6	3.3	2.1	.8	.7	1.6	2.3	.0	1.6	1.4
115.	*	.2	2.2	2.9	2.4	.1	1.4	3.4	2.2	1.0	.8	1.4	2.4	.1	1.7	1.5
120.	*	.5	2.3	2.9	2.8	.1	1.3	3.4	2.3	1.1	1.0	1.3	2.8	.4	1.6	1.5
125.	*	1.1	2.2	3.0	2.8	.3	1.2	3.2	2.2	1.2	1.6	1.2	2.8	1.0	1.4	1.3
130.	*	1.6	2.0	2.9	2.9	.5	1.0	3.2	2.0	1.5	1.9	1.0	2.7	1.4	1.1	1.0
135.	*	2.2	1.5	2.5	3.2	.8	.7	2.7	1.5	1.6	2.3	.7	2.4	2.0	1.0	.8
140.	*	2.5	1.2	2.3	3.4	.9	.4	2.2	1.1	1.9	2.2	.4	2.1	2.5	.6	.5
145.	*	2.8	.8	2.2	3.2	1.2	.3	1.5	.8	2.1	2.2	.3	2.0	2.8	.4	.3
150.	*	3.0	.4	2.0	2.9	1.4	.1	1.4	.4	2.2	1.9	.1	1.8	3.0	.0	.0
155.	*	2.7	.1	1.7	2.2	1.4	.0	1.1	.1	2.2	1.9	.0	1.8	2.7	.0	.0
160.	*	2.7	.1	1.6	1.6	1.3	.0	.9	.1	2.2	2.0	.0	1.7	2.7	.0	.0
165.	*	2.6	.1	1.7	1.4	1.3	.0	.9	.1	2.2	2.2	.0	1.7	2.6	.0	.0
170.	*	2.5	.0	1.7	1.3	1.3	.0	.9	.0	2.2	2.2	.0	1.7	2.5	.0	.0
175.	*	2.3	.0	1.7	1.0	1.3	.0	.9	.0	2.3	2.4	.0	1.6	2.3	.0	.0
180.	*	2.3	.0	1.7	1.3	1.3	.0	.9	.0	2.3	2.6	.0	1.6	2.3	.0	.0
185.	*	2.1	.0	1.7	1.2	1.1	.0	.9	.0	2.3	2.6	.0	1.6	2.1	.0	.0
190.	*	2.0	.0	1.7	1.2	1.0	.0	.8	.0	2.3	2.6	.0	1.6	2.0	.0	.0
195.	*	2.0	.0	1.7	1.4	1.0	.0	.8	.0	2.2	2.7	.0	1.5	2.0	.0	.0
200.	*	1.9	.0	1.7	1.4	.9	.0	.8	.0	2.2	2.7	.0	1.5	1.9	.0	.0
205.	*	1.9	.0	1.8	1.6	.9	.0	.8	.0	2.2	2.6	.0	1.6	1.9	.0	.0
210.	*	1.9	.0	1.8	1.6	.9	.1	.8	.0	2.2	2.6	.1	1.6	1.9	.0	.0
215.	*	1.9	.0	1.8	1.8	.9	.1	.8	.0	2.1	2.6	.1	1.6	1.9	.1	.0
220.	*	1.9	.0	1.7	2.0	.9	.1	.9	.0	2.1	2.7	.1	1.6	1.9	.1	.0
225.	*	2.0	.0	1.7	2.2	1.0	.1	.9	.0	2.3	2.7	.1	1.6	1.9	.1	.0
230.	*	2.0	.0	1.9	2.3	1.0	.1	1.0	.0	2.3	2.8	.1	1.8	1.9	.1	.0

Technical Support Document (DRAFT)
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235.	*	2.0	.1	1.8	2.5	1.0	.1	1.0	.0	2.4	2.7	.1	1.8	1.9	.1	.0	.1	.0
240.	*	2.0	.1	1.9	2.4	1.0	.2	.9	.0	2.4	2.6	.2	1.9	1.9	.2	.0	.2	.0
245.	*	1.8	.3	2.0	2.6	1.0	.4	.8	.0	2.5	2.7	.4	1.9	1.9	.2	.0	.2	.0
250.	*	2.0	.5	2.0	2.8	1.2	.6	.7	.0	2.6	2.7	.6	1.9	1.9	.5	.2	.5	.2
255.	*	2.3	1.0	1.9	2.7	1.5	.9	.7	.0	2.6	2.5	.9	1.9	2.0	.9	.2	1.0	.2
260.	*	2.5	1.6	1.9	2.6	1.6	1.6	.4	.0	2.7	2.3	1.6	1.6	2.1	1.5	.8	1.5	.8
265.	*	3.0	2.3	1.5	2.5	2.0	2.3	.3	.1	2.2	2.2	2.3	1.4	2.3	2.3	1.4	2.3	1.4
270.	*	3.1	3.0	1.1	2.5	2.2	3.1	.1	.4	1.9	2.0	3.1	1.1	2.7	3.0	1.8	3.0	1.8
275.	*	3.4	3.6	.8	2.2	2.7	3.7	.0	.6	1.6	2.0	3.7	.7	3.1	3.7	2.4	3.7	2.4
280.	*	3.4	4.0	.5	2.3	2.7	4.2	.0	.9	1.3	2.1	4.2	.4	3.2	4.0	2.8	4.1	2.8
285.	*	3.0	4.0	.2	2.2	2.9	4.3	.0	1.1	.7	2.1	4.3	.2	3.3	4.3	3.2	4.3	3.2
290.	*	2.7	3.7	.1	2.2	2.4	4.3	.0	1.5	.6	2.1	4.3	.1	3.3	4.1	3.3	4.1	3.2
295.	*	2.8	3.4	.3	2.3	2.4	3.9	.1	1.5	.6	2.1	3.9	.1	3.4	3.9	3.1	3.9	3.2
300.	*	2.8	3.3	.5	2.3	2.3	3.8	.3	1.3	.6	2.0	3.8	.1	3.3	3.7	3.0	3.7	3.0
305.	*	2.8	3.4	.8	2.2	2.4	3.8	.6	1.8	.4	1.9	3.8	.1	2.8	3.8	3.0	3.8	3.2
310.	*	2.7	3.4	1.3	1.8	2.4	3.6	1.1	1.9	.3	1.6	3.6	.1	2.9	4.0	3.2	4.1	3.2
315.	*	2.6	3.6	1.9	1.5	2.0	3.8	1.5	1.8	.1	1.2	3.8	.4	2.3	3.9	3.4	4.1	3.4
320.	*	2.3	3.6	2.3	1.0	1.7	3.8	1.8	2.1	.1	.9	3.8	.5	1.9	4.3	3.5	4.3	3.8
325.	*	2.3	3.3	2.7	.7	1.6	4.1	2.2	1.9	.0	.5	4.1	.7	1.3	4.3	3.8	4.4	3.9
330.	*	2.1	2.9	2.9	.3	1.4	4.1	2.4	1.7	.0	.3	4.1	.9	1.2	4.3	3.8	4.4	3.9
335.	*	1.8	2.3	2.9	.1	1.3	4.1	2.6	1.8	.0	.1	4.1	1.0	.8	4.2	3.9	4.2	3.8
340.	*	1.7	2.1	2.9	.1	1.2	4.2	2.6	1.5	.0	.1	4.2	1.1	.7	4.2	3.9	4.1	3.8
345.	*	1.7	1.9	2.7	.0	1.3	4.0	2.5	1.7	.0	.0	4.0	1.0	.7	4.0	3.6	3.8	3.6
350.	*	1.6	1.6	2.7	.0	1.3	4.0	2.6	1.9	.0	.0	4.0	1.1	.7	3.9	3.5	3.7	3.2
355.	*	1.7	1.4	2.5	.0	1.4	3.9	2.5	2.1	.0	.0	3.9	1.1	.7	3.7	3.3	3.4	3.2
360.	*	1.6	1.3	2.5	.0	1.4	3.9	2.4	2.2	.0	.0	3.9	1.2	.7	3.5	3.0	3.3	2.8
-----*																		
MAX	*	3.4	4.0	3.0	3.4	2.9	4.3	3.4	2.4	2.7	2.8	4.3	2.8	3.4	4.3	3.9	4.4	3.9
DEGR.	*	275	280	125	140	285	285	115	10	260	230	285	120	295	285	335	325	325
THE HIGHEST CONCENTRATION OF 4.50 PPM OCCURRED AT RECEPTOR REC19.																		

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

PAGE 1

JOB: FOOTHILLS & ARAPAHOE SCREENING 2006

RUN: FOOTHILLS & ARAPAHOE. 2006

DATE : 8/ 3/99

TIME : 12: 1:52

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	* *	X1	Y1	X2	Y2	* *	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	(1
1. FOOTHILLS NB APPR	*	36.0	-1000.0	36.0	.0	*	1000.	360. AG	1819.	6.0	
2. FOOTHILLS NB Q	*	36.0	-72.0	36.0	-3187.0	*	3115.	180. AG	453.	100.0	
3. FOOTHILLS NB Q LEF	*	12.0	-72.0	12.0	-144.4	*	72.	180. AG	618.	100.0	
4. FOOTHILLS NB DEP.	*	36.0	.0	-464.0	1000.0	*	1118.	333. AG	2772.	6.0	
5. FOOTHILLS NB R	*	54.0	-747.0	54.0	.0	*	747.	360. AG	244.	6.0	
6. FOOTHILLS NB Q R	*	54.0	-72.0	54.0	-174.7	*	103.	180. AG	226.	100.0	
7. FOOTHILLS SB APPR	*	-536.0	1000.0	-36.0	.0	*	1118.	153. AG	1803.	6.0	
8. FOOTHILLS SB Q	*	-36.0	72.0	-1795.8	3338.2	*	3710.	332. AG	476.	100.0	
9. FOOTHILLS SB Q LEFT	*	-12.0	72.0	-367.4	782.8	*	795.	333. AG	641.	100.0	
10. FOOTHILLS SB DEP.	*	-36.0	.0	-36.0	-1000.0	*	1000.	180. AG	3057.	6.0	
11. FOOTHILLS SB R	*	-202.5	297.0	-54.0	.0	*	332.	153. AG	225.	6.0	
12. FOOTHILLS SB Q R	*	-54.0	72.0	-98.6	161.1	*	100.	333. AG	238.	100.0	
13. ARAPAHOE EB APPR.	*	-1000.0	-42.0	.0	-42.0	*	1000.	90. AG	1197.	7.2	
14. ARAPAHOE EB QUEUE	*	-60.0	-42.0	-217.1	-42.0	*	157.	270. AG	624.	100.0	
15. ARAPAHOE .EB DEP.	*	.0	-42.0	1000.0	-42.0	*	1000.	90. AG	1789.	7.2	
16. ARAPAHOE EB QUEUE LE	*	-60.0	-12.0	-1053.5	-12.2	*	993.	270. AG	613.	100.0	
17. ARAPAHOE EB R	*	-110.0	-66.0	.0	-66.0	*	110.	90. AG	637.	7.2	
18. ARAPAHOE EB QUEUE R	*	-60.0	-66.0	-312.0	-66.0	*	252.	270. AG	208.	100.0	
19. ARAPAHOE WB APPR.	*	1000.0	42.0	.0	42.0	*	1000.	270. AG	1103.	7.2	
20. ARAPAHOE WB QUEUE	*	72.0	42.0	208.5	42.0	*	136.	90. AG	590.	100.0	
21. ARAPAHOE WB DEP.	*	.0	42.0	-1000.0	42.0	*	1000.	270. AG	1580.	7.2	
22. ARAPAHOE WB QUEUE LE	*	72.0	12.0	1183.6	12.2	*	1112.	90. AG	590.	100.0	
23. ARAPAHOE WB R	*	156.0	66.0	.0	66.0	*	156.	270. AG	477.	7.2	
24. ARAPAHOE WB QUEUE R	*	60.0	66.0	237.4	66.0	*	177.	90. AG	197.	100.0	

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. FOOTHILLS NB Q	*	120	77	2.0	1819	2000	131.57	1	3
3. FOOTHILLS NB Q LEF	*	120	105	2.0	252	1900	131.57	2	3
6. FOOTHILLS NB Q R	*	120	77	2.0	244	2000	131.57	1	3
8. FOOTHILLS SB Q	*	120	81	2.0	1803	2000	131.57	1	3
9. FOOTHILLS SB Q LEFT	*	120	109	2.0	348	1900	131.57	2	3
12. FOOTHILLS SB Q R	*	120	81	2.0	225	2000	131.57	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

14.	ARAPAHOE	EB	QUEUE	*	120	72	2.0	1197	2000	129.33	2	3
16.	ARAPAHOE	EB	QUEUE	LE*	120	106	2.0	477	1900	129.33	2	3
18.	ARAPAHOE	EB	QUEUE	R*	120	72	2.0	637	2000	129.33	2	3
20.	ARAPAHOE	WB	QUEUE	*	120	68	2.0	1103	2000	129.33	2	3
22.	ARAPAHOE	WB	QUEUE	LE*	120	102	2.0	618	1900	129.33	2	3
24.	ARAPAHOE	WB	QUEUE	R*	120	68	2.0	477	2000	129.33	2	3

RECEPTOR LOCATIONS

		*	COORDINATES (FT)			*
RECEPTOR		*	X	Y	Z	*
1.	REC 4 (NE CORNER)	*	24.5	72.5	6.0	*
2.	REC 1 (SE CORNER)	*	58.0	-70.0	6.0	*
3.	REC 2 (SW CORNER)	*	-58.5	-72.0	6.0	*
4.	REC 3 (NW CORNER)	*	-97.0	70.0	6.0	*
5.	REC 5 (E MID-MAIN)	*	58.0	-170.0	6.0	*
6.	REC 6 (W MID-MAIN)	*	-25.5	170.0	6.0	*
7.	REC 7 (N MID-LOCAL)	*	-197.0	70.0	6.0	*
8.	REC 8 (S MID-LOCAL)	*	-158.0	-72.0	6.0	*
9.	REC 9	*	-58.5	-172.0	6.0	*
10.	REC10	*	124.5	-72.0	6.0	*
11.	REC11	*	124.5	72.5	6.0	*
12.	REC12	*	-147.0	170.0	6.0	*
13.	REC13	*	58.0	-160.0	6.0	*
14.	REC14	*	58.0	-180.0	6.0	*
15.	REC15	*	68.0	-160.0	6.0	*
16.	REC16	*	68.0	-170.0	6.0	*
17.	REC17	*	68.0	-180.0	6.0	*
18.	REC18	*	58.0	-150.0	6.0	*
19.	REC19	*	68.0	-150.0	6.0	*

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: FOOTHILLS & ARAPAHOE SCREENING 2006										RUN: FOOTHILLS & ARAPAHOE. 2006								
ANGLE *	(PPM)																	
(DEGR) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	
5. *	.1	1.6	3.9	3.3	3.2	.1	1.5	5.4	2.6	2.1	.0	3.0	3.2	2.9	1.7	1.7	1.7	
10. *	.1	1.7	3.2	3.1	2.7	.1	1.5	5.3	2.1	2.0	.0	2.9	2.7	2.4	1.4	1.4	1.4	
15. *	.1	1.8	2.7	3.1	2.5	.1	1.5	5.1	1.9	2.0	.0	2.8	2.4	2.2	1.3	1.3	1.3	
20. *	.1	1.9	2.2	3.1	2.2	.1	1.5	5.2	1.9	2.0	.0	2.7	2.0	2.0	1.3	1.3	1.3	
25. *	.0	2.0	1.9	2.9	1.8	.1	1.4	5.1	2.0	2.0	.0	2.6	1.9	1.6	1.3	1.2	1.3	
30. *	.0	2.0	2.0	2.9	1.7	.0	1.4	5.1	2.2	1.9	.0	2.6	1.7	1.4	1.2	1.2	1.3	
35. *	.0	2.1	2.1	2.8	1.5	.0	1.2	5.1	2.4	1.8	.0	2.4	1.5	1.2	1.2	1.1	1.3	
40. *	.0	2.0	2.0	2.7	1.2	.0	1.3	5.0	2.7	1.7	.0	2.3	1.3	1.1	1.0	1.0	.9	
45. *	.0	2.2	2.2	2.6	1.1	.0	1.3	4.9	3.1	1.7	.1	2.2	1.1	.9	.9	.9	.9	
50. *	.0	2.1	2.3	2.7	1.1	.0	1.3	4.9	3.2	1.6	.1	2.2	1.1	.9	.9	.9	.8	
55. *	.0	2.0	2.4	2.7	.9	.0	1.3	5.1	3.1	1.6	.1	2.3	1.0	.8	.9	.8	.8	
60. *	.0	2.1	2.6	2.7	1.0	.0	1.4	5.1	3.0	1.5	.1	2.4	1.0	.8	.9	.9	.8	
65. *	.1	1.9	2.8	2.6	1.0	.0	1.5	5.0	3.0	1.7	.2	2.4	1.0	.8	.9	.9	.8	
70. *	.4	1.8	3.0	2.6	1.0	.0	1.5	5.0	2.8	1.7	.4	2.3	1.0	.8	.9	.8	.8	
75. *	.7	1.8	3.1	2.7	.9	.0	1.7	5.0	2.6	1.8	.8	2.3	.9	.8	.8	.8	.8	
80. *	1.2	1.7	3.1	2.8	.6	.0	1.9	4.6	2.2	1.7	1.3	2.3	.6	.5	.6	.5	.5	
85. *	1.9	1.6	3.1	3.2	.4	.1	2.2	4.2	1.9	1.4	1.9	2.5	.4	.3	.4	.4	.3	
90. *	2.7	1.3	3.0	3.3	.3	.2	2.3	3.6	1.8	1.0	2.7	2.7	.3	.2	.3	.3	.3	
95. *	3.2	.8	2.8	3.4	.1	.5	2.4	2.9	1.5	.7	3.3	3.4	.1	.1	.1	.1	.3	
100. *	3.7	.5	2.5	3.3	.0	.8	2.2	2.4	1.4	.5	3.9	3.8	.0	.0	.0	.0	.0	
105. *	3.9	.3	2.4	3.1	.0	1.1	2.0	1.9	1.3	.3	4.4	4.0	.1	.0	.0	.0	.0	
110. *	3.6	.1	2.5	2.6	.0	1.2	2.1	1.5	1.3	.1	4.6	4.1	.1	.0	.0	.0	.0	
115. *	3.4	.1	2.4	2.1	.0	1.3	1.9	1.2	1.4	.1	4.6	3.9	.1	.0	.0	.0	.0	
120. *	3.1	.1	2.3	1.9	.0	1.4	2.0	1.0	1.4	.1	4.6	3.8	.1	.0	.0	.0	.0	
125. *	2.7	.2	2.2	1.9	.0	1.6	2.4	.9	1.4	.0	4.5	3.3	.1	.0	.0	.0	.0	
130. *	2.3	.1	2.2	1.7	.0	1.4	2.6	.9	1.5	.0	4.6	2.8	.2	.0	.0	.0	.0	
135. *	2.0	.1	2.1	2.0	.0	1.4	2.8	.8	1.5	.0	4.3	2.7	.2	.0	.0	.0	.0	
140. *	1.6	.2	2.0	2.2	.0	1.3	2.8	.9	1.5	.0	4.2	2.3	.2	.0	.0	.0	.0	
145. *	1.4	.2	1.9	2.4	.0	1.5	2.8	.8	1.6	.0	4.1	2.1	.2	.0	.0	.0	.0	
150. *	1.4	.4	1.9	2.6	.2	1.5	2.9	.8	1.7	.0	4.0	1.9	.4	.1	.0	.0	.0	
155. *	1.6	.7	1.9	2.8	.3	2.0	2.7	.8	1.8	.0	3.7	2.1	.5	.2	.0	.0	.0	
160. *	1.8	1.1	2.0	3.0	.5	2.3	2.8	.9	1.9	.0	3.7	2.1	.8	.4	.1	.1	.3	
165. *	2.2	1.7	2.1	2.9	1.0	3.1	2.8	.9	2.1	.1	3.8	2.3	1.3	.8	.4	.4	.4	
170. *	2.5	2.4	2.1	3.0	1.5	3.5	2.8	.7	2.1	.2	3.9	2.0	1.9	1.3	.8	.8	.8	
175. *	3.1	3.2	1.8	3.0	2.2	4.1	2.5	.6	1.8	.5	4.2	1.9	2.6	1.9	1.3	1.3	1.3	
180. *	3.1	4.0	1.5	2.9	2.8	4.2	2.4	.4	1.5	.8	4.5	1.7	3.3	2.5	1.7	1.7	1.7	
185. *	3.0	4.5	1.1	2.5	3.2	4.5	2.1	.2	1.0	.9	4.8	1.5	3.7	2.9	2.2	2.2	2.2	
190. *	2.6	4.8	.7	2.3	3.4	4.6	1.8	.1	.7	1.1	5.1	1.3	3.9	3.1	2.4	2.4	2.4	
195. *	2.4	4.8	.4	2.1	3.4	4.5	1.7	.0	.4	1.2	4.9	1.1	4.0	3.1	2.6	2.5	2.5	
200. *	2.2	4.7	.2	2.1	3.4	4.5	1.5	.0	.2	1.3	5.0	1.0	3.9	3.0	2.5	2.4	2.4	
205. *	2.1	4.4	.1	2.1	3.2	4.5	1.4	.0	.1	1.2	4.8	1.0	3.7	2.8	2.4	2.2	2.2	
210. *	2.0	4.4	.1	2.2	3.1	4.5	1.5	.0	.1	1.2	4.7	.9	3.7	2.7	2.4	2.2	2.2	
215. *	2.1	4.3	.1	2.2	3.1	4.4	1.4	.0	.1	1.3	4.6	.9	3.6	2.6	2.4	2.1	2.2	
220. *	2.2	4.2	.1	2.2	2.9	4.5	1.5	.1	.1	1.4	4.3	.8	3.3	2.4	2.3	2.1	2.0	
225. *	2.2	4.0	.1	2.0	2.9	4.4	1.5	.1	.1	1.3	4.5	.8	3.1	2.3	2.3	2.0	1.9	
230. *	2.8	3.9	.2	1.9	2.8	4.4	1.4	.1	.1	1.4	4.4	.8	3.1	2.2	2.2	1.8	1.7	
235. *	2.9	3.8	.1	2.0	2.8	4.3	1.6	.1	.0	1.5	4.3	.9	3.0	2.2	2.2	1.8	1.7	

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

240.	*	3.1	3.7	.2	1.9	2.8	4.3	1.6	.2	.0	1.6	4.0	.9	2.9	2.1	2.2	1.9	1.7
245.	*	3.2	3.4	.4	1.8	2.6	4.2	1.6	.3	.0	1.8	4.2	.9	2.8	2.0	2.3	1.9	1.7
250.	*	3.1	3.4	.7	1.8	2.6	4.1	1.7	.5	.0	1.8	4.4	.8	2.8	2.0	2.2	1.9	1.6
255.	*	3.3	3.3	1.1	1.7	2.6	4.0	1.7	.8	.0	2.1	4.2	.7	2.7	1.9	2.2	2.0	1.6
260.	*	3.3	3.4	1.8	1.6	2.6	3.7	1.6	1.4	.0	2.3	4.0	.4	2.7	1.9	2.4	2.1	1.7
265.	*	3.4	3.8	2.7	1.4	2.8	3.5	1.4	1.9	.1	2.7	3.7	.3	2.9	2.1	2.5	2.3	1.9
270.	*	3.1	4.1	3.7	1.1	3.0	3.3	1.1	2.7	.2	3.0	3.2	.2	3.1	2.2	2.6	2.4	1.8
275.	*	3.1	4.2	4.3	.7	3.5	3.4	.7	3.3	.4	3.0	2.6	.1	3.6	2.4	3.1	3.0	2.5
280.	*	3.2	4.2	5.1	.5	3.8	3.2	.4	3.8	.6	3.0	2.3	.0	4.0	2.8	3.7	3.4	2.9
285.	*	3.2	3.8	5.5	.3	4.0	3.4	.3	4.1	.9	2.6	2.2	.0	4.4	3.2	3.9	3.6	3.2
290.	*	3.3	3.0	5.5	.1	4.4	3.5	.1	4.3	1.0	2.3	2.0	.0	4.9	3.5	4.3	3.8	3.2
295.	*	3.6	2.8	5.5	.1	4.7	3.6	.1	4.5	1.0	2.0	1.8	.0	5.1	3.9	4.4	4.1	3.7
300.	*	3.8	2.4	5.2	.1	5.1	3.8	.1	4.5	1.2	1.7	1.8	.0	5.3	4.2	4.5	4.3	3.8
305.	*	4.2	2.2	5.0	.1	5.2	4.0	.0	4.4	1.3	2.0	1.9	.1	5.4	4.5	4.6	4.4	4.0
310.	*	4.2	2.6	4.8	.1	5.4	4.2	.0	4.3	1.5	2.3	1.9	.1	5.5	4.6	4.6	4.4	4.2
315.	*	4.5	2.7	4.7	.2	5.7	4.5	.0	4.4	1.6	2.8	1.9	.2	5.9	5.0	4.7	4.8	4.6
320.	*	4.6	3.1	4.5	.6	5.9	4.5	.1	4.4	1.8	3.1	1.7	.6	5.8	5.3	4.9	4.9	5.0
325.	*	4.4	3.4	4.7	1.2	6.4	4.2	.2	4.3	1.9	3.1	1.4	1.2	6.5	5.8	5.4	5.4	5.2
330.	*	3.7	3.9	5.2	1.9	6.8	3.8	.4	4.4	2.3	3.3	1.2	1.8	6.8	6.4	5.3	5.4	5.6
335.	*	3.0	3.9	5.0	2.6	6.8	3.0	.8	4.5	2.7	3.0	.6	2.5	6.8	6.4	5.1	5.3	5.2
340.	*	2.1	3.2	5.4	3.0	6.5	2.1	1.0	4.7	3.0	2.6	.4	2.8	6.3	6.1	4.4	4.7	4.8
345.	*	1.1	2.7	5.4	3.3	5.5	1.2	1.2	4.8	3.1	2.3	.1	3.2	5.2	5.3	3.6	3.8	3.8
350.	*	.7	2.2	5.4	3.4	5.0	.7	1.5	5.0	3.2	2.2	.0	3.3	4.9	4.7	2.9	2.9	3.2
355.	*	.3	1.8	5.1	3.4	4.2	.3	1.6	5.3	3.1	2.0	.0	3.2	4.1	4.0	2.3	2.4	2.2
360.	*	.1	1.6	4.6	3.3	3.8	.1	1.6	5.4	2.9	2.0	.0	3.1	3.8	3.4	1.9	1.9	2.0
-----*																		
MAX	*	4.6	4.8	5.5	3.4	6.8	4.6	2.9	5.4	3.2	3.3	5.1	4.1	6.8	6.4	5.4	5.4	5.6
DEGR.	*	320	190	285	95	330	190	150	5	50	330	190	110	330	330	325	325	330

THE HIGHEST CONCENTRATION OF 6.80 PPM OCCURRED AT RECEPTOR REC5 .

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE 1

JOB: UNIVERSITY AND ARAPAHOE

RUN: UNIVERSITY AND ARAPAHOE 2006 SCREENING

DATE : 8/ 3/99

TIME : 11:39: 3

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	(I
1. UNIVERSITY NB APPR	*	28.0	-1000.0	28.0	.0	*	1000.	360. AG	1242.	7.0	
2. UNIVERSITY NB Q	*	28.0	-66.0	28.0	-306.4	*	240.	180. AG	431.	100.0	
3. UNIVERSITY NB Q LEF*	*	8.0	-66.0	8.0	-777.1	*	711.	180. AG	304.	100.0	
4. UNIVERSITY NB DEP.	*	28.0	.0	28.0	1000.0	*	1000.	360. AG	2078.	7.0	
5. UNIVERSITY SB APR	*	-26.0	1000.0	-26.0	.0	*	1000.	180. AG	1464.	7.0	
6. UNIVERSITY SB Q	*	-26.0	69.0	-26.0	341.2	*	272.	360. AG	395.	100.0	
7. UNIVERSITY SB Q LEFT*	*	.0	69.0	.0	1043.0	*	974.	360. AG	286.	100.0	
8. UNIVERSITY SB DP.	*	-26.0	.0	-26.0	-1000.0	*	1000.	180. AG	2176.	7.0	
9. UNIVERSITY SB R	*	-45.5	344.0	-45.5	.0	*	344.	180. AG	374.	7.0	
10. ARAPAHOE EB APPR.	*	-1000.0	-37.0	.0	-37.0	*	1000.	90. AG	810.	8.2	
11. ARAPAHOE EB QUEUE	*	-53.0	-37.0	-217.8	-37.0	*	165.	270. AG	508.	100.0	
12. ARAPAHOE .EB DEP.	*	.0	-37.0	1000.0	-37.0	*	1000.	90. AG	1288.	8.2	
13. ARAPAHOE EB QUEUE LE*	*	-53.0	-13.0	-162.7	-13.0	*	110.	270. AG	607.	100.0	
14. ARAPAHOE EB R	*	-428.0	-57.5	.0	-57.5	*	428.	90. AG	323.	8.2	
15. ARAPAHOE WB APPR.	*	1000.0	37.0	.0	37.0	*	1000.	270. AG	1082.	8.2	
16. ARAPAHOE WB QUEUE	*	43.0	37.0	3793.3	38.2	*	3750.	90. AG	607.	100.0	
17. ARAPAHOE WB DEP.	*	.0	37.0	-1000.0	37.0	*	1000.	270. AG	1700.	8.2	
18. ARAPAHOE WB QUEUE LE*	*	43.0	13.0	119.4	13.0	*	76.	90. AG	508.	100.0	
19. UNIVERSITY SB R QUEU*	*	-45.5	69.0	-45.5	217.2	*	148.	360. AG	198.	100.0	
20. ARAPAHOE EB R Q	*	-53.0	-57.5	-180.2	-57.5	*	127.	270. AG	254.	100.0	
21. ARAPAHOE WB FR	*	343.0	59.0	.0	59.0	*	343.	270. AG	484.	8.2	

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. UNIVERSITY NB Q	*	100	61	2.0	1242	2000	131.61	1	3
3. UNIVERSITY NB Q LEF*	*	100	86	2.0	244	1900	131.61	2	3
6. UNIVERSITY SB Q	*	100	56	2.0	1464	2000	131.61	1	3
7. UNIVERSITY SB Q LEFT*	*	100	81	2.0	360	1900	131.61	2	3
11. ARAPAHOE EB QUEUE	*	100	72	2.0	810	2000	131.61	2	3
13. ARAPAHOE EB QUEUE LE*	*	100	86	2.0	352	1900	131.61	2	3
16. ARAPAHOE WB QUEUE	*	100	86	2.0	1082	2000	131.61	2	3
18. ARAPAHOE WB QUEUE LE*	*	100	72	2.0	388	1900	131.61	2	3
19. UNIVERSITY SB R QUEU*	*	100	56	2.0	484	2000	131.61	1	3
20. ARAPAHOE EB R Q	*	100	72	2.0	323	2000	131.61	2	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

RECEPTOR LOCATIONS					

RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*

1. REC 1 (SE CORNER)	*	52.0	-60.0	6.0	*
2. REC 2 (SW CORNER)	*	-50.0	-65.0	6.0	*
3. REC 3 (NW CORNER)	*	-54.0	60.0	6.0	*
4. REC 4 (NE CORNER)	*	50.0	70.0	6.0	*
5. REC 5 (E MID-MAIN)	*	52.0	-160.0	6.0	*
6. REC 6 (W MID-MAIN)	*	-54.0	160.0	6.0	*
7. REC 7 (N MID-LOCAL)	*	-154.0	60.0	6.0	*
8. REC 8 (S MID-LOCAL)	*	-150.0	-65.0	6.0	*
9. REC9	*	50.0	170.0	6.0	*
10. REC10	*	-50.0	-160.0	6.0	*
11. REC11	*	152.0	-60.0	6.0	*
12. REC12	*	150.0	70.0	6.0	*
13. REC13	*	-140.0	-65.0	6.0	*
14. REC14	*	-160.0	-65.0	6.0	*
15. REC15	*	-140.0	-75.0	6.0	*
16. REC16	*	-150.0	-75.0	6.0	*
17. REC17	*	-160.0	-75.0	6.0	*

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

JOB: UNIVERSITY AND ARAPAHOE										RUN: UNIVERSITY AND ARAPAHOE 2006 SCREENING								
(DEGR)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	
5.	*	2.4	3.2	3.2	.9	1.9	2.9	.3	4.0	.9	2.4	1.1	.0	4.2	3.8	3.7	3.5	3.4
10.	*	2.1	3.0	3.6	.6	1.7	3.3	.5	4.4	.6	2.3	1.1	.0	4.5	4.0	3.9	3.9	3.9
15.	*	2.0	2.7	3.7	.4	1.2	3.6	.5	4.4	.4	2.1	1.1	.0	4.9	4.3	4.3	3.9	3.8
20.	*	1.9	2.3	3.7	.2	.9	3.7	.6	4.8	.2	2.1	1.1	.0	4.9	4.6	4.3	4.3	4.3
25.	*	1.7	2.0	3.6	.1	1.0	3.7	1.0	4.9	.1	2.1	1.1	.0	5.0	4.6	4.4	4.3	4.3
30.	*	1.7	1.8	3.3	.1	.8	3.6	.9	4.8	.1	2.0	1.1	.0	5.0	4.8	4.2	4.3	4.3
35.	*	1.7	1.8	3.1	.1	.8	3.4	1.0	4.8	.1	2.2	1.2	.0	4.7	4.8	4.2	4.2	4.3
40.	*	1.8	1.7	2.8	.1	.7	3.3	1.0	5.0	.1	2.3	1.3	.0	4.7	5.0	4.2	4.2	4.3
45.	*	1.7	1.9	2.6	.1	.7	3.3	1.1	4.8	.1	2.4	1.3	.0	4.8	4.8	3.7	3.9	4.3
50.	*	1.6	2.1	2.2	.1	.7	2.9	1.0	4.7	.1	2.3	1.3	.0	4.8	4.7	4.0	4.1	3.9
55.	*	1.7	2.2	2.1	.0	.8	2.9	1.0	5.0	.0	2.3	1.5	.0	4.9	4.8	3.9	4.1	4.3
60.	*	1.7	2.4	2.0	.0	.9	2.8	1.1	4.9	.0	2.6	1.6	.0	4.7	5.1	3.7	3.7	3.8
65.	*	1.7	2.4	2.0	.1	.9	2.7	1.2	5.2	.0	2.5	1.6	.1	5.0	5.2	3.4	3.7	3.8
70.	*	1.8	2.6	2.0	.3	.9	2.7	1.2	4.8	.0	2.5	1.8	.3	4.8	5.1	3.5	3.4	3.8
75.	*	1.8	2.7	2.2	.6	.8	2.8	1.4	4.9	.1	2.4	1.7	.6	4.6	4.6	3.3	3.4	3.8
80.	*	1.7	2.6	2.5	1.0	.8	2.9	1.7	4.6	.2	2.4	1.7	1.0	4.4	4.7	3.0	3.1	3.3
85.	*	1.6	2.6	2.9	1.7	.6	3.1	2.1	4.3	.3	2.2	1.6	1.7	4.2	4.4	2.7	2.7	2.8
90.	*	1.3	2.4	3.4	2.3	.5	3.4	2.5	3.7	.5	2.1	1.3	2.3	3.6	3.9	2.1	2.3	2.4
95.	*	.9	2.2	3.5	2.6	.2	3.6	2.5	2.8	.8	1.8	.9	2.6	2.8	2.9	1.6	1.7	1.8
100.	*	.5	1.8	3.4	2.9	.1	3.8	2.4	2.3	1.0	1.7	.5	2.9	2.3	2.3	1.2	1.3	1.3
105.	*	.3	1.7	3.2	3.0	.0	3.8	2.0	1.8	1.0	1.6	.3	2.9	1.8	1.9	1.1	1.0	1.0
110.	*	.1	1.6	2.6	2.9	.0	3.7	2.0	1.4	1.0	1.6	.1	2.8	1.4	1.4	.8	.8	.9
115.	*	.1	1.6	2.3	2.9	.0	3.8	1.8	1.2	1.0	1.6	.1	2.7	1.3	1.2	.9	.8	.8
120.	*	.1	1.6	1.9	2.8	.0	3.8	1.9	1.1	.9	1.6	.1	2.5	1.2	1.1	.9	.8	.8
125.	*	.0	1.7	1.8	2.8	.0	3.9	2.0	1.0	.9	1.7	.0	2.4	1.1	1.0	.9	.8	.8
130.	*	.0	1.8	1.8	2.9	.0	3.9	2.4	1.0	1.0	1.8	.0	2.3	1.2	1.0	.9	.8	.8
135.	*	.0	2.0	1.5	3.0	.0	4.0	2.6	1.0	.9	1.9	.0	2.3	1.0	.9	.9	.9	.8
140.	*	.0	2.0	1.7	3.0	.0	3.8	2.7	.9	1.0	1.9	.0	2.2	1.0	.9	.9	.8	.8
145.	*	.0	2.0	1.7	2.9	.0	3.9	2.9	.9	1.0	1.8	.0	2.1	.9	.9	.8	.8	.8
150.	*	.0	2.0	1.9	2.8	.0	4.0	3.0	.8	1.0	1.8	.0	1.9	.9	.8	.7	.7	.7
155.	*	.2	2.1	2.2	2.7	.1	3.9	2.9	.7	1.1	1.8	.0	1.8	.7	.6	.7	.7	.6
160.	*	.2	2.1	2.4	2.9	.2	3.9	2.8	.5	1.3	1.8	.0	1.8	.7	.5	.6	.5	.5
165.	*	.5	2.1	2.6	3.1	.5	3.7	2.7	.5	1.5	1.7	.0	1.8	.5	.5	.5	.5	.5
170.	*	.9	1.8	2.7	3.4	.6	3.6	2.5	.4	1.8	1.7	.0	1.8	.5	.4	.5	.4	.4
175.	*	1.4	1.5	2.7	3.5	1.2	3.3	2.3	.2	1.9	1.3	.0	1.8	.2	.2	.2	.2	.2
180.	*	1.9	1.2	2.5	3.8	1.7	3.0	2.2	.2	2.2	1.1	.1	2.0	.2	.1	.2	.1	.2
185.	*	2.4	.9	2.6	3.7	2.1	2.7	1.9	.0	2.3	.9	.3	2.3	.1	.0	.1	.0	.0
190.	*	2.8	.5	2.1	3.5	2.6	2.2	1.6	.0	2.3	.5	.5	2.5	.0	.0	.0	.0	.0
195.	*	3.1	.3	2.0	3.1	2.9	1.7	1.4	.0	2.2	.3	.5	2.7	.0	.0	.0	.0	.0
200.	*	3.1	.2	2.1	2.7	3.0	1.3	1.3	.0	2.2	.2	.8	2.9	.0	.0	.0	.0	.0
205.	*	3.0	.1	2.1	2.2	2.9	1.2	1.0	.0	2.1	.1	.9	3.2	.0	.0	.0	.0	.0
210.	*	2.8	.1	2.2	2.2	2.8	1.1	1.1	.1	2.0	.1	.9	3.4	.1	.1	.0	.0	.0
215.	*	2.7	.1	2.3	2.2	2.8	1.0	.9	.1	2.5	.1	1.0	3.4	.1	.1	.0	.0	.0
220.	*	2.6	.0	2.2	2.0	2.7	.7	.8	.1	2.7	.0	1.0	3.5	.1	.1	.0	.0	.0
225.	*	2.5	.1	2.1	2.2	2.6	.6	.7	.1	2.6	.0	1.1	3.5	.1	.1	.0	.0	.0
230.	*	2.2	.1	2.0	2.4	2.4	.4	.8	.1	2.5	.0	1.1	3.5	.1	.1	.0	.0	.0
235.	*	2.2	.1	1.8	2.3	2.4	.3	.7	.2	2.5	.0	1.1	3.7	.2	.1	.0	.0	.0

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

240.	*	2.1	.2	1.5	2.5	2.4	.3	.7	.2	2.3	.0	.9	3.6	.2	.2	.0	.0	.0
245.	*	1.9	.3	1.4	2.3	2.3	.3	.8	.3	2.3	.0	.9	3.3	.3	.2	.0	.0	.0
250.	*	2.1	.7	1.2	2.3	2.3	.3	.8	.4	2.0	.0	.9	3.2	.5	.4	.0	.0	.0
255.	*	2.1	1.0	1.1	2.2	2.3	.3	.9	.6	2.0	.0	1.0	2.8	.7	.6	.0	.0	.0
260.	*	2.3	1.3	1.0	2.3	2.3	.2	.9	.8	2.0	.0	1.4	2.4	1.0	.6	.1	.1	.1
265.	*	2.5	2.0	.9	2.1	2.3	.1	.9	1.2	2.0	.0	1.4	2.2	1.3	1.1	.3	.2	.1
270.	*	2.7	2.6	.8	1.9	2.3	.1	.7	1.5	2.0	.0	1.6	1.9	1.8	1.3	.6	.5	.4
275.	*	2.8	3.1	.5	1.9	2.5	.0	.5	1.8	1.9	.2	1.8	1.4	2.1	1.5	.8	.6	.5
280.	*	2.7	3.5	.4	1.8	2.7	.0	.4	2.2	1.9	.2	1.7	1.1	2.5	1.9	1.1	.9	.5
285.	*	2.6	3.9	.2	1.7	2.8	.0	.2	2.4	1.7	.2	1.7	1.1	2.7	2.0	1.4	1.1	.5
290.	*	2.3	4.2	.2	1.8	2.9	.0	.2	2.6	1.6	.3	1.9	.9	2.9	2.3	1.5	1.2	1.0
295.	*	2.0	4.2	.1	1.8	3.2	.0	.1	2.8	1.8	.4	1.7	.9	3.0	2.5	1.8	1.5	1.1
300.	*	1.8	4.3	.1	1.9	3.4	.0	.1	3.0	1.8	.5	1.8	.9	3.1	2.7	1.9	1.7	1.4
305.	*	1.6	4.2	.1	1.9	3.5	.0	.1	3.0	1.8	.7	2.0	.9	3.1	2.7	2.1	1.9	1.6
310.	*	1.6	4.1	.0	1.9	3.5	.0	.0	2.9	1.7	.9	2.2	.9	3.2	2.7	2.2	2.0	1.6
315.	*	1.5	3.9	.0	1.9	3.4	.1	.0	2.9	1.7	1.0	2.4	.8	3.1	2.8	2.5	2.2	1.9
320.	*	1.6	3.7	.0	2.1	3.3	.1	.0	3.0	1.9	1.2	2.6	.8	3.1	2.8	2.5	2.2	2.1
325.	*	1.4	3.5	.0	2.0	3.5	.1	.0	2.9	1.8	1.3	2.5	.7	3.1	2.8	2.6	2.4	2.1
330.	*	1.8	3.4	.1	2.1	3.3	.1	.0	2.9	1.9	1.4	2.4	.8	3.2	2.7	2.6	2.4	2.1
335.	*	2.2	3.3	.1	2.1	3.3	.1	.0	3.0	1.8	1.4	2.3	.7	3.2	2.8	2.7	2.5	2.4
340.	*	2.4	3.2	.4	2.1	3.1	.4	.0	3.1	1.8	1.3	2.2	.7	3.3	2.9	2.8	2.6	2.4
345.	*	2.5	3.1	.8	2.1	3.2	.7	.0	3.2	1.9	1.7	1.9	.5	3.5	3.0	2.9	2.7	2.5
350.	*	2.8	3.2	1.2	1.9	2.9	1.0	.0	3.3	1.7	2.1	1.8	.5	3.6	3.1	3.0	2.8	2.6
355.	*	2.8	3.2	1.9	1.8	2.7	1.6	.0	3.4	1.6	2.1	1.5	.2	3.7	3.2	3.2	2.9	2.7
360.	*	2.8	3.5	2.5	1.4	2.4	2.2	.2	3.8	1.2	2.4	1.4	.2	4.1	3.5	3.6	3.3	3.0
-----*																		
MAX	*	3.1	4.3	3.7	3.8	3.5	4.0	3.0	5.2	2.7	2.6	2.6	3.7	5.0	5.2	4.4	4.3	4.1
DEGR.	*	195	300	15	180	305	135	150	65	220	60	320	235	25	65	25	20	35

THE HIGHEST CONCENTRATION OF 5.20 PPM OCCURRED AT RECEPTOR REC8 .CAMP 2006 Hour 14 CAL3QHC: LIJ

CAMP 2006 Hour 14 CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: CAMP REVISED LINKS RUN:

DATE : 8/23/99
TIME : 14:26:45

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG TYPE	VPH	EF	H
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)
-----*											

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

1.	BROADWAY SB @ CHAMPA*	-15.0	572.0	-15.0	115.0 *	457.	180.	AG	687.	14.6	.0
2.	BROADWAY SB@CHAMPA Q*	-15.0	171.0	-15.0	218.6 *	48.	360.	AG	530.	100.0	.0
3.	BROADWAY SB @ STOUT *	-15.0	115.0	-15.0	-356.0 *	471.	180.	AG	737.	14.6	.0
4.	BROADWAY SB@STOUT Q *	-15.0	-312.0	-15.0	-265.1 *	47.	360.	AG	488.	100.0	.0
5.	BROADWAY NB @ STOUT *	10.0	-815.0	10.0	-312.0 *	503.	360.	AG	430.	14.6	.0
6.	BROADWAY NB @STOUT Q*	10.0	-400.0	10.0	-441.1 *	41.	180.	AG	326.	100.0	.0
7.	BROADWAY NB @ CHAMPA*	22.0	-312.0	22.0	580.0 *	892.	360.	AG	430.	14.6	.0
8.	BROADWAY NB @CHAMPAQ*	22.0	99.0	22.0	54.3 *	45.	180.	AG	353.	100.0	.0
9.	BROADWAY NB @ CURTIS*	17.5	148.0	17.5	639.0 *	491.	360.	AG	351.	14.6	.0
10.	BROADWAY NB @CURTISQ*	17.5	580.0	17.5	552.5 *	28.	180.	AG	600.	100.0	.0
11.	CHAMPA SWB @ BROADW *	518.0	653.0	.0	131.0 *	735.	225.	AG	324.	18.8	.0
12.	CHAMPA SWB @BROADW Q*	58.0	190.0	69.4	201.5 *	16.	45.	AG	474.	100.0	.0
13.	CHAMPA SWB @ 20TH *	.0	131.0	-470.0	-353.0 *	675.	224.	AG	404.	18.8	.0
14.	CHAMPA SWB @ 20TH Q *	-442.0	-325.0	-426.2	-308.7 *	23.	44.	AG	530.	100.0	.0
15.	21ST SEB @ CHAMPA *	-393.0	202.0	-151.0	-27.0 *	333.	133.	AG	87.	20.9	.0
16.	21ST SEB @ BROADWAY *	-151.0	-27.0	.0	-175.0 *	211.	134.	AG	94.	20.9	.0
17.	21ST SEB @ STOUT *	.0	-175.0	89.0	-261.0 *	124.	134.	AG	23.	20.9	.0
18.	21ST NWB @ STOUT *	331.0	-472.0	107.0	-255.0 *	312.	314.	AG	24.	20.9	.0
19.	21ST NWB @ BROADWAY *	107.0	-255.0	.0	-151.0 *	149.	314.	AG	152.	20.9	.0
20.	21ST NWB @ CHAMPA *	.0	-151.0	-142.0	-12.0 *	199.	314.	AG	152.	20.9	.0
21.	21ST NWB @ CURTIS *	-142.0	-12.0	-381.0	221.0 *	334.	314.	AG	45.	20.9	.0
22.	BROADWAY NB @CHAMPQL*	5.5	89.0	5.5	85.5 *	3.	180.	AG	298.	100.0	.0
23.	BROADWAY NB @21QL *	5.0	-205.0	5.0	-208.5 *	3.	180.	AG	298.	100.0	.0
24.	BROADWAY SB @21QL *	-4.5	-116.0	-4.5	-112.5 *	3.	360.	AG	298.	100.0	.0
25.	BROADWAY SB@CALIFORN*	-15.0	-356.0	-15.0	-811.0 *	455.	180.	AG	648.	14.6	.0
26.	21ST SEB @ CALIF *	89.0	-261.0	321.0	-487.0 *	324.	134.	AG	36.	20.9	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	* RED TIME (SEC)	* CLEARANCE LOST TIME (SEC)	* APPROACH VOL (VPH)	* SATURATION FLOW RATE (VPH)	* IDLE EM FAC (gm/hr)	* SIGNAL TYPE	* ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	75	38	2.0	687	2000	130.05	1	3
4. BROADWAY SB@STOUT Q *	75	35	2.0	737	2000	130.05	1	3
6. BROADWAY NB @STOUT Q*	75	35	2.0	430	2000	130.05	1	3
8. BROADWAY NB @CHAMPAQ*	75	38	2.0	430	2000	130.05	1	3
10. BROADWAY NB @CURTISQ*	75	43	2.0	351	2000	130.05	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	263	2000	130.05	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	328	2000	130.05	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	10	2000	130.05	2	3
23. BROADWAY NB @21QL *	75	64	2.0	10	2000	130.05	2	3
24. BROADWAY SB @21QL *	75	64	2.0	10	2000	130.05	2	3

RECEPTOR LOCATIONS

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

RECEPTOR	* *	COORDINATES (FT)			* *
		X	Y	Z	
1. RECEPTOR 1 CAMP	*	-61.0	.0	10.0	*
2. REC 2	*	-40.0	232.0	6.0	*
3. REC 3	*	-40.0	132.0	6.0	*
4. REC 4	*	-90.0	82.0	6.0	*
5. REC 5	*	-149.0	21.0	6.0	*
6. REC 6	*	-40.0	48.0	6.0	*
7. REC 7	*	-106.5	-20.0	6.0	*
8. REC 8	*	-40.0	-27.0	6.0	*
9. REC 9	*	-40.0	-163.0	6.0	*
10. REC 10	*	-40.0	-263.0	6.0	*
11. REC 11	*	43.5	-66.0	6.0	*
12. REC 12	*	43.5	-243.0	6.0	*
13. REC 13	*	43.5	-166.0	6.0	*
14. REC 14	*	43.5	-15.0	6.0	*
15. REC 15	*	93.5	185.0	6.0	*
16. REC 16	*	93.5	266.0	6.0	*
17. REC 17	*	43.5	316.0	6.0	*
18. REC 18	*	43.5	216.0	6.0	*
19. REC 19	*	43.5	135.0	6.0	*
20. REC 20	*	-40.0	-85.5	6.0	*
21. REC 21	*	142.1	235.0	6.0	*
22. REC 22	*	143.5	-266.0	6.0	*
23. REC 23	*	43.5	35.0	6.0	*
24. REC 24	*	143.5	316.0	6.0	*
25. REC 25	*	-189.4	-18.0	6.0	*
26. REC 26	*	-146.0	-61.5	6.0	*
27. REC 27	*	-90.0	-113.0	6.0	*

JOB: CAMP REVISED LINKS

RUN:

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND	* *	CONCENTRATION																
ANGLE	*	(PPM)																
(DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17
15.	*	.9	.7	1.4	.5	.1	1.4	.7	1.1	1.1	.8	.2	.2	.2	.3	.3	.0	.2

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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WIND  * CONCENTRATION
ANGLE *      (PPM)
(DEGR) * REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
15.   *      .3      .0      .3      .0      .2      .7      .7
-----*-----
THE HIGHEST CONCENTRATION OF      1.40 PPM OCCURRED AT RECEPTOR REC3 .
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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 15

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 8/23/99
 TIME : 11:41:49

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.1 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	609.	14.5	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	213.2	*	42.	360. AG	525.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	654.	14.5	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-270.3	*	42.	360. AG	483.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	884.	14.5	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-472.2	*	72.	180. AG	322.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	720.	14.5	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	35.2	*	64.	180. AG	350.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	1144.	14.5	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	503.6	*	76.	180. AG	594.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	430.	18.8	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	73.1	205.2	*	21.	45. AG	469.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	536.	18.8	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-421.3	-303.7	*	30.	44. AG	525.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	106.	20.8	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	106.	20.8	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	35.	20.8	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	35.	20.8	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	150.	20.8	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	150.	20.8	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	44.	20.8	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	85.5	*	3.	180. AG	295.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-208.5	*	3.	180. AG	295.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-112.5	*	3.	360. AG	295.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	767.	14.5	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	35.	20.8	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	609	2000	128.68	1	3

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

4. BROADWAY SB@STOUT Q *	75	35	2.0	654	2000	128.68	1	3
6. BROADWAY NB @STOUT Q*	75	35	2.0	755	2000	128.68	1	3
8. BROADWAY NB @CHAMPAQ*	75	38	2.0	615	2000	128.68	1	3
10. BROADWAY NB @CURTISQ*	75	43	2.0	977	2000	128.68	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	346	2000	128.68	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	431	2000	128.68	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	10	2000	128.68	2	3
23. BROADWAY NB @21QL *	75	64	2.0	10	2000	128.68	2	3
24. BROADWAY SB @21QL *	75	64	2.0	10	2000	128.68	2	3

ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1

2. *	.7	.8	1.2	.2	.0	1.3	.5	1.1	1.2	.9	1.0	.9	1.0	1.4	.5	.2	1.2
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WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27

2. *	.3	.0	1.4	.0	.1	.4	.6
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THE HIGHEST CONCENTRATION OF 1.60 PPM OCCURRED AT RECEPTOR REC19.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 16

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 8/23/99
TIME : 11:40:42

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION * LINK COORDINATES (FT) * LENGTH BRG TYPE VPH EF H
 * X1 Y1 X2 Y2 * (FT) (DEG) (G/MI) (FT)

1. BROADWAY SB @ CHAMPA* -15.0 572.0 -15.0 115.0 * 457. 180. AG 749. 24.9 .0
2. BROADWAY SB@CHAMPA Q* -15.0 171.0 -15.0 222.7 * 52. 360. AG 524. 100.0 .0
3. BROADWAY SB @ STOUT * -15.0 115.0 -15.0 -356.0 * 471. 180. AG 803. 24.9 .0
4. BROADWAY SB@STOUT Q * -15.0 -312.0 -15.0 -260.9 * 51. 360. AG 482. 100.0 .0
5. BROADWAY NB @ STOUT * 10.0 -815.0 10.0 -312.0 * 503. 360. AG 1087. 12.9 .0
6. BROADWAY NB @STOUT Q* 10.0 -400.0 10.0 -488.8 * 89. 180. AG 321. 100.0 .0
7. BROADWAY NB @ CHAMPA* 22.0 -312.0 22.0 580.0 * 892. 360. AG 886. 12.9 .0
8. BROADWAY NB @CHAMPAQ* 22.0 99.0 22.0 20.5 * 79. 180. AG 349. 100.0 .0
9. BROADWAY NB @ CURTIS* 17.5 148.0 17.5 639.0 * 491. 360. AG 1407. 12.9 .0
10. BROADWAY NB @CURTISQ* 17.5 580.0 17.5 485.9 * 94. 180. AG 592. 100.0 .0
11. CHAMPA SWB @ BROADW * 518.0 653.0 .0 131.0 * 735. 225. AG 529. 20.8 .0
12. CHAMPA SWB @BROADW Q* 58.0 190.0 76.6 208.7 * 26. 45. AG 468. 100.0 .0
13. CHAMPA SWB @ 20TH * .0 131.0 -470.0 -353.0 * 675. 224. AG 658. 20.8 .0
14. CHAMPA SWB @ 20TH Q * -442.0 -325.0 -416.5 -298.7 * 37. 44. AG 524. 100.0 .0
15. 21ST SEB @ CHAMPA * -393.0 202.0 -151.0 -27.0 * 333. 133. AG 131. 23.8 .0
16. 21ST SEB @ BROADWAY * -151.0 -27.0 .0 -175.0 * 211. 134. AG 131. 23.8 .0
17. 21ST SEB @ STOUT * .0 -175.0 89.0 -261.0 * 124. 134. AG 44. 23.8 .0
18. 21ST NWB @ STOUT * 331.0 -472.0 107.0 -255.0 * 312. 314. AG 44. 23.8 .0
19. 21ST NWB @ BROADWAY * 107.0 -255.0 .0 -151.0 * 149. 314. AG 185. 23.8 .0
20. 21ST NWB @ CHAMPA * .0 -151.0 -142.0 -12.0 * 199. 314. AG 185. 23.8 .0
21. 21ST NWB @ CURTIS * -142.0 -12.0 -381.0 221.0 * 334. 314. AG 54. 23.8 .0
22. BROADWAY NB @CHAMPQL* 5.5 89.0 5.5 84.8 * 4. 180. AG 294. 100.0 .0
23. BROADWAY NB @21QL * 5.0 -205.0 5.0 -209.2 * 4. 180. AG 294. 100.0 .0
24. BROADWAY SB @21QL * -4.5 -116.0 -4.5 -111.8 * 4. 360. AG 294. 100.0 .0
25. BROADWAY SB@CALIFORN* -15.0 -356.0 -15.0 -811.0 * 455. 180. AG 942. 24.9 .0
26. 21ST SEB @ CALIF * 89.0 -261.0 321.0 -487.0 * 324. 134. AG 44. 23.8 .0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL ARRIVAL
 * LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE
 * (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

-----*																				
2.	BROADWAY	SB@CHAMPA	Q *	75	38	2.0	749	2000	128.41	1	3									
4.	BROADWAY	SB@STOUT	Q *	75	35	2.0	803	2000	128.41	1	3									
6.	BROADWAY	NB @STOUT	Q*	75	35	2.0	928	2000	128.41	1	3									
8.	BROADWAY	NB @CHAMPA	Q*	75	38	2.0	756	2000	128.41	1	3									
10.	BROADWAY	NB @CURTIS	Q*	75	43	2.0	1201	2000	128.41	1	3									
12.	CHAMPA	SWB @BROADW	Q *	75	34	2.0	426	2000	128.41	1	3									
14.	CHAMPA	SWB @ 20TH	Q *	75	38	2.0	530	2000	128.41	1	3									
22.	BROADWAY	NB @CHAMPQL	*	75	64	2.0	12	2000	128.41	2	3									
23.	BROADWAY	NB @21QL	*	75	64	2.0	12	2000	128.41	2	3									
24.	BROADWAY	SB @21QL	*	75	64	2.0	12	2000	128.41	2	3									
-----*																				
ANGLE *				(PPM)																
(DEGR)*				REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17
-----*																				
29.	*	1.7	1.7	2.4	1.4	.9	2.4	1.5	2.0	1.6	1.3	.2	.2	.2	.2	.6	.2	.2		
-----*																				
ANGLE *				(PPM)																
(DEGR)*				REC21	REC22	REC23	REC24	REC25	REC26	REC27										
-----*																				
29.	*	.6	.0	.3	.2	.9	1.6	1.2												
-----*																				
THE HIGHEST CONCENTRATION OF 2.40 PPM OCCURRED AT RECEPTOR REC3 .																				

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 17
 DATE : 8/25/99
 TIME : 12:44:30

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG TYPE	VPH	EF	H
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	842.	15.9	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	222.7	*	52.	360. AG	519.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	903.	15.9	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-260.7	*	51.	360. AG	478.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	1222.	15.9	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-488.8	*	89.	180. AG	319.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	996.	8.2	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	20.5	*	79.	180. AG	346.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	1582.	8.2	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	485.9	*	94.	180. AG	587.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	594.	13.2	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	76.6	208.7	*	26.	45. AG	464.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	740.	13.2	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-416.5	-298.7	*	37.	44. AG	519.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	147.	15.9	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	147.	15.9	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	49.	15.9	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	208.	15.9	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	208.	15.9	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	61.	15.9	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	49.	15.9	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	84.8	*	4.	180. AG	291.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-209.2	*	4.	180. AG	291.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-111.8	*	4.	360. AG	291.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	1059.	15.9	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	49.	15.9	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL	ARRIVAL
	*	LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	*	(SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	749	2000	127.32	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	804	2000	127.32	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	928	2000	127.32	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8. BROADWAY NB @CHAMPAQ*	75	38	2.0	756	2000	127.32	1	3
10. BROADWAY NB @CURTISQ*	75	43	2.0	1202	2000	127.32	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	426	2000	127.32	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	530	2000	127.32	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	12	2000	127.32	2	3
23. BROADWAY NB @21QL *	75	64	2.0	12	2000	127.32	2	3
24. BROADWAY SB @21QL *	75	64	2.0	12	2000	127.32	2	3

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1
 -----*-----
 51. * .8 1.1 1.6 1.2 1.0 1.3 .8 1.0 .8 .8 .0 .1 .0 .0 .2 .4 .1

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
 -----*-----
 51. * .2 .0 .0 .4 1.2 .8 .6
 -----*-----

THE HIGHEST CONCENTRATION OF 1.60 PPM OCCURRED AT RECEPTOR REC3 .

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 18 CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
 DATE : 8/25/99
 TIME : 12:47: 9

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG TYPE	VPH	EF	H
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	495.	24.1	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	201.3	*	30.	360. AG	532.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	531.	24.1	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-282.0	*	30.	360. AG	490.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	310.	24.1	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-426.4	*	26.	180. AG	327.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	310.	12.4	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	70.3	*	29.	180. AG	355.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	253.	12.4	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	562.4	*	18.	180. AG	602.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	234.	20.2	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	65.3	197.4	*	10.	45. AG	476.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	291.	20.2	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-431.9	-314.6	*	15.	44. AG	532.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	63.	23.0	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	68.	23.0	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	16.	23.0	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	109.	23.0	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	109.	23.0	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	32.	23.0	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	26.	23.0	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	86.6	*	2.	180. AG	299.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-207.4	*	2.	180. AG	299.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-113.6	*	2.	360. AG	299.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	467.	23.0	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	17.	23.0	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL	ARRIVAL
	*	LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	*	(SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	440	2000	130.47	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	473	2000	130.47	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	276	2000	130.47	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8.	BROADWAY NB @CHAMPAQ*	75	38	2.0	276	2000	130.47	1	3
10.	BROADWAY NB @CURTISQ*	75	43	2.0	225	2000	130.47	1	3
12.	CHAMPA SWB @BROADW Q*	75	34	2.0	169	2000	130.47	1	3
14.	CHAMPA SWB @ 20TH Q *	75	38	2.0	210	2000	130.47	1	3
22.	BROADWAY NB @CHAMPQL*	75	64	2.0	7	2000	130.47	2	3
23.	BROADWAY NB @21QL *	75	64	2.0	7	2000	130.47	2	3
24.	BROADWAY SB @21QL *	75	64	2.0	7	2000	130.47	2	3

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1
 -----*-----
 146. * .4 1.4 1.0 .6 .4 .6 .2 .6 .6 1.5 .0 .0 .1 .0 .0 .1 .1

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
 -----*-----
 146. * .0 .1 .0 .1 .3 .2 .3
 -----*-----

THE HIGHEST CONCENTRATION OF 1.50 PPM OCCURRED AT RECEPTOR REC10.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 19 CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
 DATE : 8/23/99
 TIME : 11:30:23

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	583.	15.2	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	211.3	*	40.	360. AG	554.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	625.	15.2	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-272.2	*	40.	360. AG	510.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	365.	15.2	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-434.8	*	35.	180. AG	340.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	365.	15.2	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	61.2	*	38.	180. AG	369.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	298.	15.2	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	556.7	*	23.	180. AG	627.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	275.	19.6	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	67.7	199.8	*	14.	45. AG	496.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	343.	19.6	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-428.7	-311.3	*	19.	44. AG	554.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	74.	21.1	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	80.	21.1	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	19.	21.1	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	20.	21.1	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	129.	21.1	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	129.	21.1	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	38.	21.1	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	85.9	*	3.	180. AG	311.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-208.1	*	3.	180. AG	311.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-112.9	*	3.	360. AG	311.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	551.	15.2	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	30.	21.1	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	583	2000	135.91	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	625	2000	135.91	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	365	2000	135.91	1	3
8. BROADWAY NB @CHAMPAQ*	*	75	38	2.0	365	2000	135.91	1	3
10. BROADWAY NB @CURTISQ*	*	75	43	2.0	298	2000	135.91	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

12. CHAMPA SWB @BROADW Q*	75	34	2.0	223	2000	135.91	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	278	2000	135.91	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	9	2000	135.91	2	3
23. BROADWAY NB @21QL *	75	64	2.0	9	2000	135.91	2	3
24. BROADWAY SB @21QL *	75	64	2.0	9	2000	135.91	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR) * REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
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223. * .1 .1 .3 .3 .3 .3 .4 .0 .0 .0 .4 .9 .6 .4 .5 .9 .8

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR) * REC21 REC22 REC23 REC24 REC25 REC26 REC27
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223. * .7 .3 .4 .7 .2 .3 .0
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THE HIGHEST CONCENTRATION OF 1.20 PPM OCCURRED AT RECEPTOR REC18.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 20 CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 8/25/99

TIME : 14:24:37

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG TYPE	VPH	EF	H
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	492.	15.8	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	205.1	*	34.	360. AG	542.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	528.	15.8	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-278.3	*	34.	360. AG	499.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	309.	15.8	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-429.5	*	29.	180. AG	333.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	309.	15.8	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	67.0	*	32.	180. AG	361.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	252.	15.8	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	560.2	*	20.	180. AG	613.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	233.	20.4	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	66.3	198.3	*	12.	45. AG	485.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	290.	20.4	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-430.7	-313.4	*	16.	44. AG	542.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	63.	22.0	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	67.	22.0	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	16.	22.0	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	17.	22.0	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	109.	22.0	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	109.	22.0	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	32.	22.0	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	86.6	*	2.	180. AG	304.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-207.4	*	2.	180. AG	304.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-113.6	*	2.	360. AG	304.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	465.	15.8	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	26.	22.0	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL	ARRIVAL
	*	LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	*	(SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	492	2000	132.97	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	528	2000	132.97	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	309	2000	132.97	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8.	BROADWAY NB @CHAMPAQ*	75	38	2.0	309	2000	132.97	1	3
10.	BROADWAY NB @CURTISQ*	75	43	2.0	252	2000	132.97	1	3
12.	CHAMPA SWB @BROADW Q*	75	34	2.0	189	2000	132.97	1	3
14.	CHAMPA SWB @ 20TH Q *	75	38	2.0	235	2000	132.97	1	3
22.	BROADWAY NB @CHAMPQL*	75	64	2.0	7	2000	132.97	2	3
23.	BROADWAY NB @21QL *	75	64	2.0	7	2000	132.97	2	3
24.	BROADWAY SB @21QL *	75	64	2.0	7	2000	132.97	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
-----*-----
221. * .1 .1 .3 .3 .3 .2 .3 .0 .0 .0 .4 .8 .6 .4 .5 .8 .8

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
221. * .6 .3 .4 .7 .2 .2 .0
-----*-----

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THE HIGHEST CONCENTRATION OF 1.00 PPM OCCURRED AT RECEPTOR REC18.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 21 CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
 DATE : 8/25/99
 TIME : 13:51: 7

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.1 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	427.	16.3	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	204.2	*	33.	360. AG	557.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	459.	16.3	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-279.1	*	33.	360. AG	513.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	268.	16.3	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-428.7	*	29.	180. AG	342.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	268.	16.3	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	67.8	*	31.	180. AG	371.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	218.	16.3	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	561.0	*	19.	180. AG	630.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	202.	21.1	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	66.0	198.0	*	11.	45. AG	498.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	251.	21.1	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-431.0	-313.7	*	16.	44. AG	557.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	54.	22.6	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	58.	22.6	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	14.	22.6	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	15.	22.6	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	95.	22.6	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	95.	22.6	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	28.	22.6	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	86.6	*	2.	180. AG	313.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-207.4	*	2.	180. AG	313.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-113.6	*	2.	360. AG	313.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	404.	16.3	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	22.	22.6	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	480	2000	136.54	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	516	2000	136.54	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	301	2000	136.54	1	3
8. BROADWAY NB @CHAMPAQ*	*	75	38	2.0	301	2000	136.54	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

10. BROADWAY NB @CURTISQ*	75	43	2.0	245	2000	136.54	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	184	2000	136.54	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	229	2000	136.54	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	7	2000	136.54	2	3
23. BROADWAY NB @21QL *	75	64	2.0	7	2000	136.54	2	3
24. BROADWAY SB @21QL *	75	64	2.0	7	2000	136.54	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
-----*-----
267. * .1 .0 .0 .0 .0 .2 .3 .1 .1 .0 .3 .2 .3 .3 1.0 .3 .3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
267. * .3 .2 .3 .1 .0 .2 .1
-----*-----

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THE HIGHEST CONCENTRATION OF 1.00 PPM OCCURRED AT RECEPTOR REC15.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 22
DATE : 8/25/99
TIME : 13:49:30

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

```
VS =      .0 CM/S      VD =      .0 CM/S      Z0 = 175. CM
U =  1.0 M/S      CLAS =    4 (D)      ATIM =  60. MINUTES      MIXH = 1000. M      AMB =      .0 PPM      BRG :
```

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG TYPE	VPH	EF	H
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)
	*					*					
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	277.	15.8	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	190.1	*	19.	360. AG	557.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	297.	15.8	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-293.1	*	19.	360. AG	513.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	173.	15.8	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-416.5	*	16.	180. AG	342.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	173.	15.8	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	81.1	*	18.	180. AG	371.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	141.	15.8	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	568.9	*	11.	180. AG	630.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	131.	20.5	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	62.6	194.6	*	7.	45. AG	498.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	163.	20.5	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-435.6	-318.4	*	9.	44. AG	557.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	35.	22.2	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	38.	22.2	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	9.	22.2	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	61.	22.2	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	61.	22.2	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	18.	22.2	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	14.	22.2	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	87.6	*	1.	180. AG	313.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-206.4	*	1.	180. AG	313.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-114.6	*	1.	360. AG	313.	100.0	.0
25. BROADWAY SB@CALIFORM*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	261.	15.8	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	10.	22.2	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK	DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2.	BROADWAY SB@CHAMPA Q*		75	38	2.0	277	2000	136.54	1	3
4.	BROADWAY SB@STOUT Q *		75	35	2.0	297	2000	136.54	1	3
6.	BROADWAY NB @STOUT Q*		75	35	2.0	173	2000	136.54	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8. BROADWAY NB @CHAMPAQ*	75	38	2.0	173	2000	136.54	1	3
10. BROADWAY NB @CURTISQ*	75	43	2.0	141	2000	136.54	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	106	2000	136.54	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	132	2000	136.54	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	4	2000	136.54	2	3
23. BROADWAY NB @21QL *	75	64	2.0	4	2000	136.54	2	3
24. BROADWAY SB @21QL *	75	64	2.0	4	2000	136.54	2	3

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1

82. *	.1	.2	.4	.3	.2	.2	.1	.2	.2	.2	.0	.0	.0	.0	.0	.1	.0
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WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27

82. *	.0	.0	.0	.1	.1	.1	.1
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THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC3.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2006 Hour 23

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 8/25/99

TIME : 14:13: 7

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	155.	17.6	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	181.6	*	11.	360. AG	604.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	167.	17.6	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-301.5	*	11.	360. AG	556.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	97.	17.6	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-409.2	*	9.	180. AG	371.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	97.	17.6	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	89.0	*	10.	180. AG	402.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	79.	17.6	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	573.9	*	6.	180. AG	683.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	73.	22.8	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	60.6	192.6	*	4.	45. AG	540.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	91.	22.8	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-438.5	-321.4	*	5.	44. AG	604.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	20.	24.5	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	21.	24.5	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	5.	24.5	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	5.	24.5	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	34.	24.5	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	34.	24.5	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	10.	24.5	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	88.3	*	1.	180. AG	339.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-205.7	*	1.	180. AG	339.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-115.3	*	1.	360. AG	339.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	147.	17.6	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	8.	24.5	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	155	2000	148.05	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	167	2000	148.05	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	97	2000	148.05	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8. BROADWAY NB @CHAMPAQ*	75	38	2.0	97	2000	148.05	1	3
10. BROADWAY NB @CURTISQ*	75	43	2.0	79	2000	148.05	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	60	2000	148.05	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	74	2000	148.05	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	2	2000	148.05	2	3
23. BROADWAY NB @21QL *	75	64	2.0	2	2000	148.05	2	3
24. BROADWAY SB @21QL *	75	64	2.0	2	2000	148.05	2	3

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1
 -----*-----
 208. * .0 .0 .1 .1 .1 .0 .0 .0 .0 .0 .2 .2 .3 .2 .0 .1 .4

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
 -----*-----
 208. * .0 .0 .2 .1 .1 .0 .0
 -----*-----

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC17.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 14

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:11:27

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	788.	13.6	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	225.4	*	54.	360. AG	560.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	845.	13.6	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-258.2	*	54.	360. AG	516.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	494.	13.6	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-447.3	*	47.	180. AG	344.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	494.	13.6	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	47.7	*	51.	180. AG	373.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	403.	13.6	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	548.5	*	32.	180. AG	634.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	372.	17.7	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	71.1	203.2	*	19.	45. AG	501.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	463.	17.7	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-423.9	-306.4	*	26.	44. AG	560.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	100.	19.6	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	108.	19.6	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	26.	19.6	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	174.	19.6	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	174.	19.6	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	51.	19.6	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	41.	19.6	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	84.8	*	4.	180. AG	314.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-209.2	*	4.	180. AG	314.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-111.8	*	4.	360. AG	314.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	744.	13.6	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	27.	19.6	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	788	2000	137.34	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	845	2000	137.34	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	494	2000	137.34	1	3
8. BROADWAY NB @CHAMPAQ*	*	75	38	2.0	494	2000	137.34	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

10. BROADWAY NB @CURTISQ*	75	43	2.0	403	2000	137.34	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	302	2000	137.34	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	376	2000	137.34	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	12	2000	137.34	2	3
23. BROADWAY NB @21QL *	75	64	2.0	12	2000	137.34	2	3
24. BROADWAY SB @21QL *	75	64	2.0	12	2000	137.34	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
-----*-----
15. * .9 .8 1.6 .6 .1 1.5 .8 1.3 1.3 .8 .3 .2 .2 .3 .3 .0 .2

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
15. * .3 .0 .3 .0 .2 .6 .8
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THE HIGHEST CONCENTRATION OF 1.60 PPM OCCURRED AT RECEPTOR REC3 .

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 15

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:13:19

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.1 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	699.	13.6	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	219.4	*	48.	360. AG	560.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	750.	13.6	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-264.2	*	48.	360. AG	516.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	1014.	13.6	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-482.9	*	83.	180. AG	344.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	827.	13.6	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	25.7	*	73.	180. AG	373.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	1313.	13.6	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	492.3	*	88.	180. AG	634.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	494.	17.6	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	75.3	207.4	*	25.	45. AG	501.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	614.	17.6	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-418.1	-300.4	*	34.	44. AG	560.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	122.	19.6	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	122.	19.6	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	41.	19.6	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	173.	19.6	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	173.	19.6	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	51.	19.6	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	41.	19.6	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	85.2	*	4.	180. AG	314.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-208.8	*	4.	180. AG	314.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-112.2	*	4.	360. AG	314.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	880.	13.6	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	41.	19.6	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	699	2000	137.34	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	750	2000	137.34	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	866	2000	137.34	1	3

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Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8.	BROADWAY NB @CHAMPAQ*	75	38	2.0	706	2000	137.34	1	3
10.	BROADWAY NB @CURTISQ*	75	43	2.0	1121	2000	137.34	1	3
12.	CHAMPA SWB @BROADW Q*	75	34	2.0	397	2000	137.34	1	3
14.	CHAMPA SWB @ 20TH Q *	75	38	2.0	495	2000	137.34	1	3
22.	BROADWAY NB @CHAMPQL*	75	64	2.0	11	2000	137.34	2	3
23.	BROADWAY NB @21QL *	75	64	2.0	11	2000	137.34	2	3
24.	BROADWAY SB @21QL *	75	64	2.0	11	2000	137.34	2	3

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1

2.	*	.8	.8	1.2	.3	.0	1.3	.6	1.1	1.2	1.0	1.3	.9	1.0	1.5	.6	.2	1.2
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WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27

2.	*	.3	.1	1.5	.0	.1	.5	.7
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THE HIGHEST CONCENTRATION OF 1.70 PPM OCCURRED AT RECEPTOR REC19.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 16

CAL3QHC : LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:15:14

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	859.	23.0	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	230.4	*	59.	360. AG	495.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	922.	23.0	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-253.2	*	59.	360. AG	456.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	1247.	11.9	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-501.8	*	102.	180. AG	304.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	1016.	11.9	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	8.8	*	90.	180. AG	330.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	1614.	11.9	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	472.1	*	108.	180. AG	560.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	607.	19.3	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	79.2	211.4	*	30.	45. AG	443.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	755.	19.3	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-412.8	-294.9	*	42.	44. AG	495.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	150.	22.1	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	150.	22.1	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	50.	22.1	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	212.	22.1	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	212.	22.1	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	62.	22.1	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	50.	22.1	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	84.1	*	5.	180. AG	278.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-209.9	*	5.	180. AG	278.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-111.1	*	5.	360. AG	278.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	1081.	23.0	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	50.	22.1	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	859	2000	121.31	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	922	2000	121.31	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	1065	2000	121.31	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8.	BROADWAY NB @CHAMPAQ*	75	38	2.0	868	2000	121.31	1	3
10.	BROADWAY NB @CURTISQ*	75	43	2.0	1378	2000	121.31	1	3
12.	CHAMPA SWB @BROADW Q*	75	34	2.0	488	2000	121.31	1	3
14.	CHAMPA SWB @ 20TH Q *	75	38	2.0	608	2000	121.31	1	3
22.	BROADWAY NB @CHAMPQL*	75	64	2.0	14	2000	121.31	2	3
23.	BROADWAY NB @21QL *	75	64	2.0	14	2000	121.31	2	3
24.	BROADWAY SB @21QL *	75	64	2.0	14	2000	121.31	2	3

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1
 -----*-----
 29. * 1.7 1.8 2.5 1.5 1.0 2.5 1.6 2.2 1.5 1.4 .2 .3 .2 .2 .6 .2 .2

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
 -----*-----
 29. * .6 .0 .3 .2 .9 1.5 1.3
 -----*-----

THE HIGHEST CONCENTRATION OF 2.50 PPM OCCURRED AT RECEPTOR REC3 .

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 17

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:16:58

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	859.	15.8	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	230.4	*	59.	360. AG	495.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	922.	15.8	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-253.2	*	59.	360. AG	456.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	1247.	8.1	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-501.8	*	102.	180. AG	304.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	1016.	8.1	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	8.8	*	90.	180. AG	330.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	1615.	8.1	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	472.1	*	108.	180. AG	560.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	607.	13.1	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	79.4	211.5	*	30.	45. AG	443.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	756.	13.1	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-412.8	-294.9	*	42.	44. AG	495.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	150.	15.8	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	150.	15.8	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	50.	15.8	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	212.	15.8	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	212.	15.8	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	62.	15.8	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	50.	15.8	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	84.1	*	5.	180. AG	278.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-209.9	*	5.	180. AG	278.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-111.1	*	5.	360. AG	278.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	1082.	15.8	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	50.	15.8	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	859	2000	121.31	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	922	2000	121.31	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	1065	2000	121.31	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8. BROADWAY NB @CHAMPAQ*	75	38	2.0	868	2000	121.31	1	3
10. BROADWAY NB @CURTISQ*	75	43	2.0	1379	2000	121.31	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	489	2000	121.31	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	608	2000	121.31	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	14	2000	121.31	2	3
23. BROADWAY NB @21QL *	75	64	2.0	14	2000	121.31	2	3
24. BROADWAY SB @21QL *	75	64	2.0	14	2000	121.31	2	3

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1
 -----*-----
 51. * .8 1.1 1.8 1.3 1.1 1.3 .8 1.1 .8 1.0 .0 .1 .0 .0 .2 .4 .1

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
 -----*-----
 51. * .3 .0 .0 .4 1.2 .9 .6
 -----*-----

THE HIGHEST CONCENTRATION OF 1.80 PPM OCCURRED AT RECEPTOR REC3 .

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 18

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:19:35

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	505.	24.0	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	205.9	*	35.	360. AG	495.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	542.	24.0	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-277.6	*	34.	360. AG	456.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	317.	12.4	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-430.2	*	30.	180. AG	304.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	317.	12.4	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	66.2	*	33.	180. AG	330.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	258.	12.4	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	559.8	*	20.	180. AG	560.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	239.	20.2	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	66.4	198.4	*	12.	45. AG	443.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	297.	20.2	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-430.4	-313.1	*	17.	44. AG	495.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	64.	22.9	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	69.	22.9	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	17.	22.9	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	112.	22.9	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	112.	22.9	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	33.	22.9	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	26.	22.9	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	86.2	*	3.	180. AG	278.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-207.8	*	3.	180. AG	278.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-113.2	*	3.	360. AG	278.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	477.	24.0	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	18.	22.9	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	505	2000	121.31	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	542	2000	121.31	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	317	2000	121.31	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8. BROADWAY NB @CHAMPAQ*	75	38	2.0	317	2000	121.31	1	3
10. BROADWAY NB @CURTISQ*	75	43	2.0	258	2000	121.31	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	194	2000	121.31	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	241	2000	121.31	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	8	2000	121.31	2	3
23. BROADWAY NB @21QL *	75	64	2.0	8	2000	121.31	2	3
24. BROADWAY SB @21QL *	75	64	2.0	8	2000	121.31	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
-----*-----
146. * .5 1.5 1.0 .6 .4 .7 .2 .6 .7 1.6 .0 .0 .1 .0 .0 .1 .1

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
146. * .0 .1 .0 .1 .3 .2 .3
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THE HIGHEST CONCENTRATION OF 1.60 PPM OCCURRED AT RECEPTOR REC10.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 19

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:21: 9

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	669.	14.0	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	217.3	*	46.	360. AG	560.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	718.	14.0	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-266.3	*	46.	360. AG	516.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	419.	14.0	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-440.0	*	40.	180. AG	344.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	419.	14.0	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	55.6	*	43.	180. AG	373.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	342.	14.0	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	553.2	*	27.	180. AG	634.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	316.	18.2	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	69.1	201.2	*	16.	45. AG	501.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	393.	18.2	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-426.7	-309.2	*	22.	44. AG	560.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	85.	19.7	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	91.	19.7	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	22.	19.7	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	148.	19.7	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	148.	19.7	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	44.	19.7	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	35.	19.7	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	85.5	*	3.	180. AG	314.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-208.5	*	3.	180. AG	314.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-112.5	*	3.	360. AG	314.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	632.	14.0	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	23.	19.7	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	669	2000	137.34	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	718	2000	137.34	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	419	2000	137.34	1	3
8. BROADWAY NB @CHAMPAQ*	*	75	38	2.0	419	2000	137.34	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

10. BROADWAY NB @CURTISQ*	75	43	2.0	342	2000	137.34	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	256	2000	137.34	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	319	2000	137.34	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	10	2000	137.34	2	3
23. BROADWAY NB @21QL *	75	64	2.0	10	2000	137.34	2	3
24. BROADWAY SB @21QL *	75	64	2.0	10	2000	137.34	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
-----*-----
223. * .1 .1 .3 .3 .3 .3 .3 .0 .0 .0 .4 .9 .6 .4 .7 .9 .9

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
223. * .7 .4 .4 .7 .3 .3 .0
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THE HIGHEST CONCENTRATION OF 1.20 PPM OCCURRED AT RECEPTOR REC18.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 20

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:22:38

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	565.	14.6	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	210.1	*	39.	360. AG	560.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	606.	14.6	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-273.3	*	39.	360. AG	516.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	354.	14.6	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-433.9	*	34.	180. AG	344.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	354.	14.6	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	62.2	*	37.	180. AG	373.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	289.	14.6	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	557.4	*	23.	180. AG	634.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	267.	18.9	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	67.4	199.5	*	13.	45. AG	501.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	332.	18.9	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-429.0	-311.6	*	19.	44. AG	560.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	72.	20.4	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	77.	20.4	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	19.	20.4	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	125.	20.4	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	125.	20.4	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	37.	20.4	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	29.	20.4	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	85.9	*	3.	180. AG	314.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-208.1	*	3.	180. AG	314.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-112.9	*	3.	360. AG	314.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	533.	14.6	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	20.	20.4	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	565	2000	137.34	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	606	2000	137.34	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	354	2000	137.34	1	3
8. BROADWAY NB @CHAMPAQ*	*	75	38	2.0	354	2000	137.34	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

10. BROADWAY NB @CURTISQ*	75	43	2.0	289	2000	137.34	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	217	2000	137.34	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	270	2000	137.34	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	9	2000	137.34	2	3
23. BROADWAY NB @21QL *	75	64	2.0	9	2000	137.34	2	3
24. BROADWAY SB @21QL *	75	64	2.0	9	2000	137.34	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR) * REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
-----*-----
221. * .1 .1 .3 .3 .3 .2 .2 .0 .0 .0 .4 .8 .6 .4 .5 .9 .8

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR) * REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
221. * .6 .4 .4 .7 .2 .2 .0
-----*-----

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THE HIGHEST CONCENTRATION OF 1.20 PPM OCCURRED AT RECEPTOR REC18.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 21

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:24: 8

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.1 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	490.	15.0	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	204.9	*	34.	360. AG	560.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	526.	15.0	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-278.5	*	33.	360. AG	516.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	307.	15.0	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-429.3	*	29.	180. AG	344.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	307.	15.0	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	67.2	*	32.	180. AG	373.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	251.	15.0	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	560.5	*	20.	180. AG	634.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	232.	19.5	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	66.1	198.2	*	12.	45. AG	501.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	288.	19.5	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-430.7	-313.4	*	16.	44. AG	560.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	62.	21.0	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	67.	21.0	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	16.	21.0	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	108.	21.0	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	108.	21.0	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	32.	21.0	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	26.	21.0	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	86.6	*	2.	180. AG	314.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-207.4	*	2.	180. AG	314.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-113.6	*	2.	360. AG	314.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	463.	15.0	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	17.	21.0	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	490	2000	137.34	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	526	2000	137.34	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	307	2000	137.34	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8. BROADWAY NB @CHAMPAQ*	75	38	2.0	307	2000	137.34	1	3
10. BROADWAY NB @CURTISQ*	75	43	2.0	251	2000	137.34	1	3
12. CHAMPA SWB @BROADW Q*	75	34	2.0	188	2000	137.34	1	3
14. CHAMPA SWB @ 20TH Q *	75	38	2.0	234	2000	137.34	1	3
22. BROADWAY NB @CHAMPQL*	75	64	2.0	7	2000	137.34	2	3
23. BROADWAY NB @21QL *	75	64	2.0	7	2000	137.34	2	3
24. BROADWAY SB @21QL *	75	64	2.0	7	2000	137.34	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
-----*-----
267. * .1 .0 .0 .0 .0 .2 .2 .1 .1 .0 .4 .3 .4 .4 1.1 .3 .3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
267. * .5 .3 .4 .2 .0 .2 .1
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THE HIGHEST CONCENTRATION OF 1.10 PPM OCCURRED AT RECEPTOR REC15.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 22

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:25:46

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	282.	15.0	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	190.5	*	20.	360. AG	560.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	303.	15.0	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-292.7	*	19.	360. AG	516.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	177.	15.0	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-416.8	*	17.	180. AG	344.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	177.	15.0	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	80.7	*	18.	180. AG	373.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	144.	15.0	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	568.7	*	11.	180. AG	634.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	133.	19.4	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	62.7	194.7	*	7.	45. AG	501.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	166.	19.4	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-435.5	-318.3	*	9.	44. AG	560.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	36.	21.0	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	39.	21.0	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	9.	21.0	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	62.	21.0	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	62.	21.0	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	18.	21.0	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	15.	21.0	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	87.6	*	1.	180. AG	314.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-206.4	*	1.	180. AG	314.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-114.6	*	1.	360. AG	314.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	267.	15.0	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	10.	21.0	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	282	2000	137.34	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	303	2000	137.34	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	177	2000	137.34	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8.	BROADWAY NB @CHAMPAQ*	75	38	2.0	177	2000	137.34	1	3
10.	BROADWAY NB @CURTISQ*	75	43	2.0	144	2000	137.34	1	3
12.	CHAMPA SWB @BROADW Q*	75	34	2.0	108	2000	137.34	1	3
14.	CHAMPA SWB @ 20TH Q *	75	38	2.0	135	2000	137.34	1	3
22.	BROADWAY NB @CHAMPQL*	75	64	2.0	4	2000	137.34	2	3
23.	BROADWAY NB @21QL *	75	64	2.0	4	2000	137.34	2	3
24.	BROADWAY SB @21QL *	75	64	2.0	4	2000	137.34	2	3

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17
-----*-----
82. * .1 .2 .4 .3 .2 .2 .1 .2 .2 .2 .0 .0 .0 .0 .0 .1 .0

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WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
-----*-----
82. * .0 .0 .0 .1 .1 .1 .1
-----*-----

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THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC3 .

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

CAMP 2013 1.7% Oxy Hour 23

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

DATE : 9/ 1/99

TIME : 10:27: 8

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM BRG :

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)
1. BROADWAY SB @ CHAMPA*	*	-15.0	572.0	-15.0	115.0	*	457.	180. AG	178.	16.2	.0
2. BROADWAY SB@CHAMPA Q*	*	-15.0	171.0	-15.0	183.3	*	12.	360. AG	560.	100.0	.0
3. BROADWAY SB @ STOUT *	*	-15.0	115.0	-15.0	-356.0	*	471.	180. AG	191.	16.2	.0
4. BROADWAY SB@STOUT Q *	*	-15.0	-312.0	-15.0	-299.9	*	12.	360. AG	516.	100.0	.0
5. BROADWAY NB @ STOUT *	*	10.0	-815.0	10.0	-312.0	*	503.	360. AG	112.	16.2	.0
6. BROADWAY NB @STOUT Q*	*	10.0	-400.0	10.0	-410.7	*	11.	180. AG	344.	100.0	.0
7. BROADWAY NB @ CHAMPA*	*	22.0	-312.0	22.0	580.0	*	892.	360. AG	112.	16.2	.0
8. BROADWAY NB @CHAMPAQ*	*	22.0	99.0	22.0	87.4	*	12.	180. AG	373.	100.0	.0
9. BROADWAY NB @ CURTIS*	*	17.5	148.0	17.5	639.0	*	491.	360. AG	91.	16.2	.0
10. BROADWAY NB @CURTISQ*	*	17.5	580.0	17.5	572.9	*	7.	180. AG	634.	100.0	.0
11. CHAMPA SWB @ BROADW *	*	518.0	653.0	.0	131.0	*	735.	225. AG	84.	21.0	.0
12. CHAMPA SWB @BROADW Q*	*	58.0	190.0	60.9	192.9	*	4.	45. AG	501.	100.0	.0
13. CHAMPA SWB @ 20TH *	*	.0	131.0	-470.0	-353.0	*	675.	224. AG	105.	21.0	.0
14. CHAMPA SWB @ 20TH Q *	*	-442.0	-325.0	-438.0	-320.8	*	6.	44. AG	560.	100.0	.0
15. 21ST SEB @ CHAMPA *	*	-393.0	202.0	-151.0	-27.0	*	333.	133. AG	23.	22.7	.0
16. 21ST SEB @ BROADWAY *	*	-151.0	-27.0	.0	-175.0	*	211.	134. AG	24.	22.7	.0
17. 21ST SEB @ STOUT *	*	.0	-175.0	89.0	-261.0	*	124.	134. AG	6.	22.7	.0
18. 21ST NWB @ STOUT *	*	331.0	-472.0	107.0	-255.0	*	312.	314. AG	39.	22.7	.0
19. 21ST NWB @ BROADWAY *	*	107.0	-255.0	.0	-151.0	*	149.	314. AG	39.	22.7	.0
20. 21ST NWB @ CHAMPA *	*	.0	-151.0	-142.0	-12.0	*	199.	314. AG	12.	22.7	.0
21. 21ST NWB @ CURTIS *	*	-142.0	-12.0	-381.0	221.0	*	334.	314. AG	9.	22.7	.0
22. BROADWAY NB @CHAMPQL*	*	5.5	89.0	5.5	88.0	*	1.	180. AG	314.	100.0	.0
23. BROADWAY NB @21QL *	*	5.0	-205.0	5.0	-206.0	*	1.	180. AG	314.	100.0	.0
24. BROADWAY SB @21QL *	*	-4.5	-116.0	-4.5	-115.0	*	1.	360. AG	314.	100.0	.0
25. BROADWAY SB@CALIFORN*	*	-15.0	-356.0	-15.0	-811.0	*	455.	180. AG	168.	16.2	.0
26. 21ST SEB @ CALIF *	*	89.0	-261.0	321.0	-487.0	*	324.	134. AG	6.	22.7	.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. BROADWAY SB@CHAMPA Q*	*	75	38	2.0	178	2000	137.34	1	3
4. BROADWAY SB@STOUT Q *	*	75	35	2.0	191	2000	137.34	1	3
6. BROADWAY NB @STOUT Q*	*	75	35	2.0	112	2000	137.34	1	3

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

8.	BROADWAY NB @CHAMPAQ*	75	38	2.0	112	2000	137.34	1	3
10.	BROADWAY NB @CURTISQ*	75	43	2.0	91	2000	137.34	1	3
12.	CHAMPA SWB @BROADW Q*	75	34	2.0	68	2000	137.34	1	3
14.	CHAMPA SWB @ 20TH Q *	75	38	2.0	85	2000	137.34	1	3
22.	BROADWAY NB @CHAMPQL*	75	64	2.0	3	2000	137.34	2	3
23.	BROADWAY NB @21QL *	75	64	2.0	3	2000	137.34	2	3
24.	BROADWAY SB @21QL *	75	64	2.0	3	2000	137.34	2	3

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 1
 -----*-----
 208. * .0 .0 .1 .1 .1 .0 .0 .0 .0 .0 .2 .2 .3 .2 .0 .1 .4

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27
 -----*-----
 208. * .0 .0 .2 .1 .1 .0 .0
 -----*-----

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC17.

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Appendix I - Federal Register: March 10, 1997 (Volume 62, Number 46)

[Federal Register: March 10, 1997 (Volume 62, Number 46)] [Rules and Regulations] [Page 10690-10700] From the Federal Register Online via GPO Access [wais.access.gpo.gov] [DOCID:fr10mr97-5]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[CO-001-0011; CO-001-0012; CO-001-0013; CO-001-0014; FRL-5692-3]

Clean Air Act Approval and Promulgation of State Implementation Plan for Colorado; Carbon Monoxide Attainment Demonstrations and Related SIP Elements for Denver and Longmont; Clean Air Act Reclassification; Oxygenated Gasoline Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rulemaking.

SUMMARY: In this document, EPA is approving the State Implementation Plan (SIP) revisions submitted by the State of Colorado for the purpose of bringing about the attainment of the national ambient air quality standards (NAAQS) for carbon monoxide (CO). The implementation plan revisions were submitted by the State on July 11 and 13, 1994, September 29, 1995, and December 22, 1995 to satisfy certain Federal requirements for an approvable nonattainment area CO SIP for Denver and Longmont. This action includes approval of revisions to Colorado Regulations 11 (vehicle inspection and maintenance (I/M)) and 13 (oxygenated fuels) submitted to satisfy conditions in the SIP, and further revisions to Regulation 13 to shorten the effective period of the oxygenated fuels program. It also includes reclassification of the Denver CO nonattainment area from Moderate to Serious. EPA proposed to approve the July 1994 and September 1995 SIP submissions and to reclassify the Denver area to Serious in the Federal Register on July 9, 1996. EPA published a supplemental proposal to approve the December 22, 1995 SIP submission shortening the oxygenated fuels program period and to approve the Denver and Longmont CO SIPs based on the shortened period on December 6, 1996. The rationale for the final approvals and reclassification are set forth in this document. Additional information is available at the address indicated below.

EFFECTIVE DATE: This action is effective on April 9, 1997.

ADDRESSES: Copies of the State's submittals and other information are available for inspection during normal business hours at the following locations: Environmental Protection Agency, Region VIII, Air Programs, 999 18th Street, 3rd Floor, South Terrace, Denver, Colorado 80202-2466; and Colorado Air Pollution Control Division, 4300 Cherry Creek Dr. South, Denver, Colorado 80222-1530.

FOR FURTHER INFORMATION CONTACT: Jeff Houk at (303) 312-6446.

SUPPLEMENTARY INFORMATION:

I. Background

The air quality planning requirements for CO nonattainment areas are set out in sections 186-187 of the Clean Air Act (Act) Amendments of 1990 (CAAA) which pertain to the classification of CO nonattainment areas and to the submission requirements of the SIPs for these areas, respectively. The EPA has issued a "General Preamble" describing EPA's preliminary views on how EPA intends to review SIPs and SIP revisions submitted under Title I of the Act, [see generally 57 FR 13498 (April 16, 1992) and 57 FR 18070 (April 28, 1992)]. Because EPA is describing its interpretations here only in broad terms, the reader should refer to the General Preamble for a more detailed discussion of the interpretations of Title I advanced in today's rulemaking action. In today's action on the Denver and Longmont CO SIPs, EPA is applying its interpretations taking into consideration the specific factual issues presented and comments received from the public. This Federal Register document addresses several requirements of the 1990 CAAA which were required to be submitted no later than November 15, 1992, and which the State did not

[[Page 10691]]

submit by that date. These requirements include an attainment demonstration, contingency measures and, for Denver, a vehicle miles travelled forecasting and tracking program and transportation control measures. EPA made a formal finding that the State had failed to submit these SIP revisions in a letter to Governor Roy Romer dated January 15, 1993. This Federal Register document also addresses revisions to Regulations 11 and 13, submitted by the State of Colorado to implement portions of the control strategy relied upon by the attainment demonstration. Section 187(a)(7) required those States containing CO nonattainment areas with design values greater than 12.7 parts per million (ppm) to submit, among other things, an attainment demonstration by November 15, 1992, demonstrating that the plan will provide for attainment by December 31, 1995 for Moderate CO nonattainment areas and December 31, 2000 for Serious CO nonattainment areas. The attainment demonstration must include a SIP control strategy, which is also due by November 15, 1992. The SIP control strategy for a given nonattainment area must be designed to ensure that the area meets the specific annual emissions reductions necessary for reaching attainment by the deadline. In addition, section 187(a)(3) requires these areas to implement contingency measures if any estimate of actual vehicle miles travelled (VMT) or any updated VMT forecast for the area contained in an annual report for any year prior to attainment exceeds the number predicted in the most recent VMT forecast. Contingency measures are also triggered by failure to attain the NAAQS for CO by the attainment deadline. Contingency measures must be submitted with the CO SIP by November 15, 1992. Finally, a vehicle miles travelled forecasting and tracking program is required by Section 187(a)(2)(A), and transportation control measures are required for Denver by Section 187(a)(2)(B). These requirements are discussed in more detail in EPA's July 9, 1996 (61 FR 36004) and December 6, 1996 (61 FR 64647) Federal Register documents proposing action on the SIP revisions. Longmont had been designated as unclassifiable/attainment prior to passage of the 1990 CAAA. However, a special monitoring study in 1988- 89 recorded an exceedance of the NAAQS in Longmont. As a result, EPA Region VIII recommended that the Governor designate this area nonattainment, and on March 15, 1991, the Governor submitted a nonattainment designation for this area that was later codified by EPA at 40 CFR Part 81. Longmont was classified as a Moderate area in 40 CFR Part 81. Since this area had never had a SIP, EPA interpreted Section 172 of the Act to require an attainment demonstration for Longmont. Contingency measures under Section 172(c)(9) were also required. On January 15, 1993, EPA made a formal finding that the State had failed to submit these SIP revisions for Longmont. On July 11, 1994 and July 13, 1994, Governor Roy Romer submitted comprehensive revisions to the Colorado SIP. The carbon monoxide SIP element submittals for Denver and Longmont addressed the outstanding CAAA requirements discussed above, as well as other CAAA mandates. The State submitted revisions to Regulations 11 and 13 on September 29, 1995, to implement the I/M and oxygenated fuels program revisions committed to in the CO SIP. EPA proposed approval of these revisions in its July 9, 1996 Federal Register document, and is today taking final action to approve these revisions. The State submitted additional revisions to Regulation 13 on December 22, 1995, shortening the effective period of the oxygenated fuels program. EPA published a Federal Register document on December 6, 1996, proposing approval of these revisions and re-proposing approval of the Denver and Longmont CO SIPs to provide an opportunity for public comment on the impact of this revision to Regulation 13 on the CO SIPs. EPA is today taking final action to approve the revisions to Regulation 13 that the State submitted on December 22, 1995.

II. Response to Public Comments

EPA received numerous comments on its proposed approval of the Denver CO SIP and the proposed reclassification of Denver from Moderate to Serious for CO. No comments were received specifically regarding the

Longmont CO SIP. EPA received one set of comments regarding its proposed approval of the shortening of the effective period of the oxygenated fuels program. The comments and EPA's responses follow.

Extension of the Comment Period

Several parties requested that EPA extend its comment period on the proposed approval of the SIP to allow more time for the preparation and submission of comments. In response to these requests, EPA extended the comment period for an additional 30 days (see 61 FR 43501, August 23, 1996).

Legality of the SIP Submission Under State Law

Several parties commented that EPA should return the Denver CO SIP to the State without action, because it was submitted to EPA in conflict with the requirements of State law. These comments generally concern the nature of the Air Quality Control Commission's (AQCC's) submission of the SIP to Legislative Council for review, and the AQCC's and the Governor's response to Legislative Council's actions. EPA's acceptance of the SIP through its July 14, 1994 determination of SIP completeness was based on the June 30, 1994 letter from the State Attorney General's Office submitted with the SIP. This letter certifies that the SIP was adopted and submitted in compliance with State law. Specifically, Section 25-7-133, C.R.S., required the submission of SIPs "regarding the regulation of mobile sources" to Legislative Council for review 45 days prior to submission to EPA. The CO SIP arguably did not fall within this criterion, as it did not include any regulatory content regarding mobile sources. Revisions to Regulations 11 and 13 (I/M and oxygenated fuels programs) to implement the provisions of the CO SIP were discussed in the SIP, but were not adopted or submitted with it. These revisions were adopted later in 1994 by the AQCC, received full Legislative Council review and were submitted to EPA in September 1995. Nevertheless, the AQCC chose to submit the CO SIP to Legislative Council for review even though it did not contain any mobile source regulation revisions. The June 30, 1994 letter from the AG's office concedes that the SIP was not submitted to Legislative Council 45 days prior to submittal to EPA, but notes that the Council acted on the SIP at its June 21, 1994 meeting and, in effect, waived the 45 day requirement. Also, according to the June 30, 1994 letter, the actions by Legislative Council at its meeting were not fully in compliance with State law: "The Council may act in one of two ways: it can return the SIP in its entirety and it is then deemed approved, or it can submit it to the General Assembly (via petition for special session if the General Assembly is not in session) * * The Legislative Council, on June 21, 1994 took action by motion, wherein it voted to postpone review of the CO SIP submission, voted to return the plan for revisions by the Commission, and voted to conduct a final review no later than January 15, 1995. Pursuant to statute, because no special assembly was called by the*

[[Page 10692]]

Council [the General Assembly was not in session], the SIP is deemed returned and approved." EPA finds the State Attorney General's Office's interpretation reasonable, and thus, EPA accepts that Office's conclusion that the SIP was, in fact, submitted to EPA for action in compliance with State law.

Oxygenated Fuels Program

Several comments were received with respect to the oxygenated fuels program. These comments and EPA's responses follow. (1) The submission violates Section 25-7-105.1, C.R.S., which states that any regulation that is more stringent than Federal law shall not constitute part of a state implementation plan. Putting aside for the purposes of this response the question of what EPA's role should be with respect to this State law, EPA does not believe that the 3.1% oxygenated fuels program is more stringent than is required under the Act. First, EPA does not believe section 211(c) of the Act preempts the State from requiring a 3.1% minimum oxygen content standard and, thus, does not believe a finding of necessity is required under section 211(c)(4)(C) of the Act (see discussion in response to comment 6 below). Second, the State is relying on the 3.1% oxygenated fuels program as one measure to help demonstrate attainment of the NAAQS for CO, as required by sections 110(a) and 187(a)(7) of the Act. Without the 3.1% oxygenated fuels program, the SIP would be unable to demonstrate attainment of the NAAQS. Thus, the 3.1% oxygenated fuels program is not more stringent than the Act requires. (2) Subsequent to AQCC adoption of the CO SIP, the AQCC adopted revisions to Regulation 13 which shortened the control period during which the oxygenated fuels program is in effect. EPA's approval of the CO SIP does not address this revision. Based on this comment, EPA repropose approval of the Denver and Longmont CO SIPs, incorporating the shortened oxygenated

gasoline season, and also proposed approval of the revisions to Regulation 13 shortening the season (see 61 FR 64647, December 6, 1996). EPA is now approving the shortening of the oxygenated gasoline season and is approving the Denver and Longmont CO SIPs based on the shortened season. (3) EPA approval of the 3.1% oxygenated fuels program would be contrary to *Exxon Corp. v. City of New York*, 548 F.2d 1088 (2nd Cir. 1977). The *Exxon v. City of New York* decision was based on pre-1990 CAA language, EPA regulations that have since been amended, and in part, different factual circumstances that bear no relevance to the situation here. Moreover, the changes in section 211(c)(4) and the 40 CFR Part 80 fuel regulations since the *Exxon* decision directly modify the provisions that the court relied on in a way that limits the scope of preemption of state fuel controls. Thus, this decision is not relevant to the current situation. In *Exxon Corp. v. City of New York*, the court found that New York City's lead and volatility regulations were preempted under section 211(c)(4). In the Part 80 regulations, EPA had set out the federal fuel requirements and stated that they prescribed regulations for the control and/or prohibition of fuels and additives. EPA also had promulgated specific lead regulations, less stringent than the New York City regulations, but did not address volatility. At the time of the court's decision, section 211(c)(4) preempted "any control or prohibition respecting use of a fuel or fuel additive." The court found that EPA had promulgated regulations respecting the use of fuels, and thus, New York City's more stringent regulations were preempted. In the 1990 CAAA, Congress amended the language of section 211(c)(4) to preempt "any control or prohibition respecting any characteristic or component of a fuel or fuel additive." After the court's decision, EPA also modified the Part 80 regulations to make it clear that they are not intended to preempt states' ability to regulate fuels and fuel additives that EPA has not addressed. Section 80.1(b) states: "Nothing in this part is intended to preempt the ability of State or local governments to control or prohibit any fuel or additive for use in motor vehicles and motor vehicle engines which is not explicitly regulated by this part." Thus, both Congress and the Agency have clearly indicated that EPA's fuel requirements do not preempt states from regulating a specific characteristic or component that the Agency has not addressed. As discussed below, there are no federal regulations applicable to oxygen content in the Denver area, and hence *Exxon v. City of New York* is not applicable here. (4) EPA approval of the 3.1% oxygenated fuels program could lead to oxygenate shortages which could interfere with the federal reformulated gasoline program. During the two winter seasons since the CO SIP was submitted to EPA, the average oxygen content in Denver has been well above 3.1%. The federal reformulated gasoline program took effect on January 1, 1995, and thus has been in effect coincident with the Denver oxygenated fuels program for over two years. No documented oxygenate shortages have occurred as a result of Denver's program. Furthermore, the commentor did not provide any indication that a change in circumstances may occur that could produce any problems in the future. (5) EPA approval of the 3.1% oxygenated fuels program could lead to an increase in NO_x emissions, which could jeopardize public health by increasing ozone concentrations. Several parties have contacted EPA in the past with regard to potential NO_x increases from use of oxygenated fuels. No good scientific information exists that conclusively documents an increase in fleet NO_x emissions from use of oxygenated fuels. The laboratory studies to date have generally had poor control of other fuel characteristics that affect NO_x emissions, making the results unreliable. Increases in NO_x emissions from the use of oxygenates would not be expected to generate exceedances of the ozone NAAQS, as asserted by the commentor. Oxygenate use is only required during the winter season, when climatic conditions are not favorable to the formation of tropospheric (ground-level) ozone. No exceedances of the ozone NAAQS have occurred at any time during the ten winter seasons in which oxygenated fuels have been used in the Denver area. (6) The 3.1% oxygen content is higher than is necessary to attain the CO NAAQS, and other reasonable, practicable means of attainment are available, so EPA cannot approve this program under section 211(c)(4)(C) of the CAA. Moreover, section 211(m) provisions occupy the field for regulation of oxygen content of gasoline and thereby preempt any different regulation by a state. Section 211(c)(4)(C) provides that states are preempted from regulating motor vehicle fuels where EPA has already acted, either to regulate the fuel or to find that no regulation is necessary. If preemption applies, the state may regulate the fuel only if EPA finds the state requirement necessary to achieve the NAAQS for the relevant pollutant. Here, EPA has neither regulated fuel oxygen content in Colorado nor made a finding that no such regulation is necessary. Therefore, the state regulation is not preempted and there is no need to find necessity. In the absence of federal preemption, states are free to regulate to control air pollution, and EPA must approve lawful state requirements into SIPs, as long as

[[Page 10693]]

the state submission meets all applicable requirements under Title I of the Act. Section 211(c)(4)(A) preempts a state from "prescrib[ing] or attempt[ing] to enforce * * * any control or prohibition respecting any characteristic or component of a fuel or fuel additive" under two circumstances. Section 211(c)(4)(A)(i) provides for preemption if EPA has found that no control or prohibition of the characteristic is necessary and has published that finding in the

*Federal Register. Section 211(c)(4)(A)(ii) provides that a state is preempted from regulating if EPA has prescribed under section 211(c)(1) a control or prohibition applicable to such characteristic or component, unless the state control or prohibition is identical to EPA's control or prohibition. Thus, to preempt state regulation under 211(c)(4), either EPA must publish a finding that a control is unnecessary, or EPA must promulgate a control of the same characteristic or component under section 211(c)(1). EPA has not made any finding under section 211(c)(4)(A)(i) that control of fuel oxygen content is unnecessary. There is no preemption of the Regulation 13 requirement for a 3.1% oxygen content under this provision. The only requirement that EPA has promulgated applicable to fuel oxygen content under 211(c)(1) is in the reformulated gasoline (RFG) regulations. EPA promulgated the RFG regulations under both sections 211(c)(1) and 211(k). However, Colorado is neither required to use RFG by statute, nor has it voluntarily opted into the RFG program. Thus, the RFG regulations do not apply in Colorado. The statute is ambiguous as to whether federal regulation of a fuel characteristic in certain areas of the country preempts state regulation only in those areas, or whether it preempts any state regulation of that characteristic nationwide. The statute simply refers to "a control or prohibition applicable to such characteristic or component." The language does not indicate whether it means any control in any area or at any time generally applicable to a fuel characteristic, or a control actually applicable to a fuel characteristic in a given time and place. The statute is also ambiguous as to whether "characteristic or component of a fuel or fuel additive" should be read generally, as in "oxygen content," or specifically, as in "oxygen content in RFG areas." In delegating authority to the Agency to administer section 211(c), Congress has also implicitly delegated the authority to reasonably interpret the provision in light of any ambiguity. *Chevron, USA v. NRDC*, 467 U.S. 837 (1984). EPA believes that the better reading of the statute is that preemption by the RFG regulations applies more narrowly, only in the areas where the federal RFG regulation applies. First, the RFG regulations arguably are not a control "applicable" to fuel oxygen content outside of RFG areas. Secondly, this interpretation is consistent with the judicial canon of statutory construction by which courts construe preemption narrowly. Thirdly, as a policy matter, EPA's decision to regulate fuel oxygen content in RFG areas did not encompass a determination that states should not or need not regulate that characteristic outside of those areas. Section 211(c)(4) applies only where EPA has affirmatively decided to regulate a particular fuel characteristic or component, or has affirmatively found that no such regulation is necessary and has published such a finding in the Federal Register. The RFG rulemaking never considered whether fuel oxygen content requirements were needed for CO control outside RFG areas, but merely incorporated the statutory requirement to set a 2.0 percent oxygen content for RFG. Moreover, whether RFG applies to an area depends solely on its status as an ozone nonattainment area; its status for CO is irrelevant. This further reinforces the conclusion that oxygen content requirements under RFG do not represent any EPA or Congressional decision on the need for such requirements outside of RFG areas. Finally, the purpose of the section 211(c)(4) preemption provision is to strike an appropriate balance between states' ability to freely adopt control measures, and avoidance of a variety of different state standards, potentially disrupting the national motor vehicle fuel market and federal regulation of such fuels. This purpose is not served by applying preemption where there is no federal regulatory scheme, as here in Colorado. Finally, section 211(m) does not constitute federal regulation of oxygen content, which could occupy the field for regulation of oxygen content and hence preempt state regulation. Section 211(m) requires states with certain CO nonattainment areas to submit a SIP revision requiring gasoline "to contain not less than 2.7 percent oxygen content by weight." The statute requires state regulation, not federal, and explicitly sets a minimum standard for such state regulation, leaving the state free to adopt more stringent requirements if it so chooses. There is no indication in the statute or the legislative history that by specifying a minimum oxygen level that states should require, Congress intended the federal government to occupy the field of oxygen content regulation and preempt states from establishing a more stringent standard. Because the federal RFG fuel oxygen content provision does not apply to Colorado, section 211(c)(4) does not preempt the state from promulgating its own average fuel oxygen content standard of 3.1%. Nor does section 211(m) explicitly or implicitly impose such a restriction. Moreover, EPA must approve into a SIP any lawful provision concerning control of a criteria pollutant that is submitted by a State and that otherwise meets the requirements of section 110. See *Union Electric Co. v. EPA*, 427 U.S. 246 (1976). Thus, Colorado was free to adopt a 3.1% oxygen content standard as a control strategy to help attain the CO NAAQS. (7) EPA approval of the 3.1% oxygenated fuels program in Colorado would be a de facto mandate that at least 50% of the gasoline in the Denver area contain ethanol, contrary to *American Petroleum Institute vs. United States Environmental Protection Agency*, 52 F.3d 1113 (D.C. Cir. 1995). In *API v. EPA*, the issue was whether EPA has the authority to mandate use of a particular oxygenate in RFG. The court held that EPA does not have such authority because Sec. 211(k) lays out the specific criteria that EPA is to consider in promulgating the RFG requirements, and the ethanol mandate was not established pursuant to those criteria. This holding has no relevance for whether a state, rather than EPA, could directly mandate use of a particular oxygenate. Moreover, the state here has not mandated use of any particular oxygenate. It has merely established oxygen content requirements, and the*

industry may use any oxygenate capable of meeting those requirements, subject to the maximum blending restrictions. In addition, these are the same oxygen content requirements as the CAA mandates for certain areas, which indicates that Congress contemplated that such higher oxygen content levels may be needed in some areas. In the absence of federal preemption, states are free to adopt fuel controls for emission reductions. API identifies no additional limit on EPA's authority to approve such state requirements in SIPs. (8) Recent studies have demonstrated that oxygenated fuels have little or no effect on CO air quality. EPA should facilitate an independent review of the impacts of oxygenated fuels on CO air quality before acting to approve the CO SIP.

[[Page 10694]]

The White House Office of Science and Technology Policy (OSTP) has recently issued a draft report on oxygenated fuels, which compiles the results of a number of other studies ("Interagency Assessment of Oxygenated Fuels," September 1996). While not yet final, the draft report concludes that oxygenated fuels produce approximately a 10.0% to 13.5% ambient CO reduction benefit. The National Academy of Sciences (NAS) has also issued a recent report commenting on the OSTP report. The NAS report found that oxygenated fuels programs have a benefit of zero to 10 percent in reducing ambient CO. Of the 10 existing "real world" studies of oxygenated fuels' ambient air impacts cited in the NAS report, eight show a statistically significant benefit from the program, and two studies (both in North Carolina) showed no significant benefit or did not attempt to quantify a benefit. Likewise, virtually all laboratory studies of oxygenated fuels, including some conducted by the automotive and petroleum industries, show a significant carbon monoxide reduction at the tailpipe from use of these fuels. EPA recently conducted an analysis of carbon monoxide air quality data from cities around the country ("Impact of the Oxyfuel Program on Ambient CO Levels," J. Richard Cook et al, EPA420-R-96-002). In this report, EPA compared data from a number of cities which used oxygenated fuels beginning in the winter of 1992-93 to data from several cities which did not. Using this approach, EPA found an immediate and sustained reduction of carbon monoxide concentrations in the range of 3.1% to 13.6% in cities using oxygenated fuels, in excess of the reductions expected from new cars entering the fleet. This reduction was not seen in cities not using oxygenated fuels. This level of benefit is consistent with that found in other studies. A subsequent regression modeling analysis by Dr. Gary Whitten of SAI of ambient CO data in oxygenated fuels areas ("Regression Modeling of Oxyfuel Effects on Ambient CO Concentrations," SYSAPP-96/78, January 8, 1997) found a 14% reduction in ambient CO concentrations due to implementation of the program. These analyses are significant because they are based on measurements of actual air quality data in these cities over at least two winter periods. Many interested parties have criticized laboratory studies as not being representative of the real world; however, in attempting to carry out a "real world" study in a single urban area, it is very difficult to separate the influence of oxygenated fuels from all of the other factors that affect carbon monoxide concentrations (including weather, congestion, and changes in the mix of cars and trucks in the fleet). The National Academy of Science's report points out some areas where additional research would be useful, and EPA and the State are working to design a study to address some of the uncertainties surrounding the use of oxygenated fuels. However, the NAS report and the available scientific data support continuing the oxygenated fuels program. While not a factor in EPA's decision, readers may be interested to know that oxygenated fuels is one of the least expensive carbon monoxide control strategies available. In terms of dollars per ton of pollution eliminated, it is much cheaper than other alternatives, such as transportation control measures, mandatory employee trip reduction, conversion of vehicles to run on alternative fuels like propane or natural gas, or industrial controls. The program also serves as an important defense against factors that increase carbon monoxide emissions in the Denver area, including growth in daily vehicle miles travelled, growth in the amount of time that vehicles spend in congestion, and growth in the number of sport utility vehicles and other types of higher-emitting light-duty trucks on the road. EPA has substantial evidence at this time that oxygenated fuels are an effective means to control carbon monoxide, and hence it is appropriate to approve this provision of the CO SIP at this time.

Shortening of the Oxygenated Fuels Season

One party submitted comments in response to EPA's December 6, 1996 supplemental notice of proposed rulemaking, proposing approval of the revisions to Regulation 13 removing the last two weeks of the oxygenated fuels season and reproposing approval of the CO SIPs to incorporate this revision. This commentor supported EPA's action to approve the shortening of the oxygenated fuels season. The commentor also raised other issues with respect to the oxygenated fuels program which have been addressed above.

Abandoned and Impounded Vehicle Program

*One commentor expressed concern that the SIP provision preventing re-registration of abandoned or impounded pre-1982 vehicles would negatively impact the collector car industry of the Denver region and would prevent owners from recovering stolen vehicles. Another commentor expressed concern that this program would unnecessarily harm lower-income individuals and artificially increase demand for new cars. While EPA understands these concerns, the Act prohibits EPA from basing its actions concerning SIPs on considerations involving the economic reasonableness of State actions. See *Union Electric Co. v. EPA*, 427 U.S. 246, 256-266 (1976); 42 U.S.C. section 7410(a)(2). While EPA is prohibited from basing its action on the SIP on economic grounds, EPA has concluded for other reasons that it should not act on this element of the SIP. The provision is not well-defined in the SIP, with the design and implementation of this program left up to the discretion of local jurisdictions, and no credit was taken for this measure in the attainment demonstration (see SIP page IX-4). Therefore, EPA is not taking action on this element of the SIP.*

Revised Emissions Standards for Pre-1982 Vehicles

One commentor stated that the requirement for tighter emissions testing cutpoints for pre-1982 was arbitrary and capricious, and unduly impacted owners of these model year vehicles in the Denver region. Again, EPA is prohibited by law from basing its actions on SIPs on considerations involving the economic reasonableness of State actions. However, pre-1982 vehicles were targeted for tighter cutpoints because 1982 and newer vehicles are already subject to the more stringent provisions of the enhanced vehicle inspection and maintenance program. Tighter cutpoints for pre-1982 vehicles should result in more high-emitting vehicles being identified and repaired through the requirements of Regulation 11. Data from the enhanced I/M program show that the average older vehicle emits carbon monoxide at levels many times higher than the level at which they were certified for sale. However, there is no presumption that all older vehicles are high emitters, and vehicles in good operating condition should not fail the tighter cutpoints. This commentor also stated that the State and EPA had failed to consider the smaller proportion of total VMT generated by pre-1982 vehicles. The mobile source emissions modeling conducted for the SIP is based on estimates of annual mileage accumulation and share of daily VMT for each model year. Thus, the SIP modeling inputs reflect the smaller proportion of total VMT generated by pre-1982 vehicles. While it is true that pre-1982 vehicles do represent a relatively small proportion of total

[[Page 10695]]

regional VMT, emissions generated by these vehicles are still significant because these vehicles are required to meet less stringent emissions standards by the State and EPA, and thus, per-vehicle emissions are higher. The SIP estimates that this measure would provide a CO emission reduction benefit of 20 tons per day in 1995. EPA believes the estimates of pre-1982 VMT share and emissions reductions from the SIP provision are reasonable. Another commentor stated that EPA should give the State the option of eliminating the I/M program and the prohibition on re-registration of abandoned and impounded vehicles in favor of an enforceable system of user fees or other economic incentives that would address the actual contribution of individual vehicles and drivers to the region's pollution problems. The Clean Air Act requires the State to implement an enhanced I/M program that meets certain minimum requirements. However, the Act would allow the State to revise its SIP at any time to add the type of program mentioned by the commentor, as long as the program meets the SIP requirements of Section 110. EPA does not have to take any type of action in order to enable the State to develop and submit this type of SIP revision. As noted above, EPA is not acting on the SIP provision that prohibits re-registration of abandoned and impounded vehicles.

Transportation Control Measures (TCMs)

One commentor felt that EPA's description of the relationship of the TCMs to the SIP as a whole was unclear. This commentor felt that EPA was interpreting the SIP to incorporate the TCMs as part of the attainment demonstration, in addition to incorporating the TCMs as contingency measures. Further review of the SIP confirms that the TCMs are only meant to be incorporated as contingency measures. This intent is clearly stated in the SIP on pages VI-3 and X-1. The SIP states the intent of the area to implement the contingency measures early, as allowed by EPA policy, to obtain additional emission reductions. Chapter XII of the SIP, Attainment Demonstration, clearly demonstrates that these measures are not necessary for the Denver area to attain the CO NAAQS by December 31,

2000. Thus, EPA is clarifying that the TCMs are intended to be enforceable provisions of the SIP only as contingency measures, with implementation required only in the event that the contingency measures are triggered (through the mechanisms discussed in the proposal). The State has made an adequate showing that TCMs are not needed for attainment, as required by section 187(a)(2)(B) of the Act. Another commentor stated that the requirements of the Act for TCMs in Denver had not been met. EPA believes that the State and the Regional Air Quality Council have correctly interpreted the Act's requirements for TCMs, that the TCM provisions of the SIP are adequate, and that the SIP contains an adequate showing that TCMs are not necessary for attainment. This commentor also stated that EPA should require annual reporting on the effectiveness and implementation of TCMs and other control strategies. EPA notes that periodic reporting is already required for a number of control measures and does not believe that further reporting is necessary at this time. For example, the Act requires annual reporting of VMT and a comparison of actual VMT with the SIP forecasts. The State has complied with these requirements. The Act and EPA's transportation conformity rule (58 FR 62188, November 24, 1993) also require that the Denver Regional Council of Governments (DRCOG) report on the implementation status of TCMs each time a conformity determination is made, and prohibit conformity findings if TCMs are not being implemented as required by the SIP. The State also produces annual reports on the effectiveness of the SIP's two major control strategies, the I/M and oxygenated fuels programs, as required by State law. EPA's I/M regulations (40 CFR Part 51, Subpart S) also require periodic evaluation of and reporting on the effectiveness of the I/M program.

Contingency Measures

One commentor stated that the SIP does not contain adequate contingency measures, and that EPA should require the State to implement the contingency measures based on the Denver area's failure to attain. This commentor also stated that it was insufficient for the SIP to describe existing conditions as contingency measures which have already been implemented. As discussed in the proposal (61 FR 36009, July 9, 1996), the SIP TCMs exceed the minimum emission reductions established in EPA guidance, and EPA considers these measures adequate. Although the State has chosen to voluntarily implement many of the contingency measures, and thus obtain the benefits of early emissions reductions, the commentor is correct that EPA is not requiring the State to implement the contingency measures in the SIP based on the area's failure to attain the standard by the end of 1995. EPA believes it is neither necessary nor appropriate to do so. This is because EPA's approval of this Serious area CO SIP, which the State has been implementing since 1994, obviates the need for Moderate area contingency measures. Contingency measures for a Moderate CO nonattainment area with a design value greater than 12.7 ppm are intended to provide emissions reductions while the State revises its SIP to meet Serious area SIP requirements. Here the State has already submitted a Serious area SIP that demonstrates attainment of the CO standard by the end of 2000, and EPA is approving it. In addition, there is no EPA-approved Moderate area CO SIP for the Denver area on which EPA can base a requirement that the State implement contingency measures for the failure to attain the CO standard by the end of 1995. If an EPA-approved Moderate area CO SIP had been in place at the time the area violated the CO standard in 1995, EPA would have required the State to implement the contingency measures contained in that SIP. In the Serious area SIP that the State has submitted and that EPA is approving today, contingency measures are tied to the 2000 attainment date. There is no basis or necessity for EPA to require the State to implement contingency measures based on the area's failure to attain the CO standard by the end of 1995. The SIP envisions that the TCMs identified as contingency measures will be implemented early. This is acceptable to EPA. EPA policy (August 13, 1993 memorandum from G.T. Helms to regional Air Branch Chiefs entitled "Early Implementation of Contingency Measures for Ozone and Carbon Monoxide Nonattainment Areas") encourages the early implementation of contingency measures for the additional emission reductions and progress toward attainment that they provide. EPA believes that requiring states to adopt additional contingency measures to replace measures that were implemented early would only discourage early implementation and the resulting additional emission reductions.

Reclassification to Serious

Two commentors expressed concern over EPA's proposed reclassification of the Denver area from Moderate to Serious for CO, given the small number and low absolute value of violations in recent years. These commentors felt that EPA should recognize Denver's progress toward attainment of the CO NAAQS in

[[Page 10696]]

recent years. EPA recognizes that Denver has taken significant steps to reduce CO levels and make progress toward attainment, including implementation of a comprehensive woodburning control program, the nation's first oxygenated fuels program, and an effective enhanced I/M program. However, as explained in the proposed rulemaking, the unambiguous provisions of the CAA and recent ambient values for CO in Denver compel EPA to take this action. One commentor stated that the SIP does not contain the elements required for a Serious area SIP. As discussed in detail in the proposal, EPA believes that the SIP does contain all required elements.

Attainment Demonstration

One commentor submitted extensive comments on the adequacy of the attainment demonstration. This commentor felt that the attainment demonstration was inadequate because it did not consider other downtown intersections with the potential of experiencing high concentrations of CO and because growth projections used in the modeling underestimate the amount of growth in traffic that has occurred in the Denver area since the attainment demonstration was submitted to EPA. The State performed preliminary CAL3QHC modeling of CO concentrations at three intersections in the downtown area: Speer and Auraria Boulevard, Broadway and Colfax, and Broadway and Champa. The CAMP air quality/meteorology monitoring station, which has historically recorded the highest levels of CO in the Denver area, is located adjacent to the intersection of Broadway and Champa. The preliminary modeling results showed predicted concentrations at the Speer/Auraria and Broadway/Colfax intersections that were up to 6 parts per million (ppm) higher than concentrations predicted at the CAMP intersection. However, the State selected only Broadway and Champa (CAMP) for use in the SIP attainment demonstration because the on-site air quality and meteorological data available at this location provided more confidence in the modeling results. To ensure that higher concentrations exceeding the NAAQS do not occur at other downtown locations the State has performed supplemental CO monitoring studies at all three intersections and elsewhere in the Denver urban core. The results to date have continued to support the use of CAMP as the maximum concentration downtown site; CAMP continues to record higher CO design value concentrations than any other location in the Denver metro monitoring network. The commentor stated that EPA has not applied its modeling standards, guidance, and protocols consistently to the choice of intersections or to the attainment demonstration generally. EPA (both Region VIII and the national Model Clearinghouse) reviewed the State's analysis and found that it was consistent with national modeling policy and other recent Urban Airshed Model/CAL3QHC modeling applications. EPA believes that modeled concentrations at Speer/Auraria and Broadway/Colfax are unreliable and therefore is not requiring the State to use the preliminary CAL3QHC intersection modeling results to demonstrate attainment at these two intersections. EPA's position is based on the following factors: (1) Saturation CO monitoring studies in the downtown area and continuous wintertime monitoring since 1994 at Speer/Auraria do not support the modeled predictions of higher concentrations at these locations; (2) estimated wind speeds at Speer/Auraria and Broadway/Colfax during both episodes modeled were frequently below the stated threshold of the CAL3QHC model and are not considered valid for use in the model; (3) there is a possibility that "cold start" vehicle emissions may have been overestimated at these intersections, artificially increasing predicted concentrations; and (4) micro-meteorological effects of high-rise office buildings significantly increase modeling uncertainties at these intersections, where on-site meteorological data was not available. EPA also notes that the State followed the criteria contained in the Guideline for Modeling Carbon Monoxide from Roadway Intersections (EPA-454/R-92-005) in identifying the six busiest intersections for the SIP analysis. State modeling of these intersections showed compliance with the NAAQS. However, these intersections are all located outside of the downtown area; downtown is where the highest concentrations have historically been measured. EPA subsequently requested the State to model an additional intersection in the downtown urban core in order to assure attainment of the NAAQS. However, the State's compliance with this request goes beyond the usual requirements for a CO SIP attainment demonstration analysis. The commentor suggested that meteorological and other data are available that are more than adequate for modeling intersections other than CAMP. To EPA's knowledge, CAMP is the only intersection with representative on-site meteorology data for the periods that were modeled. Off-site meteorology was available at the Tivoli site for portions of the SIP episodes modeled, but this site is located several hundred meters south of the current intersection of Speer and Auraria. EPA reviewed the Tivoli site and determined that meteorological data collected at this location would not be representative of conditions at the intersection. Winds at the Speer and Auraria intersection would be affected to a far greater degree by building wake effects than the Tivoli site. In addition, there have been extensive changes to the roadway and construction of additional structures in the area since the Tivoli data were obtained in 1988. No data whatsoever were available for the Broadway and Colfax intersection. The commentor referred to critiques of the attainment demonstration developed by State staff and by outside sources. EPA has not been provided with and is not aware of any State or outside critiques of the attainment

demonstration. EPA was provided with preliminary modeling results for the Speer and Auraria and Broadway and Colfax intersections by APCD staff members that were based on the Tivoli and CAMP meteorological/air quality data. In addition to using non-representative data, the analysis contained a number of modeling assumptions that were not consistent with the EPA Guideline on Air Quality Models or the CAL3QHC Model Users Manual, including incorrect atmospheric stabilities and wind speeds lower than the acceptable threshold for the CAL3QHC model. The final CAL3QHC modeling submitted by the APCD did not contain intersection modeling for the two intersections where on-site data were not available. EPA concurs with the final modeling analysis submitted by the State. This decision is supported by the supplemental CO monitoring studies that have been performed in the downtown area. These studies support the continued use of CAMP as the maximum concentration downtown site. The commentor also suggested that EPA applied a different set of review criteria to the downtown intersections than to suburban sites, because the downtown intersections showed high CO concentrations that would trigger more stringent control strategies, and suggested that these different criteria led to high concentration intersections downtown being dropped from the SIP analysis. The reason the modeling results for the two intersections in the downtown area were dropped is that the CAL3QHC model could not be applied

[[Page 10697]]

appropriately given the effects of nearby downtown buildings on wind flow and the lack of representative on-site data. Building effects were not an issue at the six suburban intersections modeled in the SIP. The commentor implied that EPA was basing its decision to approve the SIP on "voluntary" compliance with EPA requests, "understandings" between State and EPA staff, and written and unwritten EPA "guidance". The commentor suggested that EPA was honoring a "deal" that violates the letter and intent of the Act. EPA believes that the attainment demonstration meets the requirements of the Act. EPA addresses the commentor's specific concerns regarding the attainment demonstration in other portions of this response. EPA is not basing its decision to approve the SIP on any "deals" or improper "understandings" reached with the State, but on the SIP's compliance with the Act. EPA does not know what the commentor is referring to when it writes about "voluntary" compliance with EPA requests. To the extent EPA has offered guidance to the State, EPA believes such guidance has been consistent with the Act or a reasonable interpretation of the Act. The commentor noted that many large projects have been planned or built since the attainment demonstration was submitted to EPA, and that newer growth projections show higher levels of traffic than those considered in the SIP. Two of the facilities specifically mentioned by the commentor (Coors Field and Elitch's) would not be expected to affect Denver's ability to attain the CO standard, since they are not operational during the winter season when the highest values of CO are measured in Denver. The proposed Pepsi Center, which could impact Denver's ability to attain the NAAQS due to its potential proximity to one of the downtown intersections where elevated values of CO have been monitored, has not been approved by the City and County of Denver, and there is apparently some possibility that this facility may not be located downtown at all. Denver is currently examining the traffic and air quality impacts of a wide range of potential development in the lower downtown area through its Central Platte Valley Multimodal Access and Air Quality Study. The comment regarding newer projections of traffic growth apparently refers to revised estimates of daily vehicle miles travelled produced by DRCOG in the summer and fall of 1996. In early 1996, DRCOG made some improvements to its transportation demand model (used for transportation planning, and to produce estimates of future VMT and speeds for air quality planning purposes) and validated the model with actual 1995 traffic counts recorded in Denver. These adjustments led to revised estimates of approximately 49 million miles per day of traffic in the Denver area (the previous modeled estimate had been approximately 45 million miles per day). Part of this estimated increase is due to actual growth in traffic in the Denver region, and part of it is due to use of improved methodologies for traffic counting in the region. In November 1996, Colorado submitted its 1996 report of 1995 actual annual VMT, as required by the SIP's VMT tracking provisions and the Act. This report showed that actual 1995 VMT were 4.4% greater than the SIP projections and 1.3% greater than the most recent revised projection for 1995. These exceedances are within the allowable limits of EPA's VMT Tracking Program guidance (5.0% and 3.0% for the respective VMT projections). EPA established these tolerances in recognition of the uncertainty inherent in attempting to measure actual VMT in a large urban area. Since the most recent reported actual annual VMT is within these allowable tolerances, the State is not required to implement its contingency measures, and no revision to the SIP is required. If a subsequent VMT tracking report shows that the SIP VMT projections (or updated forecasts) are exceeded by greater than the margins of error allowed by EPA guidance, implementation of the contingency measures will be required, along with a revision to the SIP if necessary. EPA believes that the State has followed the proper procedures (as outlined in EPA's guidance and the SIP's VMT Tracking Program protocol) in generating the annual VMT reports that EPA is relying on for its approval of the SIP. Several factors are involved in

comparing estimates of daily VMT to estimates of annual VMT, including: (1) The geographic area covered by the different estimates; (2) whether average daily traffic or average weekday traffic are used; (3) the differences between the traffic counting network used by DRCOG for its model validation, and the network required for use by the Colorado Department of Transportation in generating the Highway Performance Monitoring System (HPMS) VMT data that the VMT Tracking Program traffic estimates are based on (use of HPMS data is required by EPA and U.S. Department of Transportation guidance); and (4) the assumptions behind the original VMT estimates in the SIP. There are a number of other factors that protect the SIP's attainment demonstration from growth in VMT. First, under the requirements of the EPA/DOT transportation conformity rule, DRCOG's transportation plans and transportation improvement programs must comply with the emissions budget for CO contained in the CO SIP, even if unexpected increases in VMT occur after the SIP is adopted. This budget protects the Denver area against future violations of the CO NAAQS in the face of growing VMT. If the budget cannot be met, DRCOG cannot adopt any new plans and TIPs, and no new regionally significant projects can be approved. Thus, failure to meet the budget has the same or greater effect as the imposition of highway sanctions under section 179 of the Act. Second, it is important to note that virtually all of the growth in the metro area has occurred not in the downtown area, where the violations of the NAAQS have been monitored, but in outlying portions of the metro area. Thus, EPA would expect that VMT in the downtown area would increase at a lower rate than VMT for the metro area as a whole. This is supported by traffic counts at locations near downtown, which show that traffic in the central area increased at a rate of approximately 2-3% per year between 1990 and 1995, even though DRCOG estimates that traffic has increased approximately 4.5% per year regionwide. Finally, the air quality trends information submitted with the State's March 1996 milestone report shows that the Denver area is ahead of schedule to attain the CO NAAQS even with the higher-than-expected estimates of daily VMT. Based on its conclusion that the attainment demonstration was inadequate, this commentor further concluded that the control strategies submitted with the SIP are insufficient to provide for attainment of the NAAQS. EPA's general response to this assertion is that the attainment demonstration is adequate, and that the modeling summarized in Chapter XII of the SIP and submitted to EPA demonstrates that the SIP will provide for attainment with the control measures included in the SIP. The commentor stated that the SIP does not include a requirement that gasoline sold during the winter months include a level of oxygen sufficient to attain the NAAQS. As discussed above, the SIP includes a requirement for a 3.1% minimum oxygen content; the attainment demonstration shows that this level of oxygen is necessary and

[[Page 10698]]

sufficient to provide for attainment of the NAAQS. The commentor stated that there is no indication that the State will apply the requirements for content and analysis of transportation plans, programs and projects contained in the conformity regulations. These requirements for nonattainment areas classified as serious and above are enforceable through the EPA/DOT conformity regulation, and DRCOG must comply with them when they take effect. There is no requirement in the conformity rule or in the Act that these provisions be incorporated into the CO SIP. However, they are mentioned on page I- 4 of the SIP. The commentor stated that the SIP does not satisfy section 110(a)(2) of the Act. As outlined in detail in the Technical Support Document for EPA's proposed action, the SIP does satisfy the SIP content requirements of section 110(a)(2). The commentor stated that the SIP does not contain adequate measures to control stationary source emissions. Stationary point source emissions represent only 1.1% of base case emissions (based on actual emissions) and 5.6% of attainment year emissions (based on allowable emissions). None of the major sources are located in close proximity to the downtown monitors which record high concentrations, and these sources have little or no impact on Denver's ability to attain the NAAQS. However, stationary point sources of CO are regulated by Colorado Regulation No. 1 (Particulates, Smokes, CO and Sulfur Oxides). As noted above, woodburning is already regulated by Regulation No. 4; woodburning also has very little impact on the downtown monitoring sites. The remaining stationary sources of emissions are natural gas combustion and structural fires, which contribute a total of less than 1% to the attainment year inventory and again have very little impact on the high concentration monitoring sites. The commentor stated that the SIP should include a mandatory employer-based trip reduction program, or demonstrate that such a program is not necessary to demonstrate attainment of the NAAQS. As noted in the proposal, Congress revised the Act in 1995 to make submittal of trip reduction programs voluntary. Thus, EPA could not require the State to submit such a program even if the attainment demonstration were to be found inadequate. The commentor noted that the SIP does not contain an adequate milestone, nor does it contain an economic incentive program for implementation should the milestone not be met. Neither the Act nor EPA policy establish requirements for milestones, so the State was free to adopt its 1995 base case emission inventory as the milestone. The base case represents progress toward attainment (emissions in the 1995 base case were substantially lower than 1990 emissions), which is the intent of this requirement of the Act.

Also, the Act does not require submittal of an economic incentive program until after either (1) the milestone has been missed or (2) the Denver area fails to attain by December 31, 2000. Thus, the SIP is not deficient in this regard. Finally, the commentor stated that EPA should expressly incorporate the baseline (pre-existing) control strategies in its approval of this SIP, that EPA should make it clear that its approval of the SIP is based on the understanding that these control strategies will remain in place, and that EPA should withdraw its approval of the SIP should these control strategies be weakened. As noted in the proposal, the baseline strategies relied upon in the attainment demonstration have already been incorporated into the Colorado SIP, making them federally enforceable; the new control strategies will also be incorporated into the SIP with EPA's final action on the SIP. EPA's approval is based on the enforceability of these measures and the SIP's stated intention that these measures continue to be implemented. If, subsequent to EPA approval, control measures are weakened or discontinued, EPA's available responses include making a finding of SIP non-implementation under section 179(a)(4) and/or section 113(a)(2) of the Act, or making a finding of SIP inadequacy and issuing a call for a SIP revision under Section 110(k)(5) of the Act. EPA believes that these mechanisms, along with EPA's and citizens' ability to directly enforce SIP requirements, are adequate to ensure that pre-existing control measures continue to be implemented.

Approval of the SIP

While several parties requested that EPA disapprove the SIP, for reasons discussed above, two commentors supported EPA's approval of the SIP. EPA is proceeding with final approval of the CO SIP for the reasons discussed above and in our July 9, 1996 and December 6, 1996 notices of proposed rulemaking.

III. Implications of Today's Final Action

In today's action, EPA is approving SIP revisions submitted by the Governor on July 11, 1994, July 13, 1994, September 29, 1995, and December 22, 1995. Specifically, EPA is (1) approving the July 11, 1994 attainment demonstration, VMT tracking and forecasting program, TCM, and contingency measures submittals for Denver; (2) approving the July 13, 1994 attainment demonstration and contingency measures submittals for Longmont; (3) approving the control strategies for Denver, including the September 29, 1995 submittal of revisions to Regulations 11 and 13 (I/M and oxygenated fuels); and (4) approving the further revisions to Regulation 13 submitted on December 22, 1995 that shorten the effective period of the oxygenated fuels program. For the reasons discussed in Section II of this document, EPA is not taking action on the SIP provision submitted on July 11, 1994 that calls for a prohibition of the re-registration of abandoned and impounded vehicles. In this document, EPA is also making a finding that the Denver/ Boulder carbon monoxide nonattainment area did not attain the NAAQS by the required attainment date of December 31, 1995, and is revising the area's classification for carbon monoxide in 40 CFR Part 81 from Moderate to Serious. This finding is based on air quality data revealing more than one exceedance of the CO NAAQS during calendar year 1995, resulting in a design value higher than the NAAQS for the period 1994-95. By action dated December 20, 1994, the EPA Administrator delegated to the Regional Administrators the authority to determine whether CO nonattainment areas attained the NAAQS, and to reclassify those that did not. EPA has reviewed this request for revision of the federally- approved SIP for conformance with the provisions of the Act. EPA has determined that this action conforms with those requirements. Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future request for revision to any State Implementation Plan. Each request for revision to any State Implementation Plan shall be considered separately in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

IV. Executive Order (EO) 12866

Under EO 12866, 58 FR 51735 (October 4, 1993), EPA is required to determine whether regulatory actions are significant and therefore should be subject to OMB review, economic analysis, and the requirements of the

[[Page 10699]]

EO. The EO defines a "significant regulatory action" as one that is likely to result in a rule that may (1) have an annual effect on the economy of \$100 million or more or adversely affect, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan

programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order. Today's SIP-related actions have been classified as Table 3 actions for signature by the Regional Administrator under the procedures published in the Federal Register on January 19, 1989 (54 FR 2214- 2225), as revised by a July 10, 1995 memorandum from Mary Nichols, Assistant Administrator for Air and Radiation. The Office of Management and Budget has exempted these regulatory actions from EO 12866 review. Likewise, EPA has determined that today's finding of failure to attain would result in none of the effects identified in section 3(f) of the EO. Under Section 186(b)(2) of the Clean Air Act, findings of failure to attain and reclassification of nonattainment areas are based upon air quality considerations and must occur by operation of law in light of certain air quality conditions. They do not, in and of themselves, impose any new requirements on any sectors of the economy. In addition, because the statutory requirements are clearly defined with respect to the differently classified areas, and because those requirements are automatically triggered by classifications that, in turn, are triggered by air quality values, findings of failure to attain and reclassification cannot be said to impose a materially adverse impact on State, local, or tribal governments or communities.

V. Regulatory Flexibility

Under the Regulatory Flexibility Act, 5 U.S.C. section 600 et. seq., EPA must prepare a regulatory flexibility analysis assessing the impact of any proposed or final rule on small entities (5 U.S.C. sections 603 and 604). Alternatively, EPA may certify that the rule will not have a significant impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and government entities with jurisdiction over populations that are less than 50,000. SIP revision approvals under Section 110 and Subchapter I, Part D, of the CAA do not create any new requirements, but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval process does not impose any new requirements, EPA certifies that this final rule would not have a significant impact on any small entities affected. Moreover, due to the nature of the Federal-State relationship under the

CAA, preparation of a regulatory flexibility analysis would constitute Federal inquiry into the economic reasonableness of State actions. The CAA forbids EPA to base its actions concerning SIPs on such grounds. Union Electric Co. v. U.S.E.P.A., 427 U.S. 246, 256-266 (S. Ct. 1976); 42 U.S.C. section 7410(a)(2). As discussed in section IV of this document, findings of failure to attain and reclassification of nonattainment areas under Section 186(b)(2) of the CAA do not, in and of themselves, create any new requirements. Therefore, I certify that today's final action does not have a significant impact on small entities.

VI. Unfunded Mandates

Under Section 202 of the Unfunded Mandates Reform Act of 1995 ("Unfunded Mandates Act"), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate, or to the private sector, of \$100 million or more. Under Section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule. EPA has determined that today's final approval actions do not include a Federal mandate that may result in estimated costs of \$100 million or more to either State, local or tribal governments in the aggregate, or to the private sector. These Federal actions approve pre- existing requirements under State or local law, and impose no new requirements. Accordingly, no additional costs to State, local or tribal governments, or to the private sector, result from these actions. Likewise, EPA believes, as discussed in section IV of this document, that the finding of failure to attain and reclassification to Serious are factual determinations based upon air quality data and must occur by operation of law and, hence, do not impose any federal intergovernmental mandate, as defined in section 101 of the Unfunded Mandates Act.

VII. Small Business Regulatory Enforcement Fairness Act (SBREFA)

Under 5 U.S.C. 801(a)(1)(A) as added by the Small Business Regulatory Enforcement Fairness Act of 1996, EPA submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives and the Comptroller of the General Accounting Office prior to publication of the rule in today's Federal Register. This rule is not a "major rule" as defined by 5 U.S.C. 804(2).

VIII. Petitions for Judicial Review

Under Section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by May 9, 1997. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (see Section 307(b)(2)).

List of Subjects

40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, and Reporting and recordkeeping requirements.

40 CFR Part 81

Environmental protection, Air pollution control, National parks, Wilderness areas.

Dated: January 31, 1997. Max H. Dodson, Acting Regional Administrator. Chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52--[AMENDED]

1. The authority citation for Part 52 continues to read as follows:

[[Page 10700]]

Authority: 42 U.S.C. 7401-7671q.

Subpart G--Colorado

2. Section 52.320 is amended by adding paragraph (c)(80) to read as follows:

Sec. 52.320 Identification of plan.

- ** * * * (c) * * * (80) On July 11, 1994, July 13, 1994, September 29, 1995, and December 22, 1995, the Governor of Colorado submitted revisions to the Colorado State Implementation Plan (SIP) to satisfy those CO nonattainment area SIP requirements for Denver and Longmont, Colorado due to be submitted by November 15, 1992, and further revisions to the SIP to shorten the effective period of the oxygenated fuels program. EPA is not taking action on the SIP provision submitted on July 11, 1994 that calls for a prohibition of the re-registration of abandoned and impounded vehicles. (i) Incorporation by reference. (A) Regulation No. 11, Motor Vehicle Emissions Inspection Program, 5 CCR 1001-13, as adopted on September 22, 1994, effective November 30, 1994. Regulation No. 13, Oxygenated Fuels Program, 5 CCR 1001-16, as adopted on October 19, 1995, effective December 20, 1995.*

PART 81--[AMENDED]

1. The authority citation for Part 81 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

2. In 81.306, the Carbon Monoxide table is amended by revising the entry for "Denver-Boulder Area" to read as follows:

Sec. 81.306 Colorado.

* * * * *

Colorado--Carbon Monoxide

Designation

Classification

Designated area

Denver-Boulder

Area: The boundaries for the Denver nonattainment area for carbon monoxide (CO) are described as follows: Start at Colorado Highway 52 where it intersects the eastern boundary of Boulder County; Follow Highway 52 west until it intersects Colorado Highway 119; Follow northern boundary of Boulder city limits west to the 6000- ft. elevation line; Follow the 6000- ft. elevation line south through Boulder and Jefferson Counties to US 6 in Jefferson County; Follow US 6 west to the Jefferson County-Clear Creek County line; Follow the Jefferson County western boundary south for approximately 16.25 miles; Follow a line east for approximately 3.75 miles to South Turkey Creek; Follow South Turkey Creek northeast for approximately 3.5 miles; Follow a line southeast for approximately 2.0 miles to the junction of South Deer Creek Road and South Deer Creek Canyon Road; Follow South Deer Creek Canyon Road northeast for approximately 3.75 miles; Follow a line southeast for approximately five miles to the northernmost boundary of Pike National Forest where it intersects the Jefferson County-Douglas County line; Follow the Pike National Forest boundary southeast through Douglas County to the Douglas County-El Paso County line; Follow the southern boundary on Douglas County east to the Elbert County line; Follow the eastern boundary of Douglas County north to the Arapahoe County line; Follow the southern boundary of Arapahoe County east to Kiowa Creek; Follow Kiowa Creek northeast through Arapahoe and Adams Counties to the Adams-Weld County line; Follow the northern boundary of Adams County west to the Boulder County line; Follow the eastern boundary of Boulder County north to Highway 52.

<i>Adams County(part)</i>	<i>Nonattainment</i>	<i>4/9/97</i>	<i>Serious.</i>
<i>Arapahoe County (part)</i>	<i>Nonattainment</i>	<i>4/9/97</i>	<i>Serious.</i>
<i>Boulder County (part)</i>	<i>Nonattainment</i>	<i>4/9/97</i>	<i>Serious.</i>
<i>Denver County (part)</i>	<i>Nonattainment</i>	<i>4/9/97</i>	<i>Serious.</i>
<i>Douglas County(part)</i>	<i>Nonattainment</i>	<i>4/9/97</i>	<i>Serious.</i>
<i>Jefferson County (part)</i>	<i>Nonattainment</i>	<i>4/9/97</i>	<i>Serious.</i>

----- \1\ This date is November 15, 1990, unless otherwise noted.

Appendix J – Temporal Distribution of Emissions

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

**** Temporal allocation factors used in the FORTRAN code PRCEMS11****
**** These factors are the same as those used in the approved CO SIP except ****
**** for on-road mobile sources; for on-road, the factors have been revised ****
**** For more details about PRCEMS11, refer to appendix of Chapter 7 of the ****
**** CO SIP Technical Support Document ****

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

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Table 32. Temporal allocation factors used to distribute AM-Peak, PM-Peak, and Off-Peak on-road mobile emissions for 2006 and 2013.

Hour	AM-Peak Factor	PM-Peak Factor	Off-Peak Factor
0	0	0	0.0147
1	0	0	0.0082
2	0	0	0.0065
3	0	0	0.0065
4	0	0	0.0115
5	0	0	0.0213
6	0	0	0.0769
7	0.5957	0	0
8	0.4043	0	0
9	0	0	0.0671
10	0	0	0.0753
11	0	0	0.0884
12	0	0	0.0818
13	0	0	0.0802
14	0	0	0.0867
15	0	0.2891	0
16	0	0.3554	0
17	0	0.3555	0
18	0	0	0.1341
19	0	0	0.0737
20	0	0	0.0622
21	0	0	0.0540
22	0	0	0.0311
23	0	0	0.0196

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Appendix K – Section 110 of the Clean Air Act

Technical Support Document (DRAFT)
Carbon Monoxide Redesignation Request and Maintenance Plan for the Denver Metropolitan Area

Section 110 of the Clean Air Act

Infrastructure Component of the Existing State Implementation Plan

This document explains how Colorado's existing State Implementation Plan (SIP), together with relevant state statutory provisions, comply with the requirements of subparagraphs (B) through (M) of Section 110(a)(2) of the Federal Clean Air Act ("CAA"). Since the SIP already complies with the relevant federal requirements, no SIP revision is necessary to establish the air quality control infrastructure required by Section 110(a)(2). State statutes are cited herein solely for the purpose of demonstrating that the State has the adequate authority under State law to promulgate and administer the SIP. The citation of such state statutory provisions shall not be construed as a submittal to EPA of such statutory provisions for incorporation into the SIP.

Section 110 (a)(2)(B)- Ambient Air Quality Monitoring and Data System

Federal Requirements

Section 110 (a)(2)(B) of the CAA provides that the SIP must: (1) provide for the establishment and operation of appropriate devices, methods, systems, and procedures to monitor, compile, and analyze data on ambient air quality; and (2) upon request, make such data available to the EPA. Also, Federal regulations concerning ambient air quality monitoring programs are found in 40 CFR 58.

Authority and Colorado SIP Provisions

The State of Colorado has an approved monitoring SIP, the authority to conduct monitoring, and the ability to properly handle all related data. The provisions for episode monitoring, data compilation and reporting, public availability of information, and annual network reviews are found in the statewide monitoring SIP which was approved by EPA on July 9, 1980 (45 FR 46073) and August 11, 1980 (45 FR 53147). The State has since revised the monitoring SIP to include all new federal requirements. The revised SIP includes a commitment to operate a PM monitoring network in accordance with those criteria established by EPA regulations (40 CFR Part 58.20 and Appendices A through G). The monitoring SIP also makes the data available to the EPA. The Colorado Air Quality Control Commission (AQCC) adopted monitoring SIP revisions on March 18, 1993.

Section 110 (a)(2)(C)- Program for Enforcement of Control Measures

Federal Requirements

Section 110 (a)(2)(C) of the CAA says that Colorado's SIP must include a program to enforce the measures described in Section 110 (a)(2)(A), and to regulate the modification and construction of any stationary source within the areas covered by the SIP as necessary to assure that the National Ambient Air Quality Standards (NAAQS) are achieved, including a permit program.

Authority and Colorado SIP Provisions

Regulation 3 regulates the construction and modification of stationary sources as necessary to assure that the NAAQS are achieved, and includes a permit program as required in Parts C and D of the CAA

Colorado also has a program for the enforcement of control measures included in the SIP. The Division of Administration in the Colorado Department of Public Health and Environment ("the Division") has the authority to enforce compliance with the emission control regulations adopted by the AQCC, and to enforce the requirements of the SIP. (Section 25-7-115, C.R.S.) The Division's authority includes the authority to issue compliance orders, and to assess civil and noncompliance penalties. (Section 25-7-115, C.R.S.) The Division has the authority to conduct inspections, collect data, and require sources to submit emissions data. (Section 25-7-111, C.R.S.) The Division and the Colorado Department of Revenue jointly enforce the Automobile Inspection and Readjustment program codified in Regulation No. 11 through the denial of registration of vehicles without the requisite inspection and taking enforcement actions, pursuant to Sections 42-4-310, 42-4-311 and 32-4-312, C.R.S. As is described below, the Division has adequate personnel and funding to enforce the control measures included in the SIP.

Section 110 (a)(2)(D)- Interstate Transport

Federal Requirements

Section 110 (a)(2)(D) of the CAA requires the SIP to include provisions prohibiting any source or other type of emissions activity in one state from contributing significantly to non-attainment in another state or from interfering with measures required to prevent significant deterioration of air quality or to protect visibility.

Section 110 (a)(2)(D) of the CAA also requires the SIP to ensure compliance with both Sections 115 and 126 of the CAA. Section 115 provides that air pollutants emitted from sources in Colorado may not endanger public health or welfare of a

foreign country. Section 126 requires the SIP to provide for notice to affected states of major proposed new or modified sources which are subject to Part C (relating to significant deterioration of air quality) or which may significantly contribute to levels in excess of the NAAQS in such other states.

Authority and Colorado SIP Provisions

Section A of part 2 of the AQCC Common Provisions (5CCR 1001-2) is adequate to comply with the requirement to prohibit sources in Colorado from contributing to nonattainment in another state. Furthermore, the control measures included in the SIP to protect the NAAQS in Colorado adequately protect other states from significant air pollution from sources in Colorado. If the State is meeting the NAAQS in its own state, then levels of pollutants will never be reached which might exceed the NAAQS in a neighboring state or endanger public health or welfare in a neighboring country.

The SIP also complies with the notice requirements of Section 126 of the CAA. Regulation 3, Part B, Section IV.C.4 provides for notice to any state that may be affected by emissions from a major source or major modification subject to the Prevention of Significant Deterioration program. Colorado also has a regulation requiring installation of BART on stationary sources if visibility impairment in any class I area is reasonably attributed to such stationary source (Regulation 3, Part B.XI.D).

Section (a)(2)(E)- Adequate Resources, State Boards, and Authority

Federal Requirements

Section 110 (a)(2)(E) of the CAA requires the SIP to include: (1) necessary assurances that Colorado has adequate personnel, funding, and authority to carry out the SIP; (2) requirements respecting State boards; and (3) necessary assurances that, where Colorado has relied on a local or regional government, agency, or instrumentality for the implementation of the SIP, Colorado has the responsibility for ensuring adequate implementation of the SIP provision.

Personnel, Funding, and Authority

There are no state or federal provisions prohibiting the implementation of any provision of the Colorado SIP. Colorado has the funding, personnel, and authority to carry out the SIP. Furthermore, the State of Colorado has the responsibility for implementing the SIP, including the provisions administered by local governments. All of the regulatory provisions included in the SIP were adopted by the AQCC pursuant to authority delegated to it by statute. The AQCC's general authority to adopt the rules and regulations necessary to implement the SIP is set out in Section 25-7-105 (1)(a)(I), C.R.S. The general authority for the Division to administer and enforce the program is set out at 25-7-111, C.R.S. Additional authority to regulate air pollution and implement provisions in the SIP is set out elsewhere in the Colorado Air Pollution Prevention and Control Act (Article 7 of Title 25, C.R.S.) The AQCC's authority includes the

authority to regulate particulate emissions, regardless of size (Section 25-7-109 (2)(b), C.R.S.). In addition, the AQCC and the Division have the authority delegated to them in Sections 42-4-301 to 42-4-316, C.R.S. (concerning motor vehicle emissions) and 42-4-401 to 42-4-414 (concerning emissions from diesel-powered vehicles). These provisions grant the agencies ample authority to carry out the SIP.

The Division is adequately staffed and has an appropriate annual budget covering the six separate programs within the Division (Stationary Sources, Mobile Sources, Technical Services, Planning and Policy, Business Services, and Financial Services). In fiscal year 1997-1998, the Division had a staff of 153 people and a \$12.86 million budget.

State Boards

Section 128 of the CAA indicates Colorado's SIP must contain requirements that any body which approves permits or enforcement orders under the CAA must have a majority of members who represent the public interest and do not derive any significant portion of their income from persons subject to permits or enforcement orders.

The SIP contains adequate provisions implementing the requirements of Section 128. Such provisions are contained in the procedural rules (5 CCR 1001-1) approved by EPA at 40 CFR Section 52.320 (c)(10). The AQCC modified the procedural rules in January 1998. The modifications comply with the requirements of Section 128 and have already been submitted to EPA for approval as a SIP revision.

Relationships with Other Agencies Responsible for Carrying Out State Activities

Where the State relies on local governments to implement a provision of the SIP, the AQCC has promulgated a State regulation requiring the local government to implement such provision. For example, the Colorado Air Quality Control Commission SIP-Specific Regulations (5 CCR 1001-20) establishes requirements for local governments to reduce street sand and to implement local ordinances included in the SIP. Local governments are also subject to the street sanding restrictions set out in Regulation No. 16. In this way the State retains the responsibility for ensuring implementation of the SIP.

State contractual agreements- Local governments implement some aspects of the SIP pursuant to contracts with the Division but the state retains the responsibility for ensuring adequate implementation of the SIP. The agreements with local governments are described here for informational purposes only and not for purposes of incorporation into the SIP. The Division contracts with local governments in two distinct ways:

1. Colorado grants monies to local governments to help pay for their support of SIP elements via public and private partnerships, education and informational campaigns.

2. Local agencies and governments also carry out specific strategies and programs pursuant to contracts with the Division. Pursuant to such contracts, the State provides grant money to local health departments. In return, the local health departments conduct inspections and maintain air quality monitors.

Section (a)(2)(F)- Stationary Source Monitoring System

Federal Requirements

Section 110 (a)(2)(F) of the CAA provides that the State must require stationary sources of air pollutants to monitor emissions and make periodic reports on such emissions, and requires the State to correlate such reports with emission limitations or standards established under the CAA.

Authority and Colorado SIP Provisions

Regulations 1 and 3 implement the requirements of Section 110(a)(2)(F). Section IV of Regulation 1 requires specified sources to monitor emissions. Regulation 3 and section 25-7-114.1, C.R.S. require all stationary sources to report their emissions on a regular basis through Air Pollution Emission Notices (APENs). In addition, Regulation 3, Part A, section VIII provides for emissions monitoring and record-keeping. These SIP provisions (together with Regulation No. 6, Part A, which is included in the State Delegation Package) require monitoring whenever monitoring is prescribed by EPA regulation.

Furthermore, the Division may require owners and operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division under the Colorado Air Quality Control Commission Common Provisions (5CCR 1001-2).

Section 110 (a)(2)(G)- Emergency Power

Federal Requirements

The requirement to develop and implement emergency plans appears in Sections 110 (a)(2)(G) and 303 of the CAA. Specifically, CAA Section 110 (a)(2)(G) provides that the SIP must provide authority comparable to that in Section 303 and adequate contingency plans to implement such authority.

Authority and Colorado SIP Provisions

Sections 25-7-112 and 25-7-113 provide the State with the authority comparable to that in Section 303 of the CAA. The SIP includes contingency plans to implement the emergency powers in the Denver nonattainment area. The Denver Emergency Episode Plans address ozone, PM₁₀, and carbon monoxide, and are similar to the emergency action plan described in 40 CFR 51.150 and 51.151.

Section 110 (a)(2)(H)- Provisions for SIP Revisions due to NAAQS Changes or Findings of Inadequacies

Federal Requirements

The federal requirements regarding SIP revisions due to NAAQS changes or findings of inadequacies are outlined in Section 110(a)(2)(H) of the CAA. The 110 SIP shall provide for revision of the SIP to: (1) address NAAQS revisions, (2) adopt new control measures, and (3) deal with inadequacies.

Authority

The AQCC has the authority and the duty to adopt and revise the SIP as necessary to comply with the federal requirements. Section 25-7-105(1)(a)(I), (C.R.S.) directs the AQCC to promulgate a comprehensive SIP which will assure attainment and maintenance of the NAAQS, prevent significant deterioration of air quality in the State of Colorado, and meet all requirements of the CAA. The AQCC also has the authority to promulgate the emission control regulations necessary to comply with the relevant federal requirements (Section 25-7-109, C.R.S.).

Section 110 (a)(2)(I)- Part D requirements

Federal Requirements

Section 110 (a)(2)(I) of the CAA requires the SIP to meet the applicable requirements of part D of the CAA for each nonattainment area in the State.

Authority and Colorado SIP Provisions

Colorado has an approved SIP element for every nonattainment area in the State.

Section 110 (a)(2)(J)- Consultation

Federal Requirements

Section 110 (a)(2)(J) of the CAA requires the SIP to include a procedure for consultation, as described in Section 121 of the CAA. Section 121 requires the State to provide, in accordance with regulations promulgated by EPA, a satisfactory process of consultation with local governments and Federal land managers.

Authority and Colorado SIP Provisions

The Division consults with local agencies, governments and elected officials during the SIP development process and during the transportation planning process. Engineering and meteorological consultation are provided by the State to local agencies. The State assists local agencies in planning air management programs for their respective areas. The plans are derived in coordination with the local agencies for an effective air management program. The AQCC holds public hearings on all SIP revisions and all procedures are followed accordingly. The general public has an opportunity to provide comments at every AQCC hearing.

The SIP includes a consultation process that the AQCC uses to determine whether transportation plans and projects conform to the SIP (Regulation 10, Part B, "Criteria for Analysis of Conformity"). Regulation 10, Part B, Section IV.F includes a specific consultation procedure for SIP revisions.

Finally, as part of the State of Colorado's Visibility SIP (Appendix I), the Division consults with the Federal Land Managers as necessary and required. This consultation process was adopted by the AQCC on November 19, 1987.

Section 110 (a)(2)(J)- Public Notification

Federal Requirements

Section 110 (a)(2)(J) of the CAA provides that the SIP must meet the applicable requirements for public notification described in Section 127 of the CAA.

Colorado SIP Provisions

Colorado has an adequate public notification process. As described in Section 127, the Division notifies the public of instances or of areas in which any NAAQS is exceeded. Included in this notification are public awareness announcements regarding health hazards and manners in which the public can participate in regulatory and other efforts to improve Colorado's air quality. The Division compiles a report to the public on an annual basis. The annual report is required by 25-7-105(5), C.R.S. and is included in the monitoring SIP.

Not only does the State provide information about readings in excess of the NAAQS after the fact, the Denver PM₁₀ SIP also provides for advance warnings to the public that the NAAQS may be exceeded whenever meteorological conditions make it possible or likely for ambient concentrations to exceed the NAAQS.

Section 110 (a)(2)(J)- Prevention of Significant Deterioration and Visibility Protection

Federal Requirements

Section 110 (a)(2)(J) of the CAA provides that the SIP must meet the applicable requirements of Part C (relating to the prevention of significant deterioration of air quality and visibility protection).

Colorado SIP Provisions

Regulation 3 implements the Prevention of Significant Deterioration (PSD) program set out in Subpart I of Part C of the CAA.

Colorado has an approved Visibility SIP, which includes a Long Term Strategy (LTS) for making reasonable progress toward remedying existing, and preventing, future visibility impairment. The Visibility SIP was adopted by the AQCC in 1987. The LTS was revised in 1992, August 1996 and April 1997. The permitting provisions necessary to assure reasonable progress toward the national goal of preventing future, and remedying existing, visibility impairment in Class I areas are set out in Regulation 3, Part C, Section .XIE.

Section 110 (a)(2)(K)- Air Quality Modeling and Data Handling

Federal Requirements

Section 110 (a)(2)(K) of the CAA requires the SIP to provide for air quality modeling to predict the effect emissions of criteria pollutants will have on ambient air quality, and to provide for the submission of such air quality modeling data to the EPA.

Authority and Colorado SIP Provisions

The Division has the authority and resources to model criteria pollutants, including PM_{2.5}. The Modeling, Meteorology, and Emission Inventory Unit within the Division performs and reviews air quality impact analyses for a variety of programs, including SIP revisions, transportation conformity determination, stationary source permitting, environmental impact statements, and hazardous waste site studies. The analyses include modeling, meteorological analysis, and emission inventory development for mobile sources and area stationary sources such as woodburning. The unit also performs air quality forecasting for the Denver-area High Pollution Season, open burning, and for special air quality studies.

The air quality modeling performed by the Division includes any air quality modeling required by EPA regulations to support SIP revisions. Where required by EPA, the air quality modeling requirements are included in the SIP. The SIP provisions requiring air quality modeling include:

PSD and Increment Consumption- Colorado's PSD program includes a requirement that the State periodically assess the adequacy of its plan to prevent significant deterioration of air quality. This is presented in Regulation 3, Part B, Section VII.

Permits- Air quality modeling requirements applicable to stationary sources are set out in Regulation 3. Regulation 3, Part A, § VIII describes Colorado's technical modeling and monitoring requirements. Regulatory requirements for Air Quality Related Values as related to modeling are described within Colorado Regulation 3, Part B § X and XI.

Transportation conformity- Metropolitan Planning Organizations in Colorado must perform regional emissions analyses to predict the effect that transportation plans, programs and projects will have on ambient air quality in nonattainment areas in Colorado (Regulation 10, Part B).

Section 110 (a)(2)(L)- Permitting Fees

Federal Requirements

The federal requirement is set out in Section 110 (a)(2)(L) of the CAA.

Colorado SIP Provisions

The State of Colorado requires the owner or operator of a major stationary source to pay a fee to cover the reasonable costs of reviewing and acting upon any permit applications. The requirement to pay such fees is described in Regulation 3. Regulation 3, Part A.VI requires each person required to obtain a construction or an operating permit, or file an APEN, to pay a fee to cover the cost of processing the permit. Also, owners or operators must pay an annual fee based on total emissions, which funds are used to administer programs for the control of air pollution from stationary sources.

Section (a)(2)(M)- Consultation/Participation by Affected Local Entities

Federal Requirements

Section 110 (a)(2)(M) of the CAA requires the SIP to provide for consultation and participation by local political subdivisions affected by the Colorado SIP.

Authority and Colorado SIP Provisions

The SIP includes a consultation process that allows local political subdivisions to participate in the development of SIPs and SIP revisions (Regulation 10, Part B, Section IV). In addition, the AQCC holds a public hearing following notice before adopting any regulatory revisions to the SIP. Local political subdivisions have an opportunity to participate in the hearing.

Regulation 3 also provides opportunity for local entities to participate in the permitting process. Pursuant to Regulation 3, affected local governments receive notice and have the opportunity to comment on and participate in construction permit review procedures and operating permit application procedures (see, Regulation 3, Part B, Section III.C.4).