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G-2 EPA MEMORANDUM: "PROCEDURES FOR PROCESSING REQUESTS TO REDESIGNATE AREAS TO ATTAINMENT", SEPTEMBER 4, 1992 FROM JOHN CALCAGNI, DIRECTOR OF AIR QUALITY MANAGEMENT DIVISION.
G-3 EPA MEMORANDUM: "OZONE AND CARBON MONOXIDE DESIGN VALUE CALCULATIONS", JUNE 18, 1990 FROM WILLIAM G. LAXTON, DIRECTOR TECHNICAL SUPPORT DIVISION.
G-4 EPA MEMORANDUM: "LIMITED MAINTENANCE PLAN OPTION FOR NONCLASSIFIABLE CO NONATTAINMENT AREAS", OCTOBER 6, 1995 FROM JOSEPH W. PAISIE, GROUP LEADER INTEGRATED POLICY AND STRATEGIES GROUP.
G-5 WOLYN, PAUL G., AND MCKEE, THOMAS B. 1989, "DEEP STABLE LAYERS IN THE INTERMOUNTAIN WESTERN UNITED STATES." *MONTHLY WEATHER REVIEW*, 117: 461-47.
G-6 ADA PLANNING ASSOCIATION DESIGNATED AS LEAD AGENCY FOR CARBON MONOXIDE SIP:
- RESOLUTION 2-78
- FEB. 3, 1978 LETTER – APA TO DIVISION OF ENVIRONMENT
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Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory

Errata

- The statement on page 26 referring to the Boise Air Terminal reads, "A permit to construct was granted prior to 1995 that contained a fuel use limit of 54,300 gallons/year and a restriction on winter season (November through February) burning."

  This should be corrected to read, "A director's exemption was granted prior to 1995 that contained a fuel use limit of 54,300 gallons/year and a restriction on winter season (November through February) burning."

- Page 3 includes a list of individuals involved in the development of the Emissions Inventory. Work on this Emissions Inventory was completed in 1999. Due to subsequent staff turnover, many of these individuals can no longer be contacted. Updated contacts, as of December 2001, are as follows:

Idaho Department of Environmental Quality			
Matt Stoll	Boise Regional Airshed Manager	373-0550	Mstoll@deq.state.id.us
COMMUNITY PLANNING ASSOCIATION OF SOUTHWEST IDAHO (formerly Ada Planning Association)			
Ali Bonakdar	Project Manager	345-5275	abonakdar@planning.cog.id.us
Ada County Air Quality Board			
Dennis Turner	Director	377-4464	dennis.turner@rmci.met
Environmental Protection Agency			
Donna Deneen	EPA Region 10	(206) 553-6706	Deneen.Donna@epamail.epa.gov

Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory

October 1999

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ACRONYMS

ACHD	Ada County Highway District
AIRS/AFS	Aerometric Information Retrieval System/AIRS Facility Subsystem
APA	Ada Planning Association
CARB	California Air Resources Board
CO	Carbon Monoxide
EIIP	Emissions Inventory Improvement Program
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
GVW	Gross Vehicle Weight
I/M	Inspection and Maintenance
IDEQ	Idaho Division of Environmental Quality
kg	kilograms
NAAQS	National Ambient Air Quality Standard
NEVES	Nonroad Engine and Vehicle Emission Study
PM_{10}	particulate matter 10 micrometers or below in aerometric diameter
ppm	parts per million
SCC	Source Classification Code
tpy	tons per year (ton/year)
VMT	vehicle miles traveled

I. INTRODUCTION

A. Background

1. Type of Inventory

The Idaho Division of Environmental Quality (IDEQ) has prepared this attainment year carbon monoxide emissions inventory for the Northern Ada County Not Classified Carbon Monoxide Nonattainment Area. A not classified carbon monoxide nonattainment area is loosely defined as an area that has exceeded one of the National Ambient Air Quality Standards (NAAQS) for carbon monoxide, yet can not be considered to have moderately high/frequent or severely high/frequent exceedences. This inventory is specifically designed to provide data of the quality necessary for the development of a Carbon Monoxide Limited Maintenance Plan and redesignation request and will be incorporated into the Limited Maintenance Plan document. EPA requires local governments to develop an carbon monoxide maintenance plan to demonstrate how air quality improvements will be maintained for the next ten years. Because Northern Ada County is a not classified nonattainment area with low ambient carbon monoxide concentrations, local governments have chosen to submit a less rigorous maintenance plan (i.e., limited maintenance plan) in accordance with EPA guidance[1].

This inventory is based on extensive data collection efforts conducted in order to prepare a 1995 particulate matter emissions inventory for Ada and Canyon Counties. The 1995 PM_{10} emissions inventory is documented in *Development of Base and Future Year Emissions Inventories for Industrial Sources for the Northern Ada County PM_{10} Nonattainment Area*, (ICF Kaiser, November 1997) and *Development of Base and Future Year Emissions Inventories for Area Sources, Nonroad Mobile Sources, and Onroad Motor Vehicles for the Northern Ada County PM_{10} Nonattainment Area*, (ICF Kaiser, November 1997). A copy of these inventories are supplied in Appendix A. This 1995 carbon monoxide emissions inventory has been developed according to the procedures outlined in "Emission Inventory Requirements for Carbon Monoxide State Implementation Plans" (EPA-450/491-011, March 1991).

2. History of Carbon Monoxide Monitoring in Ada County

Northern Ada County is currently a not classified nonattainment area for carbon monoxide. A carbon monoxide monitor has been located on 9th Street in downtown Boise since 1977. Between 1977 and 1993 it was located at the Oddfellows Hall Building. Since 1993 it has been located at the Eastman Parking Garage. Both of these locations are within 100 feet of each other. A carbon monoxide saturation study conducted in 1991 shows that this location regularly records the highest carbon monoxide concentrations in the area. Exceedances of the National Ambient Air Quality Standards were measured at this site between 1977 and 1991.
Pursuant to the Clean Air Act requirements for nonattainment areas, in 1982 IDEQ submitted a State Implementation Plan demonstrating how the area would achieve compliance with the national carbon monoxide standards. This plan was amended in 1984, and included thirteen

[1] EPA, 1995. *Memorandum: Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas.* U.S. EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC. October 6, 1995.

Transportation Control Measures for reaching attainment by 1987. In 1994 the APA voluntarily submitted a Minor Revision of the 1984 Carbon Monoxide State Implementation Plan. This revised State Implementation Plan is the current carbon monoxide air quality plan for the area. All of these plans focused on controlling carbon monoxide emissions from motor vehicles.

IDEQ had direct responsibility for preparing and submitting the 1990 base year carbon monoxide emissions inventory. In addition to the 1990 carbon monoxide inventory, it was required as part of the Clean Air Act's periodic emissions inventory. However, various state and local agencies provided IDEQ with the data for 1990 area and mobile source carbon monoxide emissions. A 1993 Base Year Carbon Monoxide Emission Inventory for Northern Ada County, Idaho was completed in 1996 by the Ada Planning Association (APA), the local metropolitan planning organization. The 1993 emissions inventory served as a base year inventory, and updated the 1990 emission inventory for Ada County.

3. Emissions Calculations

Annual and average daily emissions during the peak carbon monoxide season were estimated in both metric and standard units (i.e., tpy, tonnes/year, lbs./day, and kg/day). In Ada County, the time span between November and February is the peak carbon monoxide season. These winter months are typically when stagnation events produce high carbon monoxide concentrations. Exceedances of the NAAQS have only been measured during these winter months.

4. Selection of Base Year 1995

IDEQ technical staff chose to establish the emissions inventory for the year 1995 because:

- Good quality emissions inventory data are available. This is due to the fact that 1995 was also chosen as the most recent PM_{10} emissions inventory base year. The PM_{10} activity data could be used for estimating 1995 carbon monoxide emissions.

- 1995 was the peak year for socioeconomic growth. There have been no major increases in point, area, off-road mobile, or on-road mobile emissions sources in the area since 1995.

- Carbon monoxide monitoring data from 1993, 1994, and 1995 represent years with higher monitored ambient concentrations of carbon monoxide in the area than other, more recent years (i.e., 1998).

Although not required for a Limited Maintenance Plan, IDEQ decided to develop future year emissions estimates. Future year emissions projections will aid in the analysis of the proposed emissions increases from major carbon monoxide sources in the area, and of the future effectiveness of existing and proposed Ada County carbon monoxide control measures. Based on these considerations, emissions projections have been prepared for 2000 and 2010.

B. Inventory Contacts

The agencies with direct responsibility for preparing and submitting carbon monoxide air quality plans are IDEQ and APA. A complete Carbon Monoxide Limited Maintenance Plan, addressing all inventory components and establishing new control strategies and contingency measures as

needed to demonstrate continued attainment of the carbon monoxide standards, will be completed and submitted to the EPA in July of 2000.

IDEQ developed this 1995 carbon monoxide emissions inventory with assistance from the APA and the Ada County Air Quality Board. IDEQ is the lead agency responsible for the development of the Carbon Monoxide Air Quality Maintenance Plan and its required technical documentation. Alison Miller, Air Quality Regional Manager at IDEQ's Boise Regional Office is the overall project manager. APA, as the metropolitan planning organization, is the lead agency for analyzing the changes to the vehicle Inspection/Maintenance (I/M) program, developing contingency measures, and supporting IDEQ with the production of the emissions inventory. APA also contributed socioeconomic factors, demographic factors, transportation related activity indicators, and some quality assurance oversight. The Air Quality Board is responsible for implementation of any necessary changes to the I/M program. Ada County's Air Quality Board also provided information on Ada County's vehicle inspection and maintenance program.

Individuals involved in this emissions inventory can be reached at the following phone numbers and E-mail addresses:

Idaho Division of Environmental Quality			
Alison Miller	Regional Manager	373-0550	amiller@deq.state.id.us
Matt Stoll	Air Quality Monitoring and Emissions Manager	373-0502	mstoll@deq.state.id.us
Karin Hendrickson	area & nonroad sources	373-0550	khendric@deq.state.id.us
Yayi Dong	onroad mobile sources	373-0502	ydong@deq.state.id.us
Jay Witt	industrial point sources, industrial area sources, & nonroad sources	373-0502	jwitt@deq.state.id.us
Val Bohdan	Quality assurance	373-0502	vbohdan@deq.state.id.us
Ada Planning Association			
Ali Bonakdar	Project Manager	345-5275	abonakdar@planning.cog.id.us
Cameron McGough	Onroad mobile sources	345-5275	cmcgough@planning.cog.id.us
Ada County Air Quality Board			
Dennis Turner	Director	377-4464	dennis.turner@rmci.met
Environmental Protection Agency			
Montel Livingston		(206) 553-0180	livingston.montel@epamail.epa.gov
Wayne Elson		(206) 553-1463	elson.wayne@epamail.epa.gov
Joan Cabreza		(206) 553-8505	cabreza.joan@epamail.epa.gov

C. Geographic Area

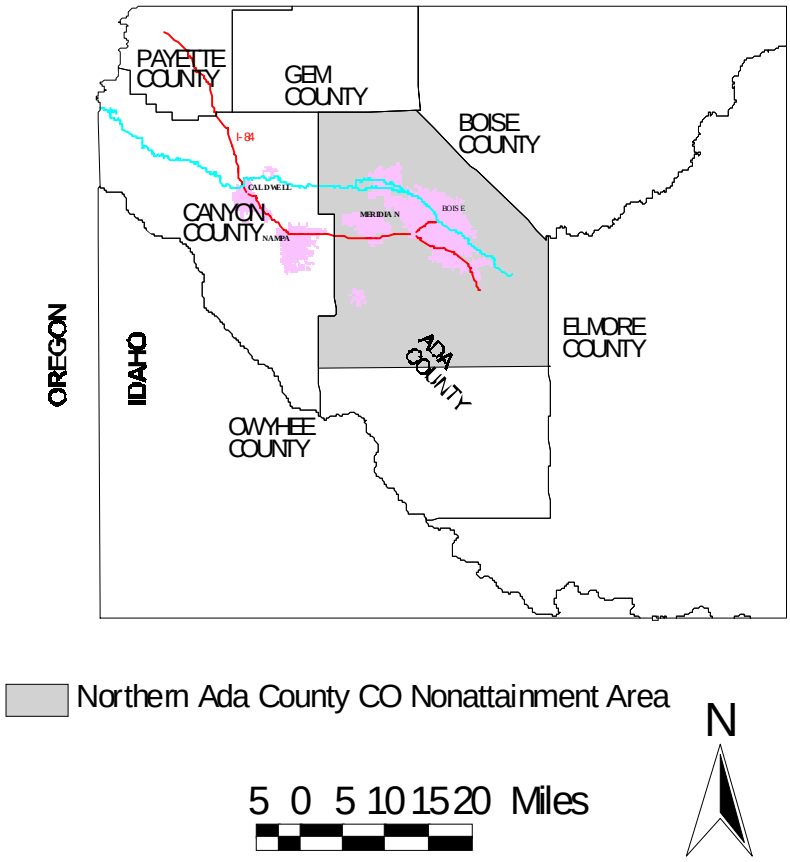
The geographic region covered in this emissions inventory includes all of Ada County. Although the Northern Ada County Carbon Monoxide Nonattainment Area includes only that portion of Ada County north of the Boise Base Line (Figure 1), the remaining areas of the county are included to simplify the inventory process. The areas south of the Boise Base Line are undeveloped and assumed to have little impact on the overall carbon monoxide emissions in the area. In addition to Ada County emissions sources, point sources emitting 100 tons or more per year of carbon monoxide within a 25-mile radius of the nonattainment area were also included.

The nonattainment area includes the northern portion of Ada County (shown in Figure 1). The area included within the boundaries contains the majority of the population in Ada County. The boundary includes all locations in the county where carbon monoxide exceedances have been measured.

The nonattainment area is bounded to the south by the Boise Base Line. South of the Base Line the land is largely unpopulated and is primarily managed by federal agencies such as the Bureau of Land Management and the Idaho National Guard.

The nonattainment area is bounded to the east and north by Boise, Elmore, and Gem Counties. A low mountain range, the Boise Front, blocks movement of air and pollution between these areas.

The nonattainment area is bounded to the west by the border with Canyon County. Canyon County is well populated and has significant sources of carbon monoxide. IDEQ plans to develop a supplemental carbon monoxide emissions inventory for Canyon County to accompany the Limited Maintenance Plan inventory for the nonattainment area.


PAYETTE COUNTY
GEM COUNTY
BOISE COUNTY
I-84
CALDWELL
CANYON COUNTY
NAMPA
MERIDIAN
BOISE
ELMORE COUNTY
ADA COUNTY
OREGON
IDAHO
OWYHEE COUNTY
Northern Ada County CO Nonattainment Area
5 0 5 10 15 20 Miles
N

D. Document Organization

This document summarizes the base and future year emissions estimates for point, area, nonroad mobile, and on-road mobile sources, and provides details of the methods and data used to develop the emissions inventory. This document is organized as follows:

Section I: presents the objectives of the inventory development, identifies the geographical coverage of the inventory, and lists the principal contacts for the inventory development.

Section II: presents a summary of estimated emissions.

Section III: describes the methods and data used to develop the point source emissions estimates

Section IV: describes the methods and data used to develop the area sources emissions estimates

Section V: describes the methods and data used to develop nonroad mobile source emissions estimates

Section VI: describes the methods and data used to develop on-road mobile source emissions estimates

Section VII: documents the quality assurance procedures which were performed.

Section VIII: lists the reference documents.

Appendices: separate document that provides detailed information used to produce the emissions inventory.

II. EMISSIONS SUMMARY

Table II-1 presents total annual emissions and average winter day emissions estimates. In Ada County, the time span between November and February (i.e., winter) is the typical carbon monoxide season. This is due, in part, to increased fuel combustion and increased carbon monoxide emissions rates from onroad mobile sources. Annual emissions for onroad mobile sources were estimated using emissions factors produced with average winter temperatures and therefore may be overestimated.

Table II-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions

Source	1995 Annual Emissions		1995 Average Winter Day	
	Tons/ Year	Metric Tonnes/ Year	Pounds/Day	Kilograms/ Day
Major Point (emit 100 tons per year or more of CO)	2,877.3	2,610.2	22,320	10,124
Area (includes minor point sources)	10,743.0	9,746.0	60,429	27,410
Nonroad Mobile	14,792.7	13,419.8	28,918	13,118
Onroad Mobile	61,180.6	55,492.4	335,235	152,035
Total	89,593.6	81,268.4	446,902	202,687

Due to proposed industrial expansion, airport expansion, and modifications to the area's vehicle inspection and maintenance (I/M) program, IDEQ decided to produce carbon monoxide emissions estimates for 2000 and 2010. Table II-2 gives the year 2000 carbon monoxide emissions estimates and Table II-3 displays the estimates produced for 2010. New I/M program features are expected for 2000. The airport and industrial expansion are expected to take place between 1999 and 2010.

Table II-2: Ada County Annual and Average Winter Day Carbon Monoxide Emissions Projected for 2000

Source	2000 Annual Emissions		2000 Average Winter Day	
	Tons/ Year	Metric Tonnes/ Year	Pounds/Day	Kilograms/ Day
Major Point (emit 100 tons per year or more of CO)	8,297.1	7,527.1	64,175	29,110
Area (includes minor point sources)	11,894.8	10,791.0	70,511	31,984
Nonroad Mobile	18,146.4	16,462.5	37,065	16,812
Onroad Mobile	56,269.3	51,038.0	308,325	139,830
Total	94,607.6	85,818.6	480,076	217,736

Table II-3: Ada County Annual and Average Winter Day Carbon Monoxide Emissions Projected for 2010

Source	2010 Annual Emissions		2010 Average Winter Day	
	Tons/ Year	Metric Tonnes/ Year	Pounds/Day	Kilograms/ Day
Major Point (emit 100 tons per year or more of CO)	8,450.4	7,666.1	65,956	29,968
Area (includes minor point sources)	13,820.4	12,537.8	87,191	39,550
Nonroad Mobile	22,876.6	20,744.5	46,204	20,958
Onroad Mobile	59,299.2	53,786.1	324,927	147,360
Total	104,446.6	94,734.5	524,278	237,836

III. POINT SOURCES

A. Introduction

For this inventory, point sources were defined as stationary, commercial/industrial operations emitting 100 tons per year (tpy) or more of carbon monoxide within the nonattainment area and its surrounding 25-mile boundary. A survey of industrial sources was conducted for the 1995 PM_{10} emissions inventory. This PM_{10} emission inventory is supplied in Appendix A. A copy of the industrial source survey is supplied in Appendix B. Activity data from this survey and from direct communication with two large facilities were used with AP-42 emissions factors to estimate carbon monoxide emissions.

Calculations for average winter day emissions were based on the winter months when high concentrations of carbon monoxide are typically measured. The industrial source survey conducted for the 1995 PM10 emissions inventory was based on a quarterly (three month) breakdown of activity. Therefore industrial point source emissions estimates for typical winter days were based on operation estimates for the winter quarter (i.e., December through February). This is different from the area, nonroad mobile, and onroad mobile portions of the inventory, which bases winter day emissions on a four month (November through February) season.

Base year industrial point source emissions were projected to future years via air quality permit limits on carbon monoxide emissions and/or the maximum carbon monoxide emitting potential.

B. Compiling the List of Point Sources

For this emissions inventory, the list of possible point sources in and around the nonattainment area was compiled from the industrial source portion of the 1995 PM10 emissions inventory[2]. The list for the 1995 PM10 emissions inventory was compiled from three primary sources: IDEQ's air pollution source/fee tracking database, the American Business Listings proprietary database, and IDEQ's industrial source mailing list. Facilities on these lists were asked to complete a PM10, NOx, SOx, and ammonia emissions survey. Based on the results of these surveys, 59 sources were included as industrial point sources in the 1995 PM10 emissions inventory, while the remaining smaller sources were included in the area source portion of the 1995 PM10 emissions inventory.

Because the 1995 PM10 emissions inventory industrial source list was not specifically designed to include carbon monoxide sources, it was checked against a list of carbon monoxide emitting facilities from IDEQ's air pollution source/fee tracking database. This check assured that no significant stationary carbon monoxide point sources were omitted from the inventory. Stationary sources located in Boise, Elmore, and Gem Counties were omitted from the list, due to topographic impediments to air pollutant transport.

[2] *Development of Base and Future Year Emission Inventories for Industrial Sources for the Northern Ada County PM_{10} Nonattainment Area*, IDEQ, 1998. See Appendix A.

C. Evaluation of Results

Activity data from the 1995 PM10 emissions inventory surveys completed by the 59 industrial point sources were used with AP-42 (fifth edition)[3] emissions factors to identify facilities in and around the nonattainment area that could possibly emit 100 tpy or more of carbon monoxide. This analysis produced no point source candidates within the nonattainment area, but did provide a candidate outside the nonattainment area. The identified point source is a sugar company in Nampa (Amalgamated Sugar Co.), located approximately 3.5 miles from the boundary of the nonattainment area.

Carbon monoxide emissions were estimated for this source using a combination of AP-42 emissions factors and emissions factors the company had calculated using uncertified source test data. No carbon monoxide emissions control equipment has been installed at this facility, therefore controlled emissions estimates were not necessary.

IDEQ emissions estimates were submitted to the sugar company for review. Upon the facility's review, updated emissions factors consistent with Appendix G of their Title V Operating Permit Application were submitted. These updated emissions factors were incorporated into the point source inventory. Table III.C-1 gives the industrial point source emissions estimates for 1995. A segment level (SCC) listing of carbon monoxide emissions points along with emissions factors and activity data are given in Appendix B.

Table III.C-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Point Sources

Source	Annual Emissions		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
Point Sources	2,877.3	2,610.2	22,320	10,124

D. Seasonal Adjustment for Industrial Point Source Emissions

Industrial point source emissions were seasonally adjusted from annual emissions to average winter day emissions using Equation III.D-1. The seasonal adjustment calculation is based on operation schedule data obtained in the 1995 PM_{10} emissions inventory point source survey and assumes a three-month winter.

Equation III.D-1[4]:

Seasonally Adjusted Emissions =
(Annual Emissions) × (winter throughput in % ÷ 25%) ÷ (operating schedule in days per year)

[3] *Compilation of Air Pollutant Emissions Factors*, EPA fifth edition.

[4] *Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone, Volume I*; EPA OAQPS, May 1991.

E. Projection to Future Years for Industrial Point Source Emissions

The 1995 industrial point source carbon monoxide emissions were projected to 2000 and 2010 using maximum carbon monoxide emitting potential to produce the most conservative estimates possible. Tables III.E-1 and III.E-2 present emissions estimates for 1995, 2000, and 2010.

One large industrial area source in the nonattainment area, a semiconductor-microchip producer (Micron Technology, Inc.), is planning to expand in the future and will most likely exceed 100 tpy of carbon monoxide emissions. This is due in large part to the proposed addition of a co-generation power plant at the facility. Carbon monoxide emissions from Micron were included in the point source section for future year projections. To avoid double counting emissions, Micron's activity data were deducted from the area source portion of the projected 2000 and 2010 inventories. Emission factors, activity data, and segment level emissions estimates used to project Micron's carbon monoxide emissions to 2000 and 2010 are included in Appendix B.

Table III.E-1: Ada County Base Year and Projected Annual Carbon Monoxide Emissions from Industrial Point Sources

	Tons per Year			**Metric Tonnes per Year**		
	1995	2000	2010	1995	2000	2010
Amalgamated[a]	2,877.3	8,194.9	8,194.9	2,610.2	7,434.3	7,434.3
Micron	Area Source	102.2	255.5	Area Source	92.8	231.8
TOTAL	2,877.3	8,297.1	8,450.4	2,610.2	7,527.1	7,666.1

[a] Projected emissions (i.e., 2000 and 2010) based on maximum potential to emit and/or permitted emissions limits.

Table III.E-2: Ada County Base Year and Projected Average Winter Day Carbon Monoxide Emissions from Industrial Point Sources

	Pounds per Day			**Kilograms per Day**		
	1995	2000	2010	1995	2000	2010
Amalgamated[a]	22,320	63,078	63,078	10,124	28,612	28,612
Micron	Area Source	1,097	2,878	Area Source	498	1,307
TOTAL	22,320	64,175	65,956	10,124	29,110	29,919

[a] Projected emissions (i.e., 2000 and 2010) based on maximum potential to emit and/or permitted emissions limits.

IV. AREA SOURCES

A. Introduction

Emissions from area sources were estimated by multiplying an emissions factor by activity data. Emissions factors used to estimate emissions were obtained from EPA's *Compilation of Air Pollution Emission Factors, Volume I* (AP-42) or from the *California Air Resources Board Emission Inventory Procedural Manual, Volume III: Methods for Assessing Area Sources*, 1996 (CARB).

For a number of area source categories general activity data, such as fuel combustion, were based on extensive data collection conducted for the 1995 PM_{10} emissions inventory (Appendix A). Activity data for area sources not included in the PM_{10} emissions inventory were gathered specifically for this inventory.

Table IV.A-1 displays the specific source categories excluded from the carbon monoxide emissions inventory. Emissions from barbeques and wildfires during the winter months are also assumed to be negligible or nonexistent. Therefore, average winter day emissions calculations for these sources were prepared using seasonal adjustment factors equal to zero.

Micron, Inc. has plans to construct a co-generation plant. For the 1995 portion of this emissions inventory, carbon monoxide emissions from Micron were below 100 tpy, and were included in the area source section. For the years 2000 and 2010, the carbon monoxide emissions from Micron are expected to exceed 100 tpy, and will therefore be counted in the industrial point source section of the inventory. All other 1995 carbon monoxide emissions estimates were projected into future years based on socioeconomic or demographic data provided by APA.

Table IV.A-1: Area Source Categories Excluded From the Inventory

Source Excluded	Justification for Excluding
orchard heating	no orchards of significant size in Ada County
sewage sludge incineration	not conducted in Ada County
automobile body incineration	not conducted in Ada County
slash burning	not conducted in Ada County
prescribed burning	not conducted in Ada County
recycle, recovery of primary metals	not conducted in Ada County

B. Emissions Summary

Table IV.B-1 presents the 1995 annual carbon monoxide emissions estimates and average winter day carbon monoxide emissions estimates. Winter day emissions for all area sources except industrial area sources are based on a four-month season (November through February). Industrial area sources are based on a three-month (December through February) winter season because seasonal throughput information obtained via the 1995 PM_{10} industrial source emissions survey was given per three month season.

Table IV.B-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Area Sources

Source	Annual Emissions		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Residential Wood Fireplaces	1,228.7	1,114.6	17,773	8,062
Residential Wood Stoves	803.6	729.0	10,788	4,893
Residential Barbeques/Fire Pits	22.3	20.2	0	0
Total Residential Wood	**2,054.6**	**1,863.8**	**28,561**	**12,955**
Residential Natural Gas	96.1	87.2	738	335
Residential Propane	0.3	0.2	2	1
Residential Fuel Oil	3.7	3.4	19	8
Residential Coal	0.8	0.7	9	4
Total Residential Fuel (less wood)	**100.9**	**91.5**	**768**	**348**
Commercial Natural Gas	88.3	80.1	677	307
Commercial Propane	0.4	0.4	3	1
Commercial Fuel Oil	8.4	7.6	42	19
Commercial Coal	0.1	0.1	1	1
Total Commercial Fuel Use	**97.2**	**88.2**	**723**	**328**
Industrial Natural Gas	79.9	72.5	385	175
Industrial Propane	0.6	0.6	5	2
Industrial Fuel Oil	5.7	5.1	28	13
Industrial Diesel	22.3	20.2	226	103
Total Industrial Fuel Use	**108.5**	**98.4**	**644**	**293**
Open Burning	5,472.6	4,964.8	29,456	13,361
Structural Fires	47.8	43.4	262	119
Vehicle Fires	2.2	2.0	12	5
Wild Fires	2,816.3	2,554.9	0	0
Other Unplanned Fires	42.5	38.6	0	0
Total Other Burning	**8,381.4**	**7,603.1**	**29,730**	**13,485**
Incinerators	0.5	0.4	3	1
Total Area Sources	**10,743.0**	**9,746.0**	**60,429**	**27,410**

C. Methods and Data

1. Residential Wood Combustion

Table IV.C.1-1 provides Annual and average winter day emissions estimates from fireplaces, barbeques/firepits, and wood stoves. Conventional wood stoves, catalytic wood stoves, noncatalytic woodstoves, certified pellet stoves, exempt pellet stoves, and masonry heaters are all included in the general woodstove category. Emissions were calculated using AP-42 emissions factors. Activity data for residential wood combustion is based upon data gathered in an extensive survey that was conducted for the 1995 PM_{10} emissions inventory. Because wood stoves include many different groups of devices, a composite wood stove emissions factor was calculated using specific AP-42 emissions factors.

Table IV.C.1-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Residential Wood Combustion

Device	Annual Emissions		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Fireplaces	1,228.7	1,114.6	17,773	8,062
Wood Stoves (all)	803.6	729.0	10,788	4,893
Barbeques/Fire Pits	22.3	20.2	0	0
Total	2,054.6	1,863.8	28,561	12,955

a. Residential Wood Combustion Activity Data

An extensive survey was conducted in April, 1997 for the 1995 PM_{10} emissions inventory to quantify residential wood burning in Ada County. The study was conducted by an independent firm, and covered both Ada and Canyon Counties with a telephone survey. The precision level for the survey was determined to be ± 7% for Ada County. The study analyzed the use of: barbeques, fireplaces, conventional wood stoves, noncatalytic stoves, catalytic stoves, certified and exempt pellet stoves, and masonry heaters. This study also provided estimates on: the types of wood burned, the number of residential wood burning devices, and device use patterns for Ada County in 1995. Appendix C provides more information on the Residential Wood Combustion Survey conducted for the 1995 PM_{10} emissions inventory.

Survey analysis assumed that per-house usage patterns were similar over the short (2 year) time span between the emissions inventory year (1995) and the survey data collection year (1997). The survey was designed to emphasize typical usage patterns rather than patterns for a specific time period. The amount of wood consumed by each type of residential wood burning device in Ada County was calculated using Equation IV.C.1.a-1. Table IV.C.1.a-1 displays the activity data used to calculate the amount of wood burned.

Equation IV.C.1.a-1:

The amount of wood consumed per device was estimated using the following equation[5]**:**

$$W = N \times L \times U \times D \times V \times C$$

Where:

W = Weight of wood (tons/year)
N = Number of devices
L = Average number of logs per use
U = Average number of uses per year
D = Average density of wood (lb/ft^3)
V =Average volume of a log (ft^3/log)
C = Conversion factor from pounds to tons (1 ton = 2000 pounds)

Table IV.C.1.a-1: Summary of Activity Data Used to Calculate Carbon Monoxide Emissions Estimates from Residential Wood Burning[6]

Device Type	Number of Households Using Device	Average Number Logs per Use	Average Uses per Year	Average Density of Wood Used (lbs/ft^3)	Average Log Volume (ft^3 /log)	Tons Burned per Year
Fireplace	14,969	6.06	35.44	35.6	0.17	9,728.1
Wood Stove	13,098	4.39	55.50	35.7	0.17	9683.9
Barbeque/Firepit	2,722	2.88	7.43	35.6	0.17	176.3

b. Residential Wood Combustion Emissions Factors

Table IV.C.1.b-1 supplies the emissions factors used to estimate carbon monoxide emissions from residential wood combustion. No emissions factors were available for wood burning barbeques or firepits. Therefore, the AP-42 emissions factor for fireplaces was used as a surrogate factor. This assumption is based on the similarities between fireplaces and barbeques/firepits.

[5] Taken from the 1995 PM_{10} emissions inventory.

[6] Activity data obtained from the wood combustion survey (Appendix C). The data is also listed in the 1995 PM_{10} emissions inventory (Appendix A).

Table IV.C.1.b-1: Residential Wood Stove, Fireplace and Barbeque/Firepit Carbon Monoxide Emissions Factors

Device Type	**Emissions Factor** (lb. CO/ton fuel)[a]
Wood Stove	166.0
Fireplace	252.6
Barbeque/Firepit[b]	252.6

[a] Either taken directly from AP-42 Table 1.9-2 or calculated using factors using factors from AP-42 Table 1.9-2.
[b] Used AP-42 emissions factor for fireplaces as surrogate emissions factor.

Because many different types of wood burning devices can be classified as wood stoves, a composite emissions factor was calculated. Table IV.C.1.b-2 presents the data used to calculate the composite wood stove emissions factor. It was derived by multiplying the appropriate AP-42 factor for type of wood stove by the population percentage of the device type in Ada County, as determined by the survey.

Table IV.C.1.b-2: Calculation of Composite Residential Wood Stove Emissions Factor

	Wood Stove					**Masonry Heater**	
	Conventional	Catalytic	Non-catalytic	Certified	Exempt		
Emissions Factor[a] (lb CO/ton fuel)	230.8	104.4	140.8	39.4	52.2	149.0	NA
% Use in Ada County[b]	44.30%	20.30%	27.70%	3.85%	3.85%	0.00%	100%
Weighted Emissions Factor (lb CO/ton fuel)	102.2	21.2	39.0	1.5	2.0	0.0	166.0

a Taken from AP-42 Table 1.10-2
b Taken from 1995 PM_{10} emissions inventory (Appendix A).

c. Residential Wood Stove Combustion Emissions Calculations

Carbon monoxide emissions were estimated using Equation IV.C.c-1. Emissions estimates were converted from pounds per year (lb/year) to tons per year (tpy) and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to pounds of carbon monoxide per winter day (lbs/day) and kilograms per winter day (kg/day).

Equation IV.C.1.c-1

The carbon monoxide emissions per device were estimated using the following equation:

$$E = F \times W$$

Where:

E = CO Emissions (lb/year)
F = Emissions factor (lbs. CO/ton fuel)
W = Weight of wood (tons/year)

2. Other Stationary Source Fuel Combustion

Table IV.C.2-1 illustrates carbon monoxide emission estimates from residential, commercial, and industrial source fuel combustion. Emissions were calculated using activity data obtained for the 1995 PM_{10} emissions inventory. Activity data was combined with AP-42 emissions factors to produce these emissions estimates.

Table IV.C.2-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Stationary Fuel Combustion Sources

Fuel Category	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Residential Natural Gas	96.1	87.2	738	335
Residential Propane	0.3	0.2	2	1
Residential Fuel Oil	3.7	3.4	19	8
Residential Coal	0.8	0.7	9	4
Total Residential Fuel	100.9	91.5	768	348
Commercial Natural Gas	88.3	80.1	677	307
Commercial Propane	0.4	0.4	3	1
Commercial Fuel Oil	8.4	7.6	42	19
Commercial Coal	0.1	0.1	1	1
Total Commercial Fuel Use	97.2	88.2	723	328
Industrial Natural Gas	79.9	72.5	385	175
Industrial Propane	0.6	0.6	5	2
Industrial Fuel Oil	22.3	20.2	226	103
Industrial Diesel	5.7	5.1	28	13
Total Industrial Fuel Use	108.5	98.4	644	293
Total Fuel Combustion	306.6	278.1	2,135	969

a. Stationary Source Fuel Combustion Activity Data

The 1995 PM_{10} emissions inventory initially identified local fuel dealers through telephone listings included in the regional yellow pages directory. To ensure completeness, the resulting list was reviewed by IDEQ personnel and modified to include additional fuel dealers. The listed dealers were then surveyed to collect 1995 monthly fuel sales data by fuel type and by end-use sector (industrial, commercial/institutional, and residential). The survey also requested fuel sales data by county. Sales data which were not broken out by county in the submitted fuel survey form were apportioned to Ada and Canyon counties based on APA 1995 population data. Fuels that were sold in the area, but then shipped outside of the study area were assumed to be excluded from the sales data provided by the fuel survey. Fuels were assumed to be used within the area and during the month in which they were sold. For the one dealer that did not respond to the fuel sales survey, sales data were imputed by assuming sales were similar to those of other dealers of comparable size. Appendix C presents the final list of fuel dealers used in this study, and includes a copy of the survey form and accompanying information request letter used for the 1995 PM_{10} emissions inventory.

Carbon monoxide emissions from industrial area sources (i.e., industrial sources that emitted less than 100 tpy carbon monoxide) were included in the stationary source fuel combustion portion of the emissions inventory. Because the amount of industrial natural gas use reported in the PM_{10} industrial source questionnaires was greater than the amount reported by the industrial natural gas fuel sales data obtained from the natural gas merchants, it was assumed that the local sales data had incorrectly assigned some fuel sales to the commercial/institutional totals. Therefore, the commercial/institutional natural gas use was reduced by an amount equal to the difference between the industrial source questionnaire data and the fuel sales data.

Similarly, for industrial diesel/fuel oil use activity data, the fuel sales data was adjusted by an amount equal to the difference between industrial fuel use estimates (obtained from the PM_{10} industrial source questionnaires) and the fuel sales data. Table IV.C.2.a-1 displays the estimated amount of fuel used by industrial, commercial/institutional, and residential area sources.

Table IV.C.2.a-1 : Activity Data Used to Calculate 1995 Ada County Carbon Monoxide Emissions from Stationary Source Fuel Combustion

Fuel Type	End Use	1995 Annual Fuel Use
Natural Gas (10^6 ft^3)	Residential	4,807.2
	Commercial (adjusted sales data)[a]	2,102.6
	Industrial [b]	1,901.7
Propane (10^3 gallons)	Residential	278.7
	Commercial	416.1
	Industrial	386.1
Diesel/Fuel Oil (10^3 gallons)	Residential	1,492.3
	Commercial	3,350.1
	Industrial (adjusted sales data)[c]	2,268.6
	Industrial engines <600 hp[d]	264.7
	Industrial engines >600 hp[d]	87.0
Coal (tons)	Residential	261.3
	Commercial	35.0

[a] The natural gas use data from 1995 PM_{10} emissions inventory industrial questionnaire were larger than what was accounted for in industrial sales data. The difference was deducted from the natural gas sales data for commercial/institutional sources.
[b] Natural gas use data from 1995 PM_{10} emissions inventory industrial source questionnaires.
[c] Diesel/Fuel Oil use from sales data attributed to industrial use, minus diesel/fuel oil use accounted for in the industrial source questionnaires.
[d] Diesel/Fuel Oil use data from 1995 PM_{10} emissions inventory industrial source questionnaires.

b. Stationary Source Fuel Combustion Emissions Factors

AP-42 emissions factors were used to estimate carbon monoxide emissions from industrial, commercial/institutional, and residential fuel combustion sources. However, no AP-42 emissions factor was available for residential propane combustion. Based on the assumption that commercial and residential propane combustion equipment have similar combustion properties, the AP-42 emissions factor for commercial boilers was used as a surrogate emissions factor for residential propane combustion. Specific information on the firing configuration of commercial/institutional and residential coal combustion equipment was also not available. Therefore, the AP-42 emissions factor for the overfeed stoker configuration, the firing configuration with the largest carbon monoxide emissions factor, was chosen as a surrogate. Table IV.C.2.b-1 lists the AP-42 emissions factors used in estimating emission.

Table IV.C.2.b-1: Stationary Source Fuel Combustion Carbon Monoxide Emissions Factors

Fuel Type[a]	Residential	Commercial	Industrial
Natural Gas (lb CO/ 10^6 ft^3 fuel)	40.0	84.0	84.0
Propane (lb CO/10^3 gal fuel)	1.9	1.9	3.2
Diesel (lb CO/10^3 gal fuel)	***NA***	***NA***	
Industrial Engines			.13
Large Stationary			.12
Fuel Oil (lb CO/10^3 gal fuel)	5.0	5.0	5.0
Coal (lb CO/ton fuel)	6.0	6.0	***NA***

[a] Emissions factors: Natural Gas, AP-42 Table 1.4-2; Propane, AP-42 Table 1.5-2; Industrial Engines, AP-42 Table 3.3-1 (converted to lb CO/10^3 gal fuel); Large Stationary Engines, AP-42 Table 3.4-1 (converted to lb CO/10^3 gal fuel); Fuel Oil, AP-42 Table 1.3-2; Coal, AP-42 Table 1.1-2 (Overfeed Stoker).

c. Stationary Source Fuel Combustion Emissions Calculations

Carbon monoxide emissions were estimated using Equation IV.C.2.c-1. Emissions estimates were converted from pounds per year (lb/year) to tons per year (tpy) and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to pounds of carbon monoxide per winter day (lbs/day) and kilograms per winter day (kg/day).

Equation IV.C.2.c-1

The carbon monoxide emissions per fuel type were estimated using the following equation:

$$E = F \times U$$

Where:

E = CO Emissions (lb/year)
F = Emissions factor (lbs. CO/amount of fuel)
U = Fuel Use (amount of fuel used/year)

3. Solid Waste Incineration

Table IV.C.3-1 provides carbon monoxide emissions estimates from refuse incinerators, medical waste incinerators, and crematories in the nonattainment area. Emissions were calculated based on the amount of material consumed in 1995 collected from individual incinerators and AP-42 emissions factors.

Table IV.C.3-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Solid Waste Incineration

Source	**Annual Average**		**Average Winter Day**	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
Incinerators	0.5	0.4	3	1

a. Solid Waste Incineration Activity Data

Previous emissions inventories for the area have not addressed incineration as a source of carbon monoxide emissions. For this emissions inventory, AIRS/AFS was reviewed and a list of nine permitted incinerators within Ada County was produced. Each incinerator on the list was contacted to determine the amount of material incinerated in 1995. Appendix C contains a copy of the contact letter and information request form used to obtain the incinerator activity data. Table IV.C.3.a-1 displays the activity data used in estimating carbon monoxide emissions.

Table IV.C.3.a-1: Mass of Material Burned in Solid Waste Incinerators in Ada County in 1995

Incinerator Type	**Estimated Tons Burned in 1995**
Unspecified medical waste	328.48
Multi chamber pathological	0.00
Multi chamber commercial/institutional	0.00
Total	**328.48**

b. Solid Waste Incineration Emissions Factors

As Table IV.C.3.a-1 shows, only unspecified medical waste incinerators were active in the nonattainment area in 1995. As a result, only one emissions factor was used to estimate carbon monoxide emissions. The AP-42[7] **factor of 2.95 lbs./ton of waste was selected.**

c. Solid Waste Incineration Emissions Calculations

Carbon monoxide emissions were evaluated by applying Equation IV.C.3.c-1. Emissions estimates were converted from lb/year to tpy and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to lbs./ (winter)day and kg/ (winter) day.

[7]AP-42 Table 2.3-1

Equation IV.C.3.c-1

The carbon monoxide emissions for solid waste incineration were estimated using the following equation:

$$E = F \times M$$

Where:

E = CO Emissions (lbs./ year)
F = Emissions factor (lbs. CO/ton of waste)
M = Mass of waste burned (ton/ year)

4. Open Burning

Table IV.C.4-1 presents emissions approximations from open burning of yard waste, ditch clearing, and agricultural residue clearing. It also includes open burning at industrial facilities and at the Boise Air Terminal's fire training facility. Industrial facilities reported the mass of material burned in 1995 for the 1995 PM_{10} emissions inventory. Activity data for open burning conducted at the Boise Air Terminal were collected specifically for this emissions inventory. Other open burning emissions were calculated based on the number of open burning permits issued. AP-42 emissions factors were applied to calculate carbon monoxide emissions. Because the type of material consumed in residential burning varies, a composite emissions factor was developed for this category of burning.

Table IV.C.4-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Open Burning

Open Burning	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
Agricultural	5,321.2	4,827.4	29,157	13,225
Ditch	38.7	35.1	212	96
Residential	15.6	14.1	85	39
Airport Training Fires	97.2	88.2	0	0
Industrial	0.1	0.1	2	1
Total	5,472.8	4,964.9	29,456	13,361

a. Open Burning Activity Data

In Ada County, a permit is required to burn tree leaves, gardening waste, or yard trimming, as well as to conduct weed control fires along ditch banks or canals, and for the clearing of crop residues. Permits are issued by local fire districts, and are valid for multiple uses within a one year period. It was assumed no ditch clearing, residential, or agricultural open burning was conducted without a permit.

In a survey conducted for the 1995 PM_{10} emissions inventory, each fire district was contacted to determine the number of open burning permits issued in 1995. For some agencies, 1995 numbers were extrapolated from data on 1996 or 1997. None of the fire districts kept records on the types of permitted burning conducted. However, based on the information and recommendations from the fire districts, it was assumed that 50% of open burning permits were for agricultural field clearing, 25% were issued for ditch or fence clearing, and 25% were issued for residential yard waste burning. Table IV.C.4.a-1 summarizes the permit activity/assumptions used to estimate emissions from open burning in 1995.

Based on information and recommendations from fire districts, the following assumptions were made: the average agricultural burn is approximately 20 acres; the average acreage burned for ditch clearing is 0.25 acres.

Table IV.C.4.a-1: Estimated Number of Open Burning Permits Issued in Ada County in 1995

Permit Type	Total Number of Permits issued in Ada County	Assumed Percent by Category	Estimated Number of Permits by Type
Agricultural	4,547	50%	2,274
Ditch Clearing		25%	1,137
Residential Waste		25%	1,137

Table IV.C.4.a-2 displays estimates of tons of fuel consumed by open burning produced using Equation IV.C.4.a-1 (for residential wastes) or Equation IV.C.4.a-2 (for agricultural burning and ditch clearing)[8]. To estimate the amount of material burned, the AP-42 fuel loading factor for unspecified weeds (3.2 tons/acre)[9] was used for ditch clearing. A conservative assumption of 500 pounds (0.25 tons) per year of waste burned for each residential burning permit was used. More information on all of the data and assumptions used to estimate open burning activity is located in the 1995 PM_{10} emissions inventory (Appendix A).

Equation IV.C.4.a-1

The amount of residential yard wastes openly (in tons) burned were calculated using the following equation:

$$M = N \times P \times T$$

Where:

M = Mass of fuel burned (ton/ year)
N = Total number of permits issued in 1995
P = Percent of permits issued for residential waste burning
T = Tons burned per permit per year

[8] Equations from 1995 PM_{10} Emissions Inventory (Appendix A of this document).

[9] AP-42 Table 2.5-5

Equation IV.C.4.a-2

The tons of material burned during agricultural open burning and ditch clearing were calculated using the following equation:

$$M = N \times P \times A \times T$$

Where:

M = Mass of fuel burned (ton/ year)
N = Total number of permits issued
P = Percent of permits issued for agricultural burning or ditch clearing
A = Average number of acres burned in 1995 per permit
T = AP-42 Fuel Loading Factor (tons/acre)

Table IV.C.4.a-2: Estimated Tons of Fuel Consumed in Open Burning in Ada County in 1995

Type of Permit	Number of Permits	Acres per Permit	Tons Fuel per Acre/Permit	Tons Burned
Agricultural	2,274	20.0	2.0[a]	90,960.0
Ditch Clearing	1,137	0.25	3.2[b]	909.6
Residential Waste	1,137	**NA**	0.25[c]	284.25

[a]A P-42 Table 2.5-5 Unspecified Field Crops
[b]AP-42 Table 2.5-5 Unspecified Weeds
[c]From 1995 PM_{10} emissions inventory, assumed 500 lbs/permit/year.

In addition to agricultural and residential open burning, the Boise Air Terminal has on-site aircraft rescue and fire fighting facilities that ignite jet fuel to simulate aircraft on fire. A permit to construct was granted prior to 1995 that contained a fuel use limit of 54,300 gallons/year and a restriction on winter season (November through February) burning. Because no activity records were kept in 1995, IDEQ assumed the Boise Air Terminal burned 54,300 gallons of jet fuel (JP-4) in 1995[10].

b. Open Burning Emissions Factors

Because it is illegal to burn municipal wastes in the nonattainment area and because the Rules for the Control of Air Pollution in Idaho (IDAPA16.01.01.611) prohibits open burning of household garbage in the State of Idaho, residential wastes disposed via open burning were assumed to consist of yard wastes and other plant materials[11]. The AP-42 emissions factors[12] from four different types of yard wastes were averaged, and the resulting average emissions factor used to

[10] Activity information obtained through direct contact with the Boise Air Terminal (Ken Nichols) on May 5, 1999.

[11] Assumption from 1995 PM_{10} emissions inventory.

[12] AP-42 Section 2.5 Tables2.5-5 and 2.5-6.

estimate open burning emissions for residential open burning. Table IV.C.4.b-1 details the creation of the composite emissions factor for the open burning of residential wastes.

Table IV.C.4.b-1: Calculation of Composite Carbon Monoxide Emissions Factor for Residential Burning

Substance	**Emissions Factor** (lb. CO/ ton waste)
Unspecified Leaves[a]	112.0
Grasses[b]	101.0
Unspecified Weeds[b]	85.0
Unspecified Forest Residueb	140.0
Average Factor	**109.5**

a From AP-42 Table 2.5-6
[b] From AP-42 Table 2.5-5

AP-42 emissions factors for unspecified field crops and unspecified weeds were used to estimate carbon monoxide emissions from agricultural burning and ditch burning, respectively. Table IV.C.4.b-2 lists the AP-42 emissions factors used to estimate emissions for agricultural open burning and ditch clearing.

Table IV.C.4.b-2: Open Burning Carbon Monoxide Emissions Factors

Burning Type	**Emissions Factor** (lb. CO/ ton fuel)
Agricultural Burning[a]	117.0
Ditch Clearing[b]	85.0

a AP-42 Table 2.5.5 Unspecified Field Crops
[b] AP-42 Table 2.5-5 Unspecified Weeds

Carbon monoxide emissions from training fires at the airport were estimated using an emissions factor for JP-4 jet fuel (3.58 lbs. CO/gal burned) obtained from communications with the Boise Air Terminal[13]. Further information on the source of this emissions factor is given in Appendix C.

c. Open Burning Emissions Calculations

Carbon monoxide emissions were estimated with Equation IV.C.4.c-1. Emissions estimates were converted from lb/year to tpy and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to lbs./ (winter)day and kg/ (winter) day.

[13] Fax via Ken Nichols, May 5,1999

Equation IV.C.4.c-1

The carbon monoxide emissions for open burning were estimated using the following equation:

$$E = F \times M$$

Where:

E = CO Emissions (lbs. CO/year)
F = Emissions factor (lbs. CO/ton fuel)
M = Mass of fuel burned (ton/year)

5. Other Combustion

Table IV.C.5-1 gives 1995 emissions estimates from structural fires, vehicle fires, wildland fires, and other unplanned fires. In a survey conducted for the 1995 PM_{10} emissions inventory, each fire district was contacted to determine the number of structural, vehicle, and other unplanned fires that occurred in 1995. Emissions factors from AP-42 and the California Air Resources Board (CARB, 1996) were applied to produce the carbon monoxide emissions estimates.

Table IV.C.5-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Other Combustion

Other Burning	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
Structural Fires	47.8	43.4	262	119
Vehicle Fires	2.2	2.0	12	5
Wildland Fires	2,816.3	2,554.9	0	0
Other Unplanned Fires	42.5	38.6	0	0
Total	2,908.8	2,638.9	274	124

a. Other Combustion Activity Data

The number of structural fires, vehicle fires, and other unplanned fires were obtained from local fire departments and agencies for the 1995 PM_{10} emissions inventory. The other unplanned fire category includes all outside fires occurring in such places as open lands, vacant lots, landfills, roadways, waterways, and construction sites. Based on information provided by fire control agencies, it was assumed that 0.5 acres burned per fire in this category. For the 1995 PM10 emissions inventory the U.S. Bureau of Land Management provided acreage burned by wildfires in 1995. Equation IV.C.5.a-1 and Equation IV.C.5.a-2 were used to calculate the amount of fuel consumed in 1995 by wildfires and other unplanned fires, respectively. Both other unplanned and wildfire categories used the AP-42 fuel loading factor for unspecified weeds[14]**.** Table IV.C.5.a-1 supplies the fire activity data used to estimate carbon monoxide emissions.

[14] 3.2 tons/acre, AP-42 Table 2.5-5

Equation IV.C.5.a-1

The tons of material burned during wildfires were calculated using the following equation:

$$M = A \times T$$

Where:

M = Mass of fuel burned (ton/ year)
A = Acres burned in 1995
T = AP-42 Fuel Loading Factor (tons/acre)

Equation IV.C.5.a-2

The tons of material burned during other unplanned burning were calculated using the following equation:

$$M = N \times A \times T$$

Where:

M = Mass of fuel burned (ton/ year)
N = Total number of fires
A = Average number of acres burned per fire (0.5 acres)
T = AP-42 Fuel Loading Factor (tons/acre)

Table IV.C.5.a-1: 1995 Ada County Fire Activity Data

Structural Fires[a]	292 fires
Vehicle Fires[a]	203 fires
Forest & Range Wild Fires[b]	66,265.6 tons of fuel
Other Unplanned Fires[a]	1,000.0 tons of fuel

[a] Data reported by local fire agencies for the 1995 PM_{10} emissions inventory.
[b] Data reported by U.S. Department of the Interior, Bureau of Land Management, for the 1995 PM_{10} emissions inventory.

b. Emissions Factors for Other Combustion

AP-42 emissions factors were used to estimate carbon monoxide emissions from wild fires and other unplanned fires. CARB emissions factors were used to estimate emissions from structural fires and vehicle fires because no AP-42 factors were available[15]. Table IV.C.5.b-1 lists the emissions factors used for estimating carbon monoxide emissions.

Table IV.C.5.b-1: Other Combustion Carbon Monoxide Emissions Factors

Source	Emissions Factor
Structural Fires[a]	327.6 lb. CO/ fire
Vehicle Fires[a]	21.25 lb. CO/fire
Wildland Fires[b]	85.0 lb. CO/ton fuel
Other Unplanned Fires[b]	85.0 lb. CO/ton fuel

a CARB Document: Structural Fires Table 17.4-1, Vehicle Fires Table 7.14-3
[b] AP-42 Table 2.5-5 (Unspecified Weeds)

c. Other Combustion Emissions Calculations

Carbon monoxide emissions were approximated using Equation IV.C.5.c-1. Emissions estimates were converted from lb/year to tpy and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to lbs./ (winter)day and kg/ (winter) day.

Equation IV.C.5.c-1

The carbon monoxide emissions from other combustion sources were estimated using the following equation:

$$E = F \times A$$

Where:

E = CO Emissions (lbs. CO/year)
F = Emissions factor (lbs. CO/ton fuel or lbs. CO /fire)
A = 1995 Activity Data (either in ton/year or fires/year)

[15] *Emission Inventory Procedural Manual, Volume III, Methods for Assessing Area Source Emissions* (CARB, 1995)

D. Seasonal Adjustment

Nonindustrial area source emissions were seasonally adjusted from annual emissions to average winter day emissions by first converting annual average estimates to average daily emissions (dividing by 365 days/year), and then multiplying by a seasonal adjustment factor. The derivation of these factors is presented in Appendix C. Industrial sources included in the area source inventory were seasonally adjusted using Equation IV.D-1 and seasonal operating factors obtained in the industrial source questionnaires collected for the 1995 PM_{10} emissions inventory (Appendix A). Appendix C displays the information used to seasonally adjust emissions from the industrial area sources. Table IV.D-1 lists the seasonal adjustment factors used to calculate the average winter day carbon monoxide emissions for the area.

Equation IV.D-1[16]

The carbon monoxide emissions from industrial area sources were seasonally adjusted using the following equation:

$$E_{WD} = E_A \times (PW / 25\%) \times Dw \times 52$$

Where:

EWD = Winter Day CO Emissions (lbs. CO/winter day)
E_A *= Annual CO Emissions (lbs. CO/year)*
P_W *= Percentage of 3-Month Winter Throughput (in %)*
D_w *= Winter Season Operation Schedule (in days/week)*

[16] From *Procedures for the Preparation of Emissions Inventories for Carbon Monoxide and Precursors of Ozone, Volume I: General Guidance for Stationary Sources*; EPA 1991.

Table IV.D-1: Seasonal Adjustment Factors Used to Estimate Average Winter Day Emissions for Ada County

Source	Seasonal Adjustment Factor	Data Source
Fireplaces	2.64	1
Woodstoves	2.45	1
Barbeques/Firepits	0.00	1
Natural Gas Combustion - Residential & Commercial	1.40	2
Natural Gas Combustion - Industrial	varies	3
Diesel/Fuel Oil Combustion - Residential & Commercial	0.91	2
Diesel/Fuel Oil Combustion - Industrial	varies	3
Coal Combustion	2.14	2
Propane Combustion	1.40	2
Incinerators	1.00	4
Structural Fires	1.00	5
Vehicle Fires	1.00	6
Wildland Fires	0.00	6
Other Unplanned Fires	0.00	6
Open Burning	1.00	6

Data Source	
1	1997 Wood Combustion Survey, conducted for 1995 PM_{10} emissions inventory
2	Monthly sales data, reported by local fuel dealers.
3	Calculated for individual industrial sources using Equation IV.D-1. See Appendix C
4	Reported by local incinerators
5	Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone, Volume I: General Guidance for Stationary Sources.
6	IDEQ judgement, based on information from fire control agencies.

E. Projection to Future Years

The 1995 area source emissions were projected to 2000 and 2010 using the latest population and socioeconomic projections provided by APA and presented in Table IV.E-1[17]. For each category, an appropriate growth indicator was chosen. Table IV.E-2 lists the area source categories and the specific demographic used to project future year emissions. Emissions projections were calculated by multiplying the 1995 annual and winter day emissions by the ratio between the appropriate demographic factor for the future year and the factor for 1995. Table IV.E-3 displays the projected annual area source carbon monoxide emissions for 1995, 2000, and 2010, while Table IV.E-4 gives the winter day emissions estimates for 1995, 2000, and 2010.

[17] From *1997 Demographic Report for Ada and Canyon Counties*, APA Report No. 09-97, June 1997. Data can also be found in the PM_{10} emissions inventory (see Appendix A).

Table IV.E-1[16]: Ada County Demographic Data

	1995	**2000**	**2010**
households	96,616	116,824	150,800
nonretail employment	132,307	161,326	202,345
retail employment	33,863	37,700	53,587
population	251,756	284,269	334,889

Table IV.E-2: Growth Indicators Used to Project Area Source Carbon Monoxide Emissions to Future Years in Ada County

	Residential	**Commercial**	**Industrial**
Wood Combustion	Households	NA	NA
Natural Gas Combustion	Households	Retail Employment	Nonretail Employment
Fuel Oil Combustion	Households	Retail Employment	Nonretail Employment
Coal Combustion	Households	Retail Employment	NA (see point sources)
Diesel Combustion	NA	NA	Nonretail Employment
Propane Combustion	Households	Retail Employment	Nonretail Employment
On-site Incinerators	Constant-No growth anticipated[b]		
Structural Fires	Households		
Vehicle Fires	Population		
Other Unplanned Fires	Constant-No growth anticipated[b]		
Wildland Fires	Constant-No growth anticipated[b]		
Open Burning[a]	Population		

[a] Airport Training fires are restricted via permit limits on fuel combustion. Therefore these emissions were assumed constant (i.e. no growth).
[b] Based on IDEQ engineering judgement.

Table IV.E-3: Base Year & Projected Annual Carbon Monoxide Emissions for Ada County

Source	**Tons per Year**			**Metric Tonnes per Year**		
	1995	2000	2010	1995	2000	2010
Residential Wood Fireplaces	1,228.7	1,485.6	1,917.7	1,114.6	1,347.8	1,739.7
Residential Wood Stoves	803.6	971.7	1,254.3	729.0	881.5	1,137.9
Residential Barbeques/Fire Pits	22.3	26.9	34.8	20.2	24.4	31.5
Total Residential Wood	2,054.6	2,484.2	3,206.8	1,863.8	2,253.7	2,909.1
Residential Natural Gas	96.1	116.3	150.1	87.2	105.5	136.1
Residential Propane	0.3	0.3	0.4	0.2	0.3	0.4
Residential Fuel Oil	3.7	4.5	5.8	3.4	4.1	5.3
Residential Coal	0.8	0.9	1.2	0.7	0.9	1.1
Total Residential Fuel (less wood)	100.9	122.0	157.5	91.5	110.8	142.9
Commercial Natural Gas	88.3	98.3	139.7	80.1	89.2	126.8
Commercial Propane	0.4	0.4	0.6	0.4	0.4	0.6
Commercial Fuel Oil	8.4	9.3	13.3	7.6	8.5	12.0
Commercial Coal	0.1	0.1	0.2	0.1	0.1	0.2
Total Commercial Fuel Use	97.2	108.1	153.8	88.2	98.2	139.6
Industrial Natural Gas	79.9	62.7	78.7	72.5	56.9	71.4
Industrial Propane	0.6	0.8	0.9	0.6	0.7	0.9
Industrial Fuel Oil	5.7	6.9	29.5	5.1	21.3	26.8
Industrial Diesel	22.3	23.5	8.7	20.2	6.3	7.9
Total Industrial Fuel Use	108.5	93.9	117.8	98.4	85.2	107.0
Open Burning	5,472.6	6,166.8	7,247.7	4,964.8	5,594.6	6,575.1
Structural Fires	47.8	57.8	74.7	43.4	52.5	67.7
Vehicle Fires	2.2	2.4	2.9	2.0	2.2	2.6
Wild Fires	2,816.3	2,816.3	2,816.3	2,554.9	2,554.9	2,554.9
Other Unplanned Fires	42.5	42.5	42.5	38.6	38.6	38.6
Total Other Burning	8,381.4	9,085.8	10,184.1	7,603.7	8,242.8	9,238.9
Incinerators	0.5	0.5	0.5	0.4	0.4	0.4
Total Area Sources	10,743.1	11,894.4	13,820.5	9,746.0	10,791.1	12,537.9

Table IV.E-4: Base Year & Projected Average Winter Day Carbon Monoxide Emissions for Ada County

Source	Pounds per Day			Kilograms per Day		
	1995	2000	2010	1995	2000	2010
Residential Wood Fireplaces	17,773	21,491	27,741	8,062	9,748	12,583
Residential Wood Stoves	10,788	13,044	16,838	4,893	5,917	7,638
Residential Barbeques/Fire Pits	0	0	0	0	0	0
Total Residential Wood	28,561	34,535	44,579	12,955	15,665	20,221
Residential Natural Gas	738	892	1,151	335	405	522
Residential Propane	2	2	3	1	1	1
Residential Fuel Oil	19	22	29	8	10	13
Residential Coal	9	11	14	4	5	7
Total Residential Fuel (less wood)	768	927	1,197	348	421	543
Commercial Natural Gas	677	754	1,072	307	342	486
Commercial Propane	3	3	5	1	2	2
Commercial Fuel Oil	42	46	66	19	21	30
Commercial Coal	1	1	2	1	1	1
Total Commercial Fuel Use	723	804	1,145	328	366	519
Industrial Natural Gas	385	385	385	175	175	175
Industrial Propane	5	6	7	2	3	3
Industrial Fuel Oil	28	226	226	13	103	103
Industrial Diesel	226	34	43	103	16	20
Total Industrial Fuel Use	644	651	661	293	297	301
Open Burning	29,456	33,258	39,181	13,361	15,086	17,772
Structural Fires	262	317	409	119	144	186
Vehicle Fires	12	13	16	5	6	7
Wild Fires	0	0	0	0	0	0
Other Unplanned Fires	0	0	0	0	0	0
Total Other Burning	29,730	33,588	39,606	13,485	15,236	17,965
Incinerators	3	3	3	1	1	1
Total Area Sources	60,429	70,508	87,191	27,410	31,986	39,550

V. NONROAD MOBILE SOURCES

A. Introduction

Emissions for nonroad mobile sources were estimated by combining an emissions factor with a measure of activity. Emissions factors used to estimate carbon monoxide emissions were taken from *Procedures for Emission Inventory Preparation: Volume IV Mobile Sources*, EPA, 1992. Some source activity data was gathered directly for this inventory. When specific activity data were not available, emissions were estimated by adjusting emissions data from the 1990 Provo-Orem Emissions Inventories conducted by the EPA for the *Nonroad Engine and Vehicle Emission Study - Report*, EPA 1991 (NEVES).

Section 4.2.3 of *Procedures for Emissions Inventory Preparation, Volume IV: Mobile Sources*, "Options for Areas Without EPA Provided Inventories," recommends that in the absence of specific activity data, areas "choose one of the 33 areas (for which inventories were prepared), which is similar in terms of climate and economic activity, so that the emissions inventories can be produced by applying the ratio of the populations for the two areas . . . " Of the 33 areas studied in NEVES, Provo-Orem, Utah was the area chosen to base Ada County's nonroad carbon monoxide emissions estimates. This decision was based on similarities in size, location, elevation, and climate. To scale the 1990 Provo/Orem emissions estimates to 1995, the ratio of the 1990 population of Ada County to the 1990 population of Provo/Orem was applied to the NEVES 1990 emissions estimates, and then projected to 1995 using a growth factor based on the Ada County population growth between 1990 and 1995.

Emissions from military aircraft and its supporting equipment were obtained directly from *Conformity Determination: 124th Fighter Group, Idaho Air National Guard, Boise, Idaho*, CH2MHill, 1996 (Idaho Air National Guard Conformity Determination).

Table V.A-1 lists the sources excluded from the nonroad portion of the inventory and a brief justification. Emissions from lawn and garden equipment and marine recreational equipment are assumed to be negligible or nonexistent during the winter months. Therefore, calculations for average winter day emissions were prepared using a seasonal adjustment factor of zero.

Emissions estimates for aircraft and airport emissions were projected to future years based on anticipated increases in aircraft operations given in the Federal Aviation Administration's *1999 Northwest Mountain Regional Airport Plan* (FAA). Emissions estimates for other nonroad sources were projected to future years using demographic or economic factors provided by APA.

Table V.A-1: Nonroad Mobile Sources Not Considered in the Emissions Inventory

Source Excluded	Justification for Excluding
Helicopters (Military and Civilian)	Negligible use in Ada County
Commercial Marine Vessels	Activity does not occur in Ada County
Logging Equipment	Activity does not occur in Ada County

B. Emissions Summary

Table V.B-1 gives the estimated annual and average winter day carbon monoxide emissions for 1995 from nonroad mobile sources. Winter day emissions for all sources were seasonally adjusted (section V.D) based on a four-month season (November through February).

Table V.B-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Nonroad Mobile Sources

Source	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Military Aircraft & Support Equipment	252.0	228.6	1,381	626
Commercial Aircraft	387.6	351.6	2,028	919
General Aircraft	279.1	253.2	1,529	694
Ground Support Equipment	1,438.9	1,305.3	7,491	3,399
Total Aircraft/Airport	2,357.6	2,138.7	12,429	5,638
Construction Equipment	503.8	457.1	1,104	501
Light Commercial Equipment	1,695.3	1,538.0	9,289	4,214
Industrial Equipment	662.4	600.9	2,904	1,317
Agricultural Equipment	834.8	757.3	1,098	498
Lawn and Garden Equipment	8,018.6	7,274.5	0	0
Recreational Equipment	580.2	526.4	1,653	750
Marine Recreational Equipment	59.5	53.9	0	0
Total Other Nonroad	12,354.6	11,208.1	16,048	7,280
Locomotives	80.5	73.0	441	200
Total Nonroad Mobile Source	14,792.7	13,419.8	28,918	13,118

C. Methods and Data

1. Aircraft and Airports

Table V.C.1-1 shows the emissions estimates produced for military aviation activities, commercial and general aircraft, and commercial airport ground support equipment. One commercial airport, the Boise Air Terminal, and one Air National Guard installation are located within the nonattainment area. Emissions for commercial aircraft, general aircraft, and airport ground support equipment were calculated based on activity data obtained from the 1995 PM_{10} emissions inventory (Appendix A), default time-in-mode data and EPA emissions factors.

Carbon monoxide emissions estimates for military aircraft and their supporting equipment were taken directly from *Conformity Determination: 124th Fighter Group, Idaho Air National Guard, Boise, Idaho* (CH2M HILL, 1996)[18].

Table V.C.1-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Aircraft and Airport Ground Support Equipment.

Source	**Annual Average**		**Average Winter Day**	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
Military Aircraft & Support Equipment	252.0	228.6	1381	626
Commercial Aircraft	387.6	351.6	2,028	919
General Aircraft	279.1	253.2	1,529	694
Airport Ground Support Equipment	1,438.9	1,305.3	7,491	3,399
Total	2,357.6	2,138.7	12,429	5,638

a. Commercial Aircraft

Table V.C.1.a-1 displays annual and winter day emissions estimates for aircraft flown for commercial purposes. The activity unit used to estimate emissions from aircraft is the number of landing and takeoff cycles (LTOs). LTO data for this carbon monoxide emissions inventory were obtained from the 1995 PM_{10} emissions inventory. Emissions factors for each type of aircraft were calculated using the method discussed in Appendix D. Parameters for these calculations were obtained from EPA's *Procedures for Emission Inventory Preparation; Vol. IV: Mobile Sources* (1992).

[18] Table 19 on page 33. Copy located in Appendix D.

Table V.C.1.a-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Commercial Aircraft

Aircraft	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Boeing 727-100	13.6	12.4	56	25
Boeing 727-200	47.1	42.7	279	127
Boeing 737-200	22.4	20.3	100	45
Boeing 737-300	72.3	65.6	382	173
Boeing 737-500	16.7	15.2	104	47
Boeing 757-200	3.4	3.1	22	10
McDonnell Douglas DC-9-15F	0.3	0.3	1	0
McDonnell Douglas DC-9-30	14.4	12.9	84	38
McDonnell Douglas DC-9-40	0.2	0.2	2	1
McDonnell Douglas DC-9-80	0.01	0.01	0	0
McDonnell Douglas MD-83	0.01	0.01	0.1	0.05
McDonnell Douglas MD-87	0.04	0.04	0	0
Lockheed L1011	0.8	0.7	9	4
Fokker F28	127.0	115.2	626	284
Canada Air	14.1	12.8	71	32
De Havilland DH8	35.9	32.6	186	84
Embracer EMB120	3.3	3.0	25	12
Fairchild/Swearingen Metro	14.8	13.4	81	37
Firetankers	1.2	1.1	0	0
Total	387.6	351.6	2,028	919

i. Commercial Aircraft Activity Data

Both annual and winter LTO activity data for the Boise Air Terminal were obtained for the 1995 PM_{10} emissions inventory. The LTO data, presented in Table V.C.1.a.i-1, was taken from the PM_{10} emissions inventory document and used to estimate 1995 carbon monoxide emissions from commercial aircraft.

Table V.C.1.a.i-1: Boise Air Terminal 1995 Commercial Aircraft LTO Data[19]

Aircraft	Annual LTOs	Winter LTOs
Boeing 727-100	506	124
Boeing 727-200	2,053	730
Boeing 737-200	1,481	397
Boeing 737-300	5,228	1,658
Boeing 737-500	1,207	449
Boeing 757-200	282	108
McDonnell Douglas DC-9-15F	16	3
McDonnell Douglas DC-9-30	804	282
McDonnell Douglas DC-9-40	12	7
McDonnell Douglas DC-9-80	1	0
McDonnell Douglas MD-83	1	1
McDonnell Douglas MD-87	6	0
Lockheed L1011	6	4
Fokker F28	5,193	1,534
Canada Air	1811	546
De Havilland DH8	4,370	1360
Embracer EMB120	397	185
Fairchild/Swearingen Metro	4,707	1,541
Firetankers	87	0

ii. Commercial Aircraft Emissions Factors

Commercial aircraft carbon monoxide emissions factors are a function of the number and type of engines used on an aircraft, the operational mode of the engine (one of five that make up an LTO cycle: approach, taxi/idle-in, taxi/idle-out, takeoff, and climb out), the duration an engine is in a particular mode, and the amount of fuel received by an engine in a given mode (in pounds of fuel per minute). Each specific type of commercial aircraft is powered by several engine types, each with their own carbon monoxide emissions profiles. Therefore, emissions factors for each type of commercial aircraft must be calculated using Equation V.C.1.a.ii-1. Parameters for Equation V.C.1.a.ii-1 were obtained from EPA's *Procedures for Emission Inventory Preparation; Vol. IV: Mobile Sources* (1992)[20]. Because specific time-in-mode data for commercial aircraft traffic at the Boise Air Terminal were not available, EPA default time-in-mode data were used in the emissions factor calculations[21]. The specific calculations used to produce commercial aircraft emissions factors and the emissions factors produced are located in Appendix D.

[19] Taken from the PM_{10} emissions inventory presented in Appendix A.

[20] Tables 5.2, 5.3, and 5.4.

[21] From Table 5.1 of *Procedures for Emission Inventory Preparation; Vol. IV: Mobile Sources* (EPA, 1992).

Equation V.C.1.a.ii-1

Emissions factors for each type of commercial aircraft were calculated using the equation[22]:

$$F = P \times EF \times F \times N \times T$$

Where:

F = CO emissions factor for a specific commercial aircraft type (lbs. CO/ LTO cycle)
P = Fraction of aircraft type that utilize a particular engine model
EF = CO emissions factor for a specific commercial aircraft type with a specific engine model in a particular operational mode. (lbs. CO/ 1000 lbs fuel)
F = Fuel flow through an engine (lbs. fuel/min).
N = Number of engines used to power the aircraft.
T = Duration (in minutes) the engine is in a particular mode.

[22] Taken from: *Procedures for Emission Inventory Preparation; Vol. IV: Mobile Sources* (EPA, 1992).

iii. Commercial Aircraft Emissions Calculations

Aircraft specific carbon monoxide emissions factors (Located in Appendix D) were multiplied by Boise Air Terminal LTO data (Table V.C.1.a.i-1) to produce emissions estimates in pounds of carbon monoxide per year for each specific aircraft type. The emissions estimates for all commercial aircraft types were summed to produce an overall estimate in pounds of carbon monoxide emissions per year from commercial air traffic at the Boise Air Terminal. This was then converted from lb/year to tpy and metric tons per year. Winter day emissions were seasonally adjusted (Section V.D) to lbs/ (winter)day and kg/ (winter) day based on winter LTO data for a four month (November through February) period[23].

b. General Aviation

This category of aircraft includes nonmilitary aircraft used for recreation, personal transport, and other nonmilitary and noncommercial activities. Again, LTOs are the activity unit used to estimate emissions from general aircraft. Annual LTO data for general aircraft traffic at the Boise Air Terminal were obtained from the 1995 PM_{10} emissions inventory.

Detailed information about the specific general aircraft types was not available, so a default carbon monoxide emissions factor from *Procedures for Emissions Inventory Preparation Volume IV: Mobile Sources* (EPA 1992)[24] was used.

i. General Aviation Activity Data

General aviation aircraft activity accounted for 46,465 of the LTOs at the Boise Air Terminal. Annual LTO data were obtained from the 1995 PM_{10} emissions inventory, given in Appendix A. Information on winter LTOs was not available for general aircraft.

ii. General Aviation Emissions Factors

Aircraft emissions rates are functions of engine type, the engine's operational mode, duration of the mode, and the engine's fuel consumption rate in a given mode. Unfortunately, detailed local information needed to calculate specific emissions factors were not available. Therefore, a default carbon monoxide emissions factor of 12.014 lbs. CO/LTO from *Procedures for Emissions Inventory Preparation Volume IV: Mobile Sources* (EPA 1992)[22] was used.

iii. General Aviation Emissions Calculations

The default general aircraft carbon monoxide emissions factor was multiplied by the Boise Air Terminal LTO data for general aircraft to produce emissions estimates in pounds of carbon monoxide per year. This estimate was then converted from lb/year to tpy and metric tons per year. Annual carbon monoxide emissions estimates were seasonally adjusted (Section V.D) to lbs./winter day and kg/winter day.

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[23] Seasonal adjusted aircraft emissions in lbs/winter day = (wintertime LTOs × aircraft emissions factor) ÷ 120 days in winter period. CO season defined as winter day.

[24] 12.014 lb. CO/ LTO from Section 5.2.4.2.

c. Airport Ground Support Equipment

Airport ground support equipment are airport-based equipment used to meet the needs of the airport and its parked aircraft. For example, ground support equipment are used to haul baggage from one aircraft to another, tow aircraft, or supply power and conditioned air to parked aircraft. Airport ground support equipment are classified according to the type of fuel used by the engine, the type of cooling system used by the engine, and the power rating of the engine. The majority of airport ground support equipment at the Boise Air Terminal have engines that burn gasoline, diesel, liquefied petroleum gas (LPG), or jet fuel, are either air or water cooled, and have a variety of power ratings.

Airport ground support equipment population data were obtained from the 1995 PM_{10} emissions inventory. Emissions factors for airport ground support equipment were matched to equipment of varying types of engines. Because of an absence of specific local data, parameters needed to estimate emissions were obtained from the California Air Resources Board (CARB) report, *Air Pollution Mitigation Measures for Airports and Associated Activity* (CARB, 1994)[25]. Specific parameters used to match emissions factors to ground support equipment are given in Appendix D. Table V.C.1.c-1 displays the estimated carbon monoxide emissions from airport ground support equipment at the Boise Air Terminal.

[25] Section 4

Table V.C.1.c-1: 1995 Boise Air Terminal Ground Support Equipment Carbon Monoxide Emissions

Equipment Type	Tons/year CO	Metric Tonnes CO/year	lbs. CO/winter day	kg CO/ Winter day
AC Units	1.2	1.1	6	3
Air Start Units	9.2	8.3	48	22
Aircraft Tugs (Narrow Body)	90.7	82.3	472	214
Baggage Tugs	411.8	373.6	2144	972
Belt Loaders	111.8	101.4	582	264
Buses	33.8	30.7	176	80
Cargo Loaders	6.8	6.2	35	16
Carts[a]	8.9	8.1	47	21
Deicers	6.6	6.0	35	16
Forklifts	11.8	10.7	61	28
Fuel Trucks	92.9	84.3	484	219
GPUs	194.4	176.4	1012	459
Lav Carts[a]	0.4	0.4	2	1
Lav Trucks[a]	10.4	9.5	54	25
Lifts	9.9	9.0	52	24
Maintenance Trucks	170.5	154.6	887	403
Other Types of Equipment	6.2	5.7	33	15
Pickups	168.2	152.6	876	397
Service Trucks	45.2	41.0	236	107
Vans	45.3	41.1	236	107
Water Trucks	2.5	2.2	13	6
Total	1,438.9	1,305.3	7,491	3,399

[a] Diesel carts were grouped with "Other types of equipment" due to lack of information. Diesel lav trucks were grouped with diesel maintenance trucks due to lack of data.

i. Airport Ground Support Equipment Activity Data

Airport ground support equipment population data were obtained from the Boise Air Terminal for the 1995 PM_{10} emissions inventory. Table V.C.1.c.i-1 gives the 1995 equipment population data used in the calculation to estimated ground support equipment emissions. The population of unspecified equipment types was distributed amongst the four specified equipment types before carbon monoxide emissions estimates were produced. This was achieved using typical equipment population statistics obtained from the California Air Resources Board (CARB) report, *Air Pollution Mitigation Measures for Airports and Associated Activity* (CARB, 1994)[26]**.** The calculations and parameters used to estimate airport ground support equipment activity at the Boise Air Terminal are found in Appendix D. In some instances, jet fuel equipment types used at

[26] Section 4. Data is also located in Table 3-10 of the PM_{10} emissions inventory found in Appendix A.

the Boise Air Terminal were assigned diesel equipment factors from the CARB document due to lack of data.

Table V.C.1.c.i-1: 1995 Ground Support Equipment Population Data for Boise Air Terminal

Equipment Type	Diesel	Gasoline	LPG	Jet Fuel A	Unspecified
AC Units	3	1	0	1	2
Air Start Units	2	2	0	2	0
Aircraft Tugs (Narrow)	2	5	0	2	3
Baggage Tugs	4	30	0	0	4
Belt Loaders	6	15	0	0	4
Buses	1	2	0	0	0
Cargo Loaders	1	1	0	0	0
Carts	2	1	0	0	25
Deicers	2	12	0	0	1
Forklifts	0	2	4	0	0
Fuel Trucks	6	10	0	0	0
GPUs	10	8	0	3	0
Lav Carts	0	1	0	0	0
Lav Trucks	1	0	0	0	1
Lifts	0	2	0	0	0
Maintenance Trucks	7	21	0	0	1
Other Types of Equipment	13	4	0	0	1
Pickups	0	36	0	0	1
Service Trucks	0	3	0	0	1
Vans	0	15	0	0	2
Water Trucks	0	1	0	0	0

ii. Airport Ground Support Equipment Emissions Factors

Emissions factors for airport ground support equipment are given in terms of grams of carbon monoxide per horsepower hour, and are engine specific. Factors must be matched to equipment of varying fuel types, engine types, and average durations of use. Emissions factors were taken from *Air Pollution Mitigation Measures for Airports and Associated Activity* (CARB, 1994). Emissions factors and the data used to assign emissions factors to ground support equipment types are given in Appendix D.

iii. Airport Ground Support Equipment Emissions Calculations

Equation V.C.1.c.iii-1 was used to calculate carbon monoxide emissions estimates for ground support equipment. This equation produced estimates in terms of pounds of carbon monoxide per day. This number was then multiplied by 365 days/year to arrive at an annual emissions estimate and seasonally adjusted to produce estimates for lbs./winter day and kg/winter day. Annual emissions were converted to tpy and metric tonnes/year.

Equation V.C.1.c.iii-1[27]

Emissions for each fuel type of airport ground support equipment were estimated using the equation:

$$E = N \times hp \times LF \times U \times F \times C$$

Where:

E = CO emissions estimate (lbs. CO/day).
N = Population of airport ground support equipment category at the Boise Air Terminal
hp = Rated horsepower (hp) of the equipment's engine.
LF = Load factor (dimensionless)
U = Average duration a piece of equipment is used (hours/day)
F = CO emissions factor for the ground support equipment category (grams/hp hour)
C = conversion factor from grams/day to lbs/day (1 lb./453.59 grams)

2. Locomotives

Table V.C.2-1 reveals the carbon monoxide from emissions estimated from line haul locomotives. Emissions were calculated using activity data collected for this emissions inventory and emissions factors from *Procedures for Emission Inventory Preparation: Volume IV Mobile Sources*, (EPA, 1992).

Table V.C.2-1: Ada County 1995 Annual Carbon Monoxide Emissions for Locomotives

Annual Average		**Average Winter Day**	
Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
80.5	73.0	441	200

a. Locomotive Activity Data

The amount of fuel (in gallons) consumed per year was used to estimate emissions from locomotives. Local railroads were contacted via a telephone survey to determine fuel consumption of line haul locomotives in Ada County in 1995. Of the four companies contacted, only one was operating line haul locomotives in Ada County in 1995. They used 2,571,282 gallons of fuel in the nonattainment area in 1995.

b. Locomotive Emissions Factors

Because specific data pertaining to the locomotive engines used in the area was not available, a default emissions factor of 0.0626 lbs. CO/gallon fuel was used to estimate emissions. The default factor was obtained from *Procedures for Emission Inventory Preparation: Volume IV Mobile Sources*, (EPA, 1992).

[27] From *Air Pollution Mitigation Measures for Airports and Associated Activity* (EEA, 1994) Section 4.

c. Locomotive Emissions Calculations
The default carbon monoxide emissions factor was multiplied by the fuel use data supplied by the phone survey to produce emissions estimates in lbs. CO/year. This estimate was then converted from lbs./year to tpy and metric tons/year. Annual carbon monoxide emissions estimates were seasonally adjusted (Section V.D) to lbs./winter day and kg/winter day.

3. Agricultural Equipment
Table V.C.3-1 provides carbon monoxide emissions estimates for agricultural equipment. Activity data, in horsepower-hours, were calculated based on equipment population estimates, horsepower estimates, general equipment population statistics, load factors, and hours of use[28]. Carbon monoxide emissions factors from NEVES were applied to the activity data to estimate emissions.

Table V.C.3-1: 1995 Ada County Annual Carbon Monoxide Emissions from Agricultural Equipment

Source	Annual Average				Average Winter Day			
	Tons/Year		Metric Tonnes/Year		Pounds/Day		Kilograms/Day	
Equipment Type	Gas	Diesel	Gas	Diesel	Gas	Diesel	Gas	Diesel
Two Wheel Tractor	278.1	0.0	252.3	0.0	366	0	166	0
Agricultural Tractor	20.2	410.4	18.3	372.3	27	540	12	245
Agricultural Mower	111.3	0.0	100.9	0.0	146	0	66	0
Baler	0.0	5.4	0.0	4.9	0	7	0	3
Combine	2.6	6.8	2.4	6.2	3	9	2	4
Total by Fuel Type	412.2	422.6	373.9	383.4	542	556	246	252
Total	**834.8**		**757.3**		**1,098**		**498**	

a. Agricultural Equipment Activity Data
Equipment activity data in terms of horsepower hours are needed to estimate emissions. Therefore, to calculate horsepower hours, 1995 Ada County equipment fuel type and population data were estimated using the PM_{10} emissions inventory and 1990 Provo-Orem NEVES data. The PM_{10} emissions inventory provided estimated totals of 1995 equipment population data[29].

[28] Equipment population statistics from the PM_{10} emissions inventory, horsepower estimates, general equipment population statistics, load factor data, and use data from *Nonroad Engine and Vehicle Emission Study - Report*, EPA 1991 (NEVES).

[29] 1995 equipment population was estimated using the *Census of Agriculture-1992* (U.S. Department of Commerce) and Ada county population growth from 1992-1995 (See Appendix A, PM_{10} inventory, for more detailed explanation).

These Ada County equipment population totals were then apportioned to use categories based on NEVES fuel use data. Table V.C.3.a-1 presents the apportioned population data.

Table V.C.3.a-1: 1995 Ada County Agricultural Equipment Population

Equipment Type	Equipment Population[a]	Percent Gasoline	Number Gasoline	Percent Diesel[b]	Number Diesel
2 Wheel Tractor	947	100.00%	947	0.00%	0
Agricultural Tractor	1543	0.23%	4	99.77%	1539
Agricultural Mower	374	100.00%	374	0.00%	0
Baler	516	0.00%	0	100.00%	516
Combine	134	0.64%	1	99.36%	133

a From PM10 emissions inventory
b From NEVES (pg. 20, average of Inventories A and B).

Once the population data was apportioned by equipment and fuel type, NEVES data on hours of use, engine load factors, and engine horsepower were selected. Table V.C.3.a-2 gives the NEVES factors used to calculate agricultural equipment activity data and the activity data used to estimate carbon monoxide emissions. The equipment's activity in horsepower-hours was calculated using Equation V.C.3.a-1.

Equation V.C.3.a-1

Annual agricultural equipment activity in Ada County was estimated using the following equation:

$$A = N \times P \times hp \times lf \times U$$

Where:

A = Annual Activity (horsepower-hours/year)
N = 1995 Ada County equipment population
P = Fraction of fuel type
hp = Average horsepower for equipment type (horsepower)
lf = Average load factor for equipment type (dimensionless)
U = Average usage hours (hours/ year)

Table V.C.3.a-2: 1995 Ada County Agricultural Equipment Horsepower Hours

Fuel Type	Equipment Type	Apportioned Ada County Equipment Population	Avg. Hp[a]	Load Factor[a]	Usage (hrs/yr)[a]	1995 Hp-Hrs
Gasoline	2 Wheel	947	7	0.62	225.9	928,444
	Tractor	4	87	0.62	456.5	98,494
	Mower	374	11	0.48	123.4	243,680
	Combine	1	131	0.74	86.3	8,366
Diesel	Tractor	1539	98	0.7	394.3	41,628,380
	Baler	516	74	0.58	58.0	1,284,510
	Combine	133	152	0.7	103.5	1,464,649

[a] From NEVES pgs. 20-24

b. Agricultural Equipment Emissions Factors

Emissions factors, given in Table V.C.3.b-1 in terms of grams of carbon monoxide per horsepower-hour, were obtained from EPA's NEVES document and applied to the calculated activity data in TableV.C.3.a-2.

Table V.C.3.b-1: Agricultural Equipment Carbon Monoxide Emissions Factors

Equipment Type	**Emissions Factor** (g/Hp-hour)[a]	
	Gasoline	**Diesel**
2 Wheel Tractor	271.70	NA
Agricultural Tractor	185.90	8.94
Agricultural Mower	414.20	NA
Baler	NA	3.78
Combine	283.40	4.20

[a] From NEVES pages 28 and 32.

c. Agricultural Equipment Emissions Calculations

Equation V.C.3.c-1 was used to estimate carbon monoxide emissions from agricultural equipment. This equation produced estimates in terms of lbs. carbon monoxide/year. This annual emissions estimate was converted to tpy and metric tonnes/year and seasonally adjusted to produce estimates for lbs./winter day and kg/winter day.

Equation V.C.3.c-1

The carbon monoxide emissions for agricultural equipment were estimated using the following equation:

$$E = F \times A \times C$$

Where:

E = CO Emissions (lb./year)
F = Emissions factor (g CO/hp-hour)
A = Calculated activity data from Equation V.C.3.a-1 (hp-hour)
C = Conversion factor from grams to pounds (1 lb./453.59 grams)

4. Other Nonroad Sources

Table V.C.4-1 shows the emissions estimated from construction equipment, light commercial equipment, industrial equipment, lawn and garden equipment, recreational equipment, and marine recreational vessels (i.e., other nonroad emissions sources). Emissions were calculated by adjusting emissions data from the NEVES 1990 Provo-Orem emissions inventory to Ada County levels using the difference in 1990 populations. These Ada County estimates were then projected to 1995 levels using the difference in population in Ada County between 1990 and 1995.

Ada County contains few trails, parks, and boating facilities where recreational vehicles and/or recreational marine vessels are operated. Because of this, 1995 annual PM_{10} emissions estimates for recreational vehicles and marine vessels in the 1995 PM_{10} emissions inventory were reduced from NEVES estimates by 50% and 75% respectively[30]. These reductions were also made for annual carbon monoxide emissions estimates.

Table V.C.4-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Other Nonroad Sources

Source	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Construction Equipment	503.8	457.1	1,104	501
Light Commercial Equipment	1,695.3	1,538.0	9,289	4,214
Industrial Equipment	662.4	600.9	2,904	1,317
Lawn and Garden Equipment	8,018.6	7,274.5	0	0
Recreational Equipment	580.2	526.4	1,653	750
Marine Recreational Vessels	59.5	53.9	0	0
Total	11,519.8	10,450.8	14,950	6,782

[30] Based on IDEQ engineering judgement.

a. Emissions Adjustments from Provo-Orem Study for Other Nonroad Sources
Emissions for construction equipment, light commercial equipment, industrial equipment, lawn and garden equipment, recreational vehicles, and recreational marine vessels were calculated using procedures documented in EPA's *Procedures for Emissions Inventory Preparation, Volume IV: Mobile Sources* (EPA 1992). Section 4.2.3 of that document, "Options for Areas Without EPA Provided Inventories," recommends that metropolitan areas for which EPA did not prepare 1990 NEVES inventory "choose one of the 33 areas (for which inventories were prepared), which is similar in terms of climate and economic activity, so that the emissions inventories can be produced by applying the ratio of the populations for the two areas . . . " Of the 33 areas studied in for the NEVES, Provo-Orem, Utah was the area chosen on which to base Ada County's nonroad carbon monoxide estimates, due to similarities in size, location, elevation, and climate.

The NEVES study conducted two separate emissions inventories: Inventory A was the EPA's best estimate of emissions using a top-down approach to allocate equipment populations to the NEVES metropolitan areas from state-level data. Inventory B was developed by updating Inventory A's equipment population data using equipment manufacturers' population statistics. In accordance with EPA's general recommendation, Ada County's nonroad carbon monoxide emissions were estimated using the averaged emissions of NEVES (1990 Provo-Orem) Inventory A and Inventory B. Table V.C.4.a-1 displays the NEVES Inventory A, Inventory B, and average carbon monoxide emissions for the Provo-Orem area.

Table V.C.4.a-1: Average of 1990 Provo-Orem Inventory A and Inventory B

Equipment Type	**Inventory A** (tpy)	**Inventory B** (tpy)	**Average** (tpy)
Construction	593	462	528
Light Commercial	1,775	1,775	1,775
Industrial	892	495	694
Recreational	1,424	1,006	1,215
Marine Recreational	209	289	249
Lawn and Garden	8,900	7,891	8,396

The average emissions in Table V.C.4.a-1 were then multiplied by a growth and apportionment factor to adjust the 1990 Provo-Orem emissions to 1995 Ada County levels. This growth and apportionment factor (0.9551) was calculated by dividing the 1995 population of Ada County by the 1990 population of Provo-Orem, Utah. Appendix D contains the specific figures used to calculate the growth and apportionment factor.

b. Other Nonroad Sources Calculations
Equation V.C.4.b-1 was used to estimate carbon monoxide emissions from construction equipment, light commercial equipment, industrial equipment, lawn and garden equipment, recreational vehicles, and recreational marine vessels. This equation produced estimates in terms of tpy carbon monoxide. This annual emissions estimate was converted to metric tonnes/year and

seasonally adjusted to produce estimates for lbs./winter day and kg/winter day. Emissions estimates for recreational vehicles and marine vessels were reduced by 50% and 75% respectively, because Ada County contains few trails, parks, and boating facilities where recreational vehicles and/or recreational marine vessels are operated.

Equation V.C.4.b-1

The carbon monoxide emissions for construction equipment, light commercial equipment, industrial equipment, lawn and garden equipment, recreational vehicles, and recreational marine vessels were estimated using the following equation:

$$E_{Ada} = E_{P\text{-}O} \times G$$

Where:

EAda = Ada County CO Emissions (tpy)
EP-O = Average Provo-Orem Emissions from Table V.C.4.a-1(tpy)
G = Growth and apportionment factor (0.9551)

D. Seasonal Adjustment

Nonroad source emissions were seasonally adjusted from annual emissions to average winter day emissions by converting an annual average to an average daily emissions estimate (dividing by 365 days/year), and then multiplying by a seasonal adjustment factor. These factors are presented in Table V.D-1. Appendix D contains the information used to produce seasonal adjustment factors. For commercial aircraft, specific seasonal activity data was available from which a seasonal adjustment factor was created. This factor was applied to carbon monoxide emissions from airport ground support equipment under the assumption ground support equipment are used only in support of commercial aircraft. Based on information provided by the Boise Air Terminal, it is assumed that general aviation activity is consistent throughout the year. Therefore, annual emissions were divided by 365 days/year to determine winter day emissions (i.e. a seasonal adjustment factor of 1.0). The use of lawn and garden equipment and recreational marine vessels are assumed negligible in the nonattainment area during the winter months (i.e., November through February). Therefore, no winter day emissions estimates were made for these sources (i.e., these sources were given seasonal adjustment factors of 0).

Table V.D-1: Factors Used to Seasonally Adjust Nonroad Mobile Source Carbon Monoxide Emissions

	Seasonal Adjustment Factor	**Data Source**
Military Aircraft & Supporting Equip.	1.00	1
Commercial Aircraft	Based on aircraft LTO data.	2
General Aircraft	1.00	3
Airport Ground Support Equipment	0.95	4
Construction Equipment	0.40	5
Light Commercial Equipment	1.00	5
Industrial Equipment	0.80	5
Agricultural Equipment	0.24	5
Recreation Vehicles	0.52	5
Lawn and Garden Equipment	0.00	6
Recreational Marine Vessels	0.00	6
Locomotives	1.00	7

Data Source	
1	*Conformity Determination: 124th Fighter Group, Idaho Air National Guard, Boise, Idaho*, CH2MHill, 1996
2	Specific seasonal LTO data by aircraft, Boise Air Terminal records
3	Boise Air Terminal assumption
4	Derived from Boise Air Terminal winter LTO data wintertime LTOs/(33.3% (1 third of year) × 1995 LTOs)
5	NEVES
6	IDEQ's engineering judgement - winter emissions are negligible
7	Based on Information supplied by locomotive companies

E. Projection to Future Years

1. Summary of Emissions Projections

1995 nonroad mobile source emissions were projected to 2000 and 2010 using either the latest population and socioeconomic projections provided by APA (Table IV.E-1) or calculated impacts produced using FAA activity forecasts. For each category, an appropriate growth indicator was chosen. Emissions projections calculated with APA demographic data were calculated by multiplying the 1995 annual and winter day emissions by the ratio between the appropriate demographic factor for the future year and the factor for 1995. Table V.E-1 displays the projected annual nonroad mobile source carbon monoxide emissions for 1995, 2000, and 2010, while Table V.E-2 gives the winter day emissions estimates for 1995, 2000, and 2010.

Table V.E-1: Base Year & Projected Annual Carbon Monoxide Emissions for Ada County

Source	Tons per Year			Metric Tonnes per Year		
	1995	2000	2010	1995	2000	2010
Military Aircraft & Support Equipment	252.0	252.0	252.0	228.6	228.6	228.6
Commercial Aircraft	387.6	620.1	736.3	351.6	562.5	668.0
General Aircraft	279.1	334.9	390.8	253.2	303.8	345.5
Airport Support Equipment	1,438.9	2,301.9	2,733.6	1,305.3	2,088.3	2,479.9
Total Aircraft/Airport	2,357.6	3,508.9	4,112.7	2,138.7	3,183.2	3,722.0
Construction Equipment	503.8	609.2	786.4	457.1	552.7	713.4
Light Commercial Equipment	1,695.3	1,887.4	2,682.8	1,538.0	1,712.3	2,433.8
Industrial Equipment	662.4	807.6	1,013.0	600.9	732.7	919.0
Agricultural Equipment	834.8	834.8	834.8	757.3	757.3	757.3
Lawn and Garden Equipment	8,018.6	9,695.7	12,515.5	7,274.5	8,796.0	11,354.1
Recreation Equipment	580.2	655.2	771.8	526.4	594.4	700.2
Marine Recreation Equipment	59.5	67.1	79.1	53.9	60.9	71.7
Total Other Nonroad	12,354.6	14,557.0	18,683.4	11,208.1	13,206.3	16,949.5
Locomotives	80.5	80.5	80.5	73.0	73.0	73.0
Total Nonroad	14,792.7	18,146.4	22,876.6	13,419.8	16,462.5	20,744.5

Table V.E-2: Base Year & Projected Average Winter Day Carbon Monoxide Emissions for Ada County from Non-Road Mobile Sources

Source	Pounds per Day			Kilograms per Day		
	1995	2000	2010	1995	2000	2010
Military Aircraft & Support Equipment	1,381	1,381	1,381	626	626	626
Commercial Aircraft	2,028	3,243	3,850	919	1,471	1,747
General Aircraft	1,529	1,835	2,141	694	832	971
Airport Support Equipment	7,491	11,983	14,229	3,399	5,435	6,454
Total Aircraft/Airport	12,429	18,442	21,601	5,638	8,364	9,798
Construction Equipment	1,104	1,335	1,724	501	606	782
Light Commercial Equipment	9,289	10,342	14,700	4,214	4,691	6,668
Industrial Equipment	2,904	3,540	4,441	1,317	1,606	2,014
Agricultural Equipment	1,098	1,098	1,098	498	498	498
Lawn and Garden Equipment	0	0	0	0	0	0
Recreation Equipment	1,653	1,867	2,199	750	847	998
Marine Recreation Equipment	0	0	0	0	0	0
Total Other Nonroad	16,048	18,182	24,162	7,280	8,248	10,960
Locomotives	441	441	441	200	200	200
Total Nonroad	28,918	37,065	46,204	13,118	16,812	20,958

2. Aircraft and Airport Emissions Projections

Due to increased activity at the Boise Air Terminal, a three phased expansion is planned to begin starting in 2000. This expansion will increase the amounts of carbon monoxide produced from airport activities and air traffic. However, specific carbon monoxide emissions estimates for the proposed expansion were not available at the time this inventory was created. Therefore, IDEQ produced conservative growth factors based on projected aviation operations from the U.S. Department of Transportation's FAA's *1999 Northwest Mountain Regional Airport Plan*[31] and on growth estimations made in the 1995 PM_{10} emissions inventory for general aviation operations.

a. Aircraft and Airport Emissions Projections to 2000

The FAA's *1999 Northwest Mountain Regional Airport Plan* estimates future year aviation operations. Total nonmilitary aircraft use at the Boise Air Terminal is estimated in the plan, but the estimates are not separated into general and commercial aviation categories. Therefore, projections of general aircraft activity from 1995 to 2000 were based on a growth factor provided by the Boise Air Terminal for the 1995 PM_{10} emissions inventory. Commercial aviation use in the year 2000 was estimated by subtracting the general aviation operations estimate from the total aviation operations estimates for the Boise Air Terminal in 2000 (from the FAA document). The number of commercial aircraft operations projected for 2000 was then divided by the number of 1995 operations to create a commercial aircraft growth factor for 2000[32]. Because airport ground

[31] From Table 3-6

[32] Operations = 2 × LTOs. Y2K operations ÷ 1995 operations = Y2K growth factor.

support equipment are almost entirely used to support commercial aircraft, the commercial aircraft projection factor was used for airport ground support equipment. Table V.E.2.a-1 provides the operational data used to arrive at aircraft projection factors for 2000.

Table V.E.2.a-1: Data Used to Produce the Airport Projection Factors for the Year 2000.

	1995 aircraft operations[a]	Estimated operations for 2000	Projection Factor
Total Operations/Factor	149,265	200,977[b]	1.35
General Aircraft Operations/Factor	92,929	111,515	1.2a
Commercial Aircraft Operations/Factor and Ground Support Equipment Factor	56,336	89,462c	1.6

a From PM10 SIP.
b From FAA's *1999 Northwest Mountain Regional Airport Plan*.
[c] Difference between 200,977 and 111,515.

b. Aircraft and Airport Emissions Projections to 2010

The FAA's *1999 Northwest Mountain Regional Airport Plan* also gives an estimation of total nonmilitary aviation operations anticipated for 2010. This estimate of total aircraft operations was used to produce an overall growth factor for the Boise Air Terminal of 1.2 for the years 2000 to 2010. Commercial aviation operations for 2010 were then approximated by multiplying the commercial aviation operation estimates for 2000 by the total operational growth factor for 2000 to 2010 (i.e., for both commercial and general aircraft combined, 1.2). This commercial aircraft operations estimate for the year 2010 was divided by the 1995 commercial aircraft operations to provide a 1995 to 2010 growth factor for commercial aircraft. Again it was assumed that airport ground support equipment are used almost entirely to support commercial aircraft. Therefore, the commercial aircraft growth factor for 1995 to 2010 was used to estimate future airport ground support equipment carbon monoxide emissions.

General aviation operations were projected to 2010 by subtracting the commercial aviation estimates for 2010 from the total aviation estimates for 2010 (from the FAA document). The projected general aircraft operations for 2010 were divided by the number of 1995 general aircraft operations to create a growth factor for 1995 to 2010 for general aircraft. Table V.E.2.b-1 supplies the operational data used to arrive at aircraft activity growth factors for 2010.

TableV.E.2.b-1: Data Used to Produce the Airport Projection Factors for the Year 2010

	1995 aircraft operations[a]	Estimated operations for 2010	Growth Factor
Total Operations/Factor	149,265	238,481[b]	1.6
General Aircraft Operations/Factor	92,929	132,324[c]	1.4
Commercial Aircraft Operations/Factor and Ground Support Equipment Factor	56,336	106,157[d]	1.9

[a] From PM_{10} SIP.
b From FAA's *1999 Northwest Mountain Regional Airport Plan*.

[c] Difference between 238,481 and 106,157.
[d] Estimated using FAA's projected operations at the Boise Air Terminal for 2000 and 2010.

3. Nonroad Mobile Emissions Projections for Sources Other than Aircraft and Airport
For nonroad source emissions that were not related to aircraft or airport, emissions projections for 2000 and 2010 were based on the latest population and socioeconomic projections prepared by APA[33]. For each of these categories, an appropriate growth indicator was chosen. Table V.E.3-1 lists the nonairport related nonroad mobile source categories and the specific demographic used to project future year emissions. Emissions projections were calculated by multiplying the 1995 emissions by the ratio of the appropriate demographic factors. Table IV.E-1 lists the Ada County demographic data used to project both area and the nonairport related nonroad mobile source emissions to the years 2000 and 2010.

Table V.E.3-1: Growth Indicators Used to Project Nonroad Mobile Source Carbon Monoxide Emissions to Future Years in Ada County (Excludes Aircraft and Airport Related Sources)

Source	Growth Factor
Construction Equipment	Households
Light Commercial Equipment	Retail employment
Industrial Equipment	Nonretail employment
Agricultural Equipment	No growth anticipated[a]
Lawn and Garden Equipment	Households
Recreation Equipment	Population
Marine Recreation Equipment	Population
Locomotives	No growth anticipated[b]

[a] Due to limited acreage available for additional agricultural use within the nonattainment area.
[b] Based on IDEQ engineering judgement.

[33] From *1997 Demographic Report for Ada and Canyon Counties*, APA Report No. 09-97, June 1997. Data can also be found in the PM_{10} emissions inventory (see Appendix A).

VI. ONROAD MOBILE SOURCES

A. Introduction

This section deals specifically with carbon monoxide emissions created by onroad transportation sources such as cars, trucks, or other motor vehicles. The main references for preparation of this chapter were the *Mobile 5 User's Guide* and *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources. (EPA-450/4-81-026d, Revised 1992).*

Vehicle miles traveled (VMT) are a measure of the total miles driven by all vehicles in a given time period for a given area. VMT were estimated by APA for each roadway type using TP+, a widely used travel demand forecasting model. TP+ generates VMT based on weekday traffic demands. Emissions were estimated by multiplying VMT for each roadway type by an emissions factor that is specific to a given roadway type with a specific average speed. Emissions factors were generated using MOBILE5b, the most recent version of EPA's emissions model. Emissions factors generated by MOBILE5b vary depending on many parameters, including vehicle speed, ambient temperature, and vehicle fleet mix. Two separate types of emissions factors were developed. One set of factors was generated for Ada County vehicles, which are subject to an emissions testing program. Another set of factors were generated for vehicles operating in Ada County, but registered outside of the emissions testing area.

In Ada County, the time span between November and February is typically the period when cold temperatures or stagnation events contribute to high concentrations of carbon monoxide. Because of this, emissions estimates were derived using MOBILE5b under winter conditions. The resulting average winter day emissions estimates were multiplied by 365 days/year to give conservative annual emissions estimates.

B. Emissions Summary

Vehicles that are registered in Ada County are subject to an annual vehicle emissions test. However, it was estimated by TP+ that 10.1% of the total VMT estimate consists of vehicles traveling within the inventory area that are not subject to emissions testing. Therefore, a separate set of MOBILE5b emissions factors were generated: one set for those vehicles subject to the emissions testing program, and one set to account for vehicles which are not subject to the I/M program. Annual emissions estimates were estimated by multiplying the average winter day emissions estimate by 365 days/year. This calculation results in a conservative annual onroad mobile emissions estimate. Table VI.B-1 summarizes the 1995 emissions estimates for total annual emissions and average winter day emissions from onroad mobile sources of carbon monoxide.

Table VI.B-1: 1995 Ada County Annual and Average Winter Day Carbon Monoxide Emissions from Onroad Mobile Sources

Road Category Totals	**Annual Average**		**Average Winter Day**	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Total Local	9,777.6	8,868.2	53,575	24,299
Total Collector	7,103.0	6,442.4	38,917	17,650
Total Arterial	32,177.2	29,185.8	176,315	79,962
Total Interstate	12,122.8	10,995.7	66,427	30,123
Network Total	61,180.6	55,492.4	335,235	152,035

C. Travel Estimation Procedures

APA is the agency responsible for transportation planning and demographic projections in the nonattainment area. The travel forecasting model used by APA is TP+. This model estimates VMT and the average speed of the roadway network. TP+ is widely used and recognized across the country for a broad range of transportation and air quality planning activities. The model is regularly maintained and updated to reflect the most recent population and employment projections for both Ada and Canyon Counties. Model calibrations and model runs are overseen by APA's Transportation Model Advisory Committee which consists of traffic engineers and transportation, air quality, and land use planners from public and private agencies.

The TP+ model estimates VMT and average speed for various types of roadways, but requires numerous inputs. Table VI.C-1 defines how the roads in the network are classified. TP+ inputs include information on the transportation network (i.e., speed, capacity and length of roads). Data about socioeconomic/land use factors that affect transportation use (i.e., population, number of households, number of registered automobiles, and employment factors) must also be input into TP+.

Table VI.C-1: Definitions of Roadway Types Used to Estimate Onroad Mobile CO Emissions[a]

Roadway Category	Definition
Interstate	Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel. Serve the major centers of activity of a metropolitan area, the highest traffic volume corridors, and the longest trip desires. Should carry a high proportion of the total urban area travel on a minimum of mileage. Carry the major portion of trip entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city.
Arterial	Link cities and larger towns (and other traffic generators, such as major resort areas, that are capable of attracting travel over similarly long distances) and form an integrated network providing interstate and intercounty service. Arterials constitute routes whose design should be expected to provide for relatively high overall travel speeds. Should interconnect with and augment the urban interstate system and provide service to trips of moderate length at a somewhat lower level of travel mobility than an interstate.
Collector	Provides both land access service and traffic circulation within residential neighborhoods, commercial, and industrial areas. Penetrates residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination. Collects traffic from local streets in residential neighborhoods and channels it into the arterial system. More moderate speeds are typical, on the average.
Local	Provide access to adjacent land and access to higher order systems. Provide service to travel over relatively short distances as compared to collectors or other higher systems. Offers the lowest level of mobility. Through traffic movement usually is deliberately discouraged.

[a] From default tables in TP+.

For this study, TP+ was calibrated to reflect more accurate roadway, socioeconomic and transportation data. A transportation survey of more than 1,700 households was conducted in Ada and Canyon counties between late 1998 and 1999 to calculate travel characteristics. Actual traffic counts were collected by Ada County Highway District (ACHD) and the Idaho Transportation Department (ITD). TP+ inputs were developed from the survey, ACHD, and ITD. The roadway network in place for 1995 was input into TP+.Table VI.C-2 displays the TP+ results for the 1995 roadway network and includes the average speed for each roadway type.

Table VI.C-2: 1995 Ada County Average Speed and Daily VMT by Roadway Category Produced Using TP+.

Roadway Category	**Average Speed** (miles/hour)	**VMT Ada County Vehicles**[a] (miles/day)	**VMT Out of County Vehicles**[b] (miles/day)	**Total VMT** (miles/day)
Interstate	43.0	1,198,121	134,605	1,332,727
Arterial	34.3	2,693,687	302,628	2,996,314
Collector	27.0	489,064	54,945	544,009
Local	16.1	448,444	50,381	498,825
Grand Total	28.8	4,829,316	542,559	5,371,875

[a] From TP+,89.9% of total VMT from vehicles registered in Ada County. These vehicles are subject to emissions testing.
[b] From TP+,10.1% of total VMT from vehicles registered outside of Ada County. These vehicles are not subject to emissions testing.

D. Description of Vehicle Inspection and Maintenance Program

1. 1995 Vehicle Inspection and Maintenance Program

A vehicle inspection and maintenance (I/M) program, operated under the auspices of the Ada County Air Quality Board (Air Quality Board) was established in 1984 as a joint action of Ada County, the ACHD, and the cities of Boise, Eagle, Garden City and Meridian. In 1991 the rules and regulations were updated to change the requirements for testing equipment and new ordinances were passed in the county and cities extending the program[34].

In 1997 the Cities of Eagle, Garden City, and Meridian, as well as the ACHD re-adopted the ordinances and extended them permanently. As of 1999, the City of Kuna did not participate in the testing program, and both Ada County and City of Boise ordinances contained sunset clauses that allowed for the testing program to expire. A new ordinance is before Ada County and all its cities that will eliminate the sunset clauses. The City of Kuna is also expected to adopt this ordinance.

The ordinances require an annual vehicle exhaust emission test of all vehicles whose owners have a primary residence or domicile in Ada County (excluding Kuna). Vehicle registration may be revoked for Ada County vehicles that do not complete the emissions test or apply for a waiver. Vehicles that are exempt include those that are model year 1965 or older; powered by fuel other than gasoline (i.e., diesel); registered as a motor home or Idaho Old Timer Vehicle (i.e., vehicles manufactured prior to January 1, 1943); or are under 1,500 pounds GVW (i.e., motorcycles). No upper weight limit exists, but most of the heavy vehicles are used for commercial purposes and not required to test.

[34] Ordinance: “The 1991 Motor Vehicle Control Ordinance”; Title 6, Chapter 1-3, Ada County Motor Vehicle Code; Ordinance number 5273, City of Boise; Ordinance number 558, Garden City; Ordinance number 547, City of Meridian; Ordinance number 177, City of Eagle.

Currently, Idaho motor vehicles may be registered in any county, but owners must designate a home county for the vehicle. It is thought that approximately 5,000 owners who reside and drive in Ada County register their vehicles outside of the county. In addition, TP+ estimates that 10.1% of all VMT in Ada County are attributed to vehicles from outside Ada County and are therefore not subject to the emissions testing program.

Any private entrepreneur who meets minimum licensing requirements may operate an exhaust emissions testing site. Minimum licensing requirements for technicians include passing a written and practical exam given by Air Quality Board personnel. Applicants must demonstrate knowledge of the operation and purpose of emissions control systems, the relationship of hydrocarbons and carbon monoxide to timing and fuel management systems, adjustments of motor vehicles to manufacturer's specifications, and operation of an exhaust gas analyzer. They must also demonstrate the ability to conduct a visual inspection of the required emissions control equipment; the ability to use, care and maintain the exhaust gas analyzer; the ability to conduct emissions tests; and the ability to complete emissions testing forms.

Most exhaust emission tests in Ada County are currently performed by operators of mobile vans. However, facilities must remain at a permanent location. Most stations offer their customers some level of vehicle repair opportunity in the event of a failed test. Facilities must demonstrate the ability to perform emission tests, comply with reporting and record keeping requirements, and employ at least one person who has a valid Emission Mechanic License. Facilities must conduct the exhaust emissions tests using approved equipment, including an NDIR exhaust analyzer that meets the 1990 California Bureau of Automotive Repair (BAR 90) or later specifications and the requirements of 207(b) of the Federal Clean Air Act. The BAR90 emission test sequence is a menu driven, step by step procedure which insures that proper procedures are followed. Exhaust emissions are measured only while the vehicle's engine is idling.

The maximum allowable charge for a vehicle emissions test is $12.00, which includes the test and a Certificate of Compliance. This fee is collected at the place of testing, and emission test information is forwarded to the Air Quality Board's vehicle registration. The Air Quality Board uses a computer data base to track vehicle compliance with emission testing requirements. Vehicle registration may be revoked for vehicles that do not complete the emissions test or vehicle owners may apply for a waiver.

The exhaust emissions test consists of a visual check of emission control devices on 1984 and newer vehicles, and a limited chemical analysis of exhaust emissions. A check of emission control devices includes verification of the presence and operation of a catalytic converter, an air injection system, and a visual check of the size of the fuel restrictor. On 1984 and newer vehicles, any emission control devices that have been removed or altered must be restored before a certificate of compliance will be issued.

Under this program, owners of vehicles exceeding the model year carbon monoxide percentage standard have ten days to adjust or repair the vehicle, and return for a free reinspection. Repairs may be done on site or at another location.

During the 1995 inventory year (and until December, 1998) the I/M program authorized waivers for some vehicles that failed the exhaust emission test. Each waiver was valid for one year, and issued upon request by vehicle owners. The waiver was issued with the understanding that owners would attempt to repair the failed engine in the future. A vehicle was not given another waiver unless the owner had paid for emission related repairs of at least $175 for 1981 and newer vehicles; or at least $75 for 1980 and older vehicles. About 1,000 vehicles annually received the one year waiver. Very few owners attempted to get a second waiver.

Ada County's I/M program includes thresholds for maximum allowable emission of carbon monoxide that are somewhat lenient compared to thresholds used elsewhere in the nation. Table VI.D.1-1 displays the maximum I/M allowable carbon monoxide percentages in tailpipe emissions for 1995 (i.e., 1984-1998 cutpoints).

Table VI.D.1-1: 1995 Allowable Carbon Monoxide Percentage of Total Tailpipe Emissions

Light Duty Vehicles (1,500 -8,499 lbs. GVW)	
1965-1974	5.5%
1975-1979	3.5%
1980	1.5%
1981 & newer	1.2%

Heavy Duty Vehicles (Over 8,500 lbs. GVW)	
1965-1974	6.0%
1975-1980	5.0%
1981 & newer	3.0%

2. Planned Changes to the Vehicle Inspection and Maintenance Program

An improved I/M program will be implemented by 2000. One of the improvements to the I/M program will be a more restrictive waiver policy. The new waiver policy requires owners of vehicles that fail an emissions test to spend a minimum of $150 on emission related repairs before a waiver will be issued.

In addition, a lower percentage of carbon monoxide tailpipe emissions will be allowed. Cut points for carbon monoxide for 1965 through 1979 model year light duty vehicles will be lowered by 0.5 %. Table VI.D.2-1 gives the cut points that will be used for the improved I/M program.

Table VI.D.2-1: Carbon Monoxide Cut Points for Improved I/M Program

Light Duty Vehicles (1,500 -8,499 lbs. GVW)	
1965-1974	5.0%
1975-1979	3.0%
1980	1.5%
1981 & newer	1.2%

Heavy Duty Vehicles (Over 8,500 lbs. GVW)	
1965-1974	6.0%
1975-1980	5.0%
1981 & newer	3.0%

The improved I/M program will also require diesel powered vehicles, previously exempt, to pass the emissions test in order to retain their registrations . The Emissions test will be expanded from an idle only test to a two speed test, conducted at both idle and at 2500 rpm. Vehicles with visible smoke in the exhaust will be given an opacity test. Testing stations will no longer be allowed to offer repair services on site and must become test only sites. A visual check of the exhaust gas recycler valve and the gas cap were added, so that the visual check of emissions control devices on vehicles 1984 and newer now includes the air injection system, catalytic converter, gas cap, fuel inlet restrictor, and exhaust gas recycler valve.

3. Out of County Onroad Mobile Source Contributions

Using actual traffic counts collected by ACHD and the ITD, TP+ estimated that 10.1% of all VMT in Ada County can be attributed to vehicles from outside of Ada County (i.e., not subject to the emissions testing program). To account for this emissions increase, a set of emissions factors that reflect the lack of emissions testing and/or anti-tampering programs were developed using MOBILE5b.

E. Emissions Modeling Inputs

The most recent model available to estimate onroad mobile source carbon monoxide emissions factors is MOBILE5b. All processing was accomplished by APA using the guidance provided in the Mobile 5 User's Guide[35].

MOBILE5b calculates emissions factors for various types of vehicles traveling on various road types. This model requires numerous inputs, including information about the vehicle mix (types and ages of vehicles found in the area), the vehicle emissions testing and anti-tampering programs, the average speeds traveled on roadways in the area, altitude and average temperatures in the area. These variables were developed through a collaborative effort by IDEQ, Air Quality Board, ITD, and APA.

The Air Quality Board maintains an active data base on the vehicle registration in Ada County. Local registration data provided by the Air Quality Board and ITD were reviewed to determine the vehicle mix. In the absence of detailed data on certain types of vehicles, adjusted national defaults were used to reflect the composition of the local fleet. These adjustments, made cooperatively by APA and Air Quality Board, are detailed in Appendix E.

Information on the local vehicle emissions testing program and anti-tampering program was provided by the Air Quality Board, the agency responsible for operating and administering these programs.

Maximum and minimum ambient winter day temperatures were developed from data for those days with the highest 8-hour carbon monoxide concentrations during 1993, 1994, and 1995. Data were obtained from the National Oceanic and Atmospheric Administration monthly reports. Temperature data is displayed in Appendix E.

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[35] *User's Guide to MOBILE5 (Mobile Source Emission Factor Model)*, US EPA, OMS, Ann Arbor, MI, March 1993.

From TP+ results, 10.1% of the nonattainment area's VMT are attributed to vehicles from outside of Ada County which are not subject to the emissions testing program. For this subset, separate emissions factors were developed using MOBILE5b inputs that reflect the lack of emissions testing or anti-tampering programs.

MOBILE5b allows for either a low altitude input (500 feet) or a high altitude input (5,500 feet). Ada County's average altitude is 2,800 feet. Because the area's altitude is not close to either possible input, the model was run for each altitude input, and the resulting emissions factors were averaged to produce more accurate emissions factors that account for Ada County's altitude.

Chevron Corporation owns and operates the major gasoline pipeline serving Idaho. Chevron's Boise office was contacted to obtain the vapor pressure for gasoline (i.e., Reid Vapor Pressure) for the winter of 1995. This was input into MOBILE5b.

Where input information was unavailable, MOBILE5b default factors were used. Specific input information used to produce onroad mobile carbon monoxide emissions factors with MOBILE5b can be found in Appendix E.

F. MOBILE5b Model Results

Table VI.F-1 gives the MOBILE5b carbon monoxide emissions factors in grams CO/mile for each vehicle type and roadway type. Average winter day emissions (in kg/day) for 1995 were calculated by multiplying the emissions factors by daily VMT estimates and converted to lbs./day. Tables VI.F-2 and VI.F-3 present the 1995 average winter day carbon monoxide emissions for each vehicle and roadway type. Annual emissions were calculated by multiplying average winter day emissions (in kg/day) by 365 days/year and then converting to metric tonnes/year and tpy. The 1995 annual carbon monoxide emissions estimates for each vehicle and roadway type are located in Tables VI.F-4 and VI.F-5.

Table VI.F-1: 1995 Ada County Average Winter Day Carbon Monoxide Emissions Factors for Onroad Mobile Sources

Vehicle Origin	Vehicle Type[a]	Emission Factors (g/mile)			
		Local	Collector	Arterial	Interstate
Ada County Vehicles	Light Duty Gas	43.49	28.65	23.40	19.53
	Light Duty Gas Truck1	52.12	35.05	28.79	24.41
	Light Duty Gas Truck2	66.26	45.63	38.67	33.69
	Heavy Duty Gas	150.43	86.67	69.33	61.94
	Light Duty Diesel	2.45	1.44	1.14	0.98
	Light Duty Diesel Trucks	3.84	2.26	1.79	1.53
	Heavy Duty Diesel	19.79	11.63	9.20	7.89
	Motorcycles	49.82	33.94	26.94	22.62
Out of County Vehicles	Light Duty Gas	48.18	31.77	26.01	21.78
	Light Duty Gas Truck1	60.06	40.50	33.44	28.52
	Light Duty Gas Truck2	78.09	53.75	45.72	39.97
	Heavy Duty Gas	163.26	94.06	75.25	67.22
	Light Duty Diesel	2.45	1.44	1.14	0.98
	Light Duty Diesel Trucks	3.84	2.26	1.79	1.53
	Heavy Duty Diesel	19.79	11.63	9.20	7.89
	Motorcycles	49.82	33.94	26.94	22.62

[a] Vehicle types were derived from vehicle registration data. These 8 types represent 100% of the fleet mix.

Table VI.F-2: 1995 Average Winter Day Carbon Monoxide Emissions from Onroad Mobile Sources - Metric Units

Vehicle Origin	Vehicle Type	Average Winter Day Emissions - kg/day				
		Local	Collector	Arterial	Interstate	Total
Ada County Vehicles	Light Duty Gas	9,985	7,173	32,266	11,980	61,404
	Light Duty Gas Truck1	6,404	4,697	21,249	8,013	40,363
	Light Duty Gas Truck2	3,892	2,923	13,646	5,288	25,749
	Heavy Duty Gas	270	170	747	297	1,484
	Light Duty Diesel	10	6	28	11	55
	Light Duty Diesel Trucks	26	17	72	27	142
	Heavy Duty Diesel	169	108	471	179	927
	Motorcycles	804	597	2,612	975	4,988
	Total	21,560	15,691	71,091	26,770	135,112
Out of County Vehicles	Light Duty Gas	1,554	1,117	5,037	1,876	9,584
	Light Duty Gas Truck1	527	387	1,761	668	3,343
	Light Duty Gas Truck2	327	245	1,148	447	2,167
	Heavy Duty Gas	255	160	706	280	1,401
	Light Duty Diesel	1	1	2	1	5
	Light Duty Diesel Trucks	0.4	0.2	1	0.4	2
	Heavy Duty Diesel	57	36	159	60	312
	Motorcycles	18	13	57	21	109
	Total	2,739	1,959	8,871	3,353	16,923
	GRAND TOTAL	24,299	17,650	79,962	30,123	152,035

Table VI.F-3: 1995 Ada County Average Winter Day Carbon Monoxide Emissions from Onroad Mobile Sources - Standard Units

Vehicle Origin	Vehicle Type	Average Winter Day Emissions - lbs./day				
		Local	Collector	Arterial	Interstate	Total
Ada County Vehicles	Light Duty Gas	22,018	15,816	71,146	26,417	135,396
	Light Duty Gas Truck1	14,120	10,356	46,854	17,670	89,000
	Light Duty Gas Truck2	8,582	6,445	30,089	11,660	56,776
	Heavy Duty Gas	595	374	1,647	654	3,270
	Light Duty Diesel	22	14	61	23	120
	Light Duty Diesel Trucks	57	36	159	60	313
	Heavy Duty Diesel	372	238	1,038	396	2,044
	Motorcycles	1,773	1,317	5,760	2,151	11,002
	Total	47,539	34,596	156,754	59,031	297,921
Out of County Vehicles	Light Duty Gas	3,426	2,463	11,106	4,137	21,132
	Light Duty Gas Truck1	1,161	854	3,883	1,473	7,370
	Light Duty Gas Truck2	720	540	2,532	985	4,777
	Heavy Duty Gas	562	353	1,557	618	3,090
	Light Duty Diesel	2	1	5	2	9
	Light Duty Diesel Trucks	1	1	2	1	5
	Heavy Duty Diesel	125	80	350	133	689
	Motorcycles	39	29	126	47	240
	Total	6,036	4,321	19,561	7,396	37,314
	GRAND TOTAL	53,575	38,917	176,315	66,427	335,235

Table VI.F-4: 1995 Ada County Annual Carbon Monoxide Emissions from Onroad Mobile Sources - Metric Units[a]

Vehicle Origin	Vehicle Type	Annual Average Emissions - Metric Tonnes/Year				
		Local	Collector	Arterial	Interstate	Total
Ada County Vehicles	Light Duty Gas	3,644.7	2,618.0	11,777.0	4,372.9	22,412.5
	Light Duty Gas Truck1	2,337.3	1,714.3	7,755.9	2,924.9	14,732.4
	Light Duty Gas Truck2	1,420.7	1,066.9	4,980.6	1,930.0	9,398.3
	Heavy Duty Gas	98.5	61.9	272.7	108.3	541.4
	Light Duty Diesel	3.6	2.3	10.1	3.8	19.8
	Light Duty Diesel Trucks	9.4	6.0	26.3	10.0	51.8
	Heavy Duty Diesel	61.5	39.4	171.8	65.5	338.3
	Motorcycles	293.5	218.1	953.5	356.0	1,821.2
	Total	7,869.2	5,726.9	25,947.9	9,771.4	49,315.7
Out of County Vehicles	Light Duty Gas	567.0	407.8	1,838.4	684.8	3,498.0
	Light Duty Gas Truck1	192.2	141.3	642.7	243.8	1,220.0
	Light Duty Gas Truck2	119.2	89.5	419.2	163.0	790.8
	Heavy Duty Gas	93.1	58.5	257.7	102.4	511.6
	Light Duty Diesel	0.3	0.2	0.8	0.3	1.5
	Light Duty Diesel Trucks	0.1	0.1	0.4	0.1	0.8
	Heavy Duty Diesel	20.7	13.3	57.9	22.1	114.0
	Motorcycles	6.4	4.8	20.8	7.8	39.8
	Total	999.0	715.5	3,237.9	1,224.3	6,176.7
	GRAND TOTAL	8,868.2	6,442.4	29,185.8	10,995.7	55,492.4

[a] Annual emissions estimates were produced using average winter day model inputs.

Table VI.F-5: 1995 Ada County Annual Average Carbon Monoxide Emissions from On Road Mobile Sources - Standard Units[a]

Vehicle Origin	Vehicle Type	Annual Average Emissions - Tons/Year				
		Local	Collector	Arterial	Interstate	Total
Ada County Vehicles	Light Duty Gas	4,018.3	2,886.4	12,984.1	4,821.1	24,709.8
	Light Duty Gas Truck1	2,576.9	1,890.1	8,550.9	3,224.7	16,242.5
	Light Duty Gas Truck2	1,566.3	1,176.3	5,491.2	2,127.9	10,361.6
	Heavy Duty Gas	108.6	68.2	300.6	119.4	596.9
	Light Duty Diesel	4.0	2.6	11.1	4.2	21.9
	Light Duty Diesel Trucks	10.4	6.7	29.0	11.0	57.1
	Heavy Duty Diesel	67.9	43.5	189.4	72.2	372.9
	Motorcycles	323.6	240.4	1,051.3	392.5	2,007.9
	Total	8,676.0	6,314.2	28,607.6	10,773.0	54,370.8
Out of County Vehicles	Light Duty Gas	625.2	449.6	2,026.8	755.0	3,856.6
	Light Duty Gas Truck1	211.9	155.8	708.6	268.8	1,345.1
	Light Duty Gas Truck2	131.4	98.6	462.1	179.7	871.9
	Heavy Duty Gas	102.6	64.5	284.1	112.9	564.0
	Light Duty Diesel	0.3	0.2	0.8	0.3	1.6
	Light Duty Diesel Trucks	0.2	0.1	0.4	0.2	0.9
	Heavy Duty Diesel	22.9	14.7	63.8	24.3	125.7
	Motorcycles	7.1	5.3	23.0	8.6	43.9
	Total	1,101.6	788.8	3,569.6	1,349.8	6,809.8
	GRAND TOTAL	9,777.6	7,103.0	32,177.2	12,122.8	61,180.6

[a] Annual emissions estimates were produced using average winter day model inputs.

G. Seasonal Adjustment

No seasonal adjustments were applied to carbon monoxide emissions from onroad mobile sources. Winter day carbon monoxide emissions were estimated using MOBILE5b inputs that reflected winter conditions. Annual emissions were extrapolated from these numbers. Because low temperatures cause vehicles to emit more carbon monoxide, this annual estimate is conservative.

Data for estimating VMT were collected year-round, and summed to give an annual average. These annual average VMT estimates were then used to produce MOBILE5b carbon monoxide emissions factors. No information was available about seasonal changes in VMT, but it was assumed that VMT does not vary seasonally.

MOBILE5b gives carbon monoxide emissions factors in grams/mile for each vehicle type and road type. Winter day emissions were estimated by multiplying the MOBILE5b emissions factors by the VMT estimates. Annual emissions were estimated by multiplying average winter day emissions (in kilograms) by 365 days/year to get annual emissions. These numbers were then converted to metric tonnes/year and tpy.

H. Projection to Future Years

Future year emissions estimates, calculated by multiplying forecasted VMT for each roadway type by a MOBILE5b emissions factor for that roadway type, are located in Table VI.H-3 and Table VI.H-4. APA prepared VMT projections for future years by altering TP+ model inputs. These inputs reflect projected changes to the roadway network, as well as expected growth and changes in socioeconomic factors. Tables VI.H-1 and VI.H-2 display the VMT projected for 2000 and 2010, respectively. Emissions factors were projected by altering MOBILE5b inputs to reflect anticipated changes to the vehicle emissions testing program. These inputs are given in Appendix E. In July 1998, the Air Quality Board passed changes intended to increase the effectiveness of the vehicle emissions testing program. These changes include a reduced allowable percentage of carbon monoxide in tailpipe emissions, and a more restrictive waiver policy. For 2000, the program will be further modified to include diesel powered vehicles and to change from an idle only to a two speed test. These changes are more fully described in section VI.D.

Table VI.H-1: 2000 Daily VMT for the Nonattainment Area by Roadway Category Produced Using TP+.

Roadway Category	VMT Ada County Vehicles[a] (miles/day)	VMT Out of County Vehicles[b] (miles/day)	Total VMT (miles/day)
Interstate	1,523,323	163,677	1,687,001
Arterial	3,411,874	366,597	3,778,472
Collector	612,293	65,789	678,082
Local	571,089	61,362	632,451
Grand Total	6,118,579	657,425	6,776,004

[a] From TP+, 90.3% of total VMT from vehicles registered in Ada County. These vehicles are subject to emissions testing.
[b] From TP+, 9.7% of total VMT from vehicles registered outside of Ada County. These vehicles are not subject to emissions testing.

Table VI.H-2: 2010 Daily VMT for the Nonattainment Area by Roadway Category Produced Using TP+.

Roadway Category	VMT Ada County Vehicles[a] (miles/day)	VMT Out of County Vehicles[b] (miles/day)	Total VMT (miles/day)
Interstate	1,884,508	208,719	2,093,227
Arterial	4,339,359	480,606	4,819,965
Collector	844,364	93,517	937,881
Local	719,103	79,644	798,747
Grand Total	7,787,334	862,486	8,649,820

[a] From TP+,90.0% of total VMT from vehicles registered in Ada County. These vehicles are subject to emissions testing.
[b] From TP+,10.0% of total VMT from vehicles registered outside of Ada County. These vehicles are not subject to emissions testing.

Table VI.H-3: Base Year & Projected Annual Carbon Monoxide Emissions for Ada County from Onroad Mobile Sources[a]

Roadway Category and Vehicle Origin	Tons per Year			Metric Tonnes per Year		
	1995	2000[a]	2010	1995	2000[b]	2010
Ada County Vehicles Local	8,676.0	8,407.4	9,241.2	7,869.2	7,625.8	8,382.1
Out of County Vehicles Local	1,101.6	1,136.0	1,278.7	999.0	1,030.4	1,159.9
Total Local	9,777.6	9,543.4	10,519.9	8,868.2	8,656.2	9,542.0
Ada County Vehicles Collector	6,314.2	5,861.4	6,795.7	5,726.9	5,316.5	6,163.9
Out of County Vehicles Collector	788.8	782.6	927.5	715.5	709.8	841.3
Total Collector	7,103.0	6,644.0	7,723.2	6,442.4	6,026.3	7,005.2
Ada County Vehicles Arterial	28,607.6	26,091.7	27,321.6	25,947.9	23,666.0	24,781.5
Out of County Vehicles Arterial	3,569.6	3,486.8	3,712.3	3,237.9	3,162.6	3,367.1
Total Arterial	32,177.2	29,578.5	31,033.9	29,185.8	26,828.6	28,148.6
Ada County Vehicles Interstate	10,773.0	9,258.7	8,828.0	9,771.4	8,397.9	8,007.3
Out of County Vehicles Interstate	1,349.8	1,244.7	1,194.0	1,224.3	1,129.0	1,083.0
Total Interstate	12,122.8	10,503.4	10,022.0	10,995.7	9,526.9	9,090.3
Ada County Vehicles System Total	54,370.8	49,619.2	52,186.6	49,315.7	45,006.1	47,334.8
Out of County Vehicles System Total	6,809.8	6,650.1	7,112.6	6,176.7	6,031.9	6,451.3
System Total	61,180.6	56,269.3	59,299.2	55,492.4	51,038.0	53,786.1

a Annual emissions estimated using average winter day temperature data which resulted in conservative estimates.

b APA produced VMT estimates and MOBILE5b factors for 1999 and 2010. For the 2000 estimates, VMT was linearly interpolated using 1999 and 2010 estimates. MOBILE5b factors for 1999 were used with the interpolated 2000 VMT to estimate year 2000 emissions.

Table VI.H-4: Base Year & Projected Average Winter Day Carbon Monoxide Emissions for Ada County from Onroad Mobile Sources

Roadway Category and Vehicle Origin	Pounds per Day			Kilograms per Day		
	1995	2000a	2010	1995	2000a	2010
Ada County Vehicles Local	47,539	46,068	50,637	21,560	20,892	22,965
Out of County Vehicles Local	6,036	6,225	7,007	2,739	2,823	3,178
Total Local	53,575	52,293	57,644	24,299	23,715	26,143
Ada County Vehicles Collector	34,596	32,117	37,237	15,691	14,566	16,887
Out of County Vehicles Collector	4,321	4,288	5,082	1,959	1,945	2,305
Total Collector	38,917	36,405	42,319	17,650	16,511	19,192
Ada County Vehicles Arterial	156,754	142,968	149,707	71,091	64,838	67,895
Out of County Vehicles Arterial	19,561	19,106	20,341	8,871	8,665	9,225
Total Arterial	176,315	162,074	170,048	79,962	73,503	77,120
Ada County Vehicles Interstate	59,031	50,732	48,373	26,770	23,008	21,938
Out of County Vehicles Interstate	7,396	6,821	6,543	3,353	3,093	2,967
Total Interstate	66,427	57,553	54,916	30,123	26,101	24,905
Ada County Vehicles System Total	297,921	271,886	285,954	135,112	123,304	129,684
Out of County Vehicles System Total	37,314	36,439	38,973	16,923	16,526	17,675
System Total	335,235	308,325	324,927	152,035	139,830	147,360

[a] APA produced VMT estimates and MOBILE5b factors for 1999 and 2010. For the 2000 estimates, VMT was linearly interpolated using 1999 and 2010 estimates. MOBILE5b factors for 1999 were used with the interpolated 2000 VMT to estimate year 2000 emissions.

VII. QUALITY ASSURANCE

A. Summary

Quality assurance (QA) and quality control (QC) measures for the *Northern Ada County 1995 Base and Future Years Carbon Monoxide (CO) Emissions Inventory* were done in accordance with EIIP guidance[36]. It should be noted that compiling of CO emissions for year 1995 heavily depended upon the data documented in *Development of Base and Future Year Emissions Inventories for Industrial Sources for the Northern Ada County PM_{10} Nonattainment Area* (ICF Kaiser, November 1997), and *Development of Base and Future Year Emissions Inventories for Area Sources, Nonroad Mobile Sources, and Onroad Motor Vehicles for the Northern Ada County PM_{10} Nonattainment Area* (ICF Kaiser, November 1997). Major difference, however, occurred in the compiling of onroad mobile CO emissions. This is because in the PM_{10} emissions inventory, MOBILE5a was utilized. For the CO inventory, MOBILE5b was used.

B. Completeness Review

Point source CO emissions, based on the PM10 activity compilations (obtained in the 1997 documents cited above) were checked and updated. Only two facilities conformed for inclusion in the point source (i.e., >100 tons/year category): Micron and Amalgamated Sugar. The rest of the PM10 point sources were relegated to inclusion into the industrial area source category in this carbon monoxide emissions inventory. The area, nonroad mobile, and onroad mobile CO source categories identified for inclusion were compared to the categories which were outlined as appropriate in EPA guidance. Table VII.B-1 lists the area, nonroad mobile, and onroad mobile sources used in the 1995 CO emissions inventory as compared to those required by EPA guidance. The completeness check indicated that all source categories stated in EPA guidance were included in the 1995, 2000, and 2010 CO emission estimates.

[36] EPA, 1997. *EIIP. Volume VI: Quality Assurance Procedures.* U.S. EPA, Office of Air Quality Planning and Standards, Reasearch Triangle Park, NC. July 1997.

Table VII.B-1: Completeness review for the Northern Ada County CO Emission Inventory as Compared to the EPA Requirements.

Inventory	Component	N. Ada '95 Inventory	EPA Requirement
Industrial Point Sources	Natural Gas	X	X
	Propane	X	X
	Diesel	X	X
	Other Oil Fuels	X	X
Area Sources:	Residential Wood Fireplaces	X	X
	Residential Wood Stoves	X	X
	Residential Barbeque/Fire Pits	X	X
	Residential Natural Gas	X	X
	Residential Propane	X	X
	Residential Fuel Oil	X	X
	Residential Coal	X	X
	Commercial Natural Gas	X	X
	Commercial Propane	X	X
	Commercial Fuel Oil	X	X
	Commercial Coal	X	X
	Open Burning	X	X
	Structural Fires	X	X
	Vehicle Fires	X	X
	Wild Fires	X	X
	Other Unplanned Fires	X	X
	Incinerators	X	X
Nonroad Mobile Sources:	Military Aircraft	X	X
	Commercial Aircraft	X	X
	General Aircraft	X	X
	Air Ground Support Equipment	X	X
	Locomotives	X	X
	Construction Equipment	X	X
	Light Commercial Equipment	X	X
	Industrial Equipment	X	X
	Agricultural Equipment	X	X
	Lawn and Garden Equipment	X	X
	Recreation Equipment	X	X
	Marine Recreation Equipment	X	X
Onroad Mobile Sources:	Interstate Highways	X	X
	Arterial Roads	X	X
	Collector Roads	X	X
	Local Roads	X	X

C. Data Elements Review

Parameters used to calculate CO emissions consisted of equations and emission factors. These parameters were applied correctly to the various operational bases for the four main emissions source categories: point, area, nonroad mobile, and onroad mobile. CO emission factors from AP-42 were used most frequently. However, other appropriate references cited in the Appendix (i.e., NEVES, Provo-Orem CMSA study, FAA, US EPA Fire Data Base, US DOT, CARB) were utilized appropriately as needed.

1. Point Sources

Consumption-rate fuel use and process produced CO were taken into account from the 1997 compilation of the 1995 year activities (based on data originally obtained from point sources questionnaires). From this data, yearly and average wintertime emissions estimates were eventually compiled for all industrial facilities. By design, the under 100 tons/year CO emitting facilities' estimates were put into the 'Area' class under the 'Industrial' label. The over 100 tons/year CO emitting facilities' were put into the 'Point' class of sources.

2. Area Sources

Population, retail and nonretail employment, number of households, acreage, number of events (i.e., wildfires, ditch burns, vehicular fires, number of wood stoves, fireplaces, and barbeque pits), fuel use, and fuel sales data were taken from the compilation of 1995 year activity data. Annual and winter-day results were eventually compiled to include all CO emission estimates.

3. Nonroad Mobile Sources

Population, retail and nonretail employment, number of households, equipment population data and their use (i.e., landings and take-offs, etc.) were taken into account from the compilation from 1995 year activities. Annual and winter-day results were calculated individually for each equipment type and eventually compiled to include all CO emissions estimates.

4. Onroad Mobile Sources

APA compiled the onroad mobile CO emission utilizing MOBILE5b and VMT generated by TP+ for four roadway categories: interstate, arterial, collector, and local. The breakdown into these categories and the determination of the out-of-county traffic portion (which is important because the latter portion is not subject to a vehicle I/M program) was done by APA per directives and methods controlled by FHWA. The transportation model TP+ calculated the percentage distribution of daily VMT for the eight vehicular class designations (LDGV, LDGT1, LDGT2, HDGV, LDDV, LDDT, HDDV, and MC) in the four roadway categories. Thus, the CO emission factor calculations (initially in grams per mile and eventually converted to tons/year) were performed by MOBILE5b under the complete quality assurance of APA and FHWA. IDEQ, however, did check the final spread sheets for accuracy and reasonableness of the methods thus used. For example, the daily VMT used for determining 1995 PM_{10} emissions (per 1997 report) for Ada County was 5,505,000 (determined using an out date calibration of TP); in this latest calibration (using TP+) the same quantity was 5,371,875 -- a mere 2.4% difference.

As the *Quality Assurance Implementation Plan* points out, the corrective QA/QC review of each major source category was performed at the 10% completion of work on the CO inventory assembling time. After the 10% review, all the errors were resolved. The final QA/QC review

was performed at the 100% completion of work on the CO inventory. Again, after the 100% review, all remaining errors were resolved. In both cases, the QA/QC reviews were performed by the QA/QC coordinator independently and without any outside influence.

D. Reasonableness Review

The 1995 year CO emissions inventory was compared to one done in 1996 for year 1993[37]. Table VII.D-1 displays the comparisons made between the four source categories. The comparison shows an overall decrease of 10.2% in CO emissions, even though the increase in the estimated nonroad mobile emissions from 1993 to 1995 is excessive. The increase in nonroad mobile emissions in year 1995 mostly stems from increases in lawn and garden equipment, recreational equipment, light commercial equipment, and aircraft/airport activities. The area source decrease in CO emissions is due completely to a decrease in wood burning. Decreases in the onroad mobile category are largely due to decreases in emissions from the 'local' category. Overall the decrease of 10.2% is reasonable.

[37] APA, 1996. *1993 Base Year Carbon Monoxide Emission Inventory for Northern Ada County, Idaho.* Submitted by IDEQ, prepared by APA. January 1997.

Table VII.D-1: Comparison of CO Emissions Inventories for Years 1993 and 1995.

Source Categories	**1993 Inventory** (tpy)	**1995 Inventory** (tpy)	**% Difference**
Point Sources	1,886	2,877	+52.5
Area Sources	16,043	10,743	-33.0
Nonroad Mobile Sources	3,976	14,793	+272.0
Onroad Mobile Sources	77,898	61,181	-21.5
TOTAL	99,803	89,594	-10.2

E. Software Tools

With the exception of the CO emissions results produced by using data output from MOBILE5b and TP+, all other computations were performed on MS Excel.

VIII. REFERENCES

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Nichols, 1999. Personal communications from Ken Nichols, Boise Air Terminal, April 19, 1999.

Nichols, 1999. Personal communications from Ken Nichols, Boise Air Terminal, May 5, 1999.

Appendix A-2.
Canyon County 1995 Carbon Monoxide Supplemental Emissions Inventory

Errata

- Page 2 includes a list of individuals involved in the development of the Emissions Inventory. Work on this Emissions Inventory was completed in 1999. Due to subsequent staff turnover, many of these individuals can no longer be contacted. Updated contacts, as of December 2001, are as follows:

Idaho Department of Environmental Quality			
Matt Stoll	Boise Regional Airshed Manager	373-0550	mstoll@deq.state.id.us
COMMUNITY PLANNING ASSOCIATION OF SOUTHWEST IDAHO (formerly Ada Planning Association)			
Ali Bonakdar	Project Manager	345-5275	abonakdar@planning.cog.id.us
Ada County Air Quality Board			
Dennis Turner	Director	377-4464	dennis.turner@rmci.met
Environmental Protection Agency			
Donna Deneen	EPA Region 10	(206) 553-6706	Deneen.Donna@epamail.epa.gov

Canyon County 1995 Carbon Monoxide Supplemental Emissions Inventory

November 1999

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Acronyms

ACHD	Ada County Highway District
AIRS/AFS	Aerometric Information Retrieval System/AIRS Facility Subsystem
APA	Ada Planning Association
CARB	California Air Resources Board
CO	Carbon Monoxide
EIIP	Emissions Inventory Improvement Program
EPA	Environmental Protection Agency
I/M	Inspection and Maintenance
IDEQ	Idaho Division of Environmental Quality
tpy	tons per year (ton/year)
VMT	Vehicle Miles Traveled

I. INTRODUCTION

A. Background

1. Type of Inventory

To support air quality planning, the Idaho Division of Environmental Quality (IDEQ) has prepared this supplementary emissions inventory to address carbon monoxide emission from Canyon County. This inventory is a supplement to the one developed for the Northern Ada County Carbon Monoxide Limited Maintenance Plan and redesignation request. It is of comparable quality and, like the 1995 Ada County carbon monoxide emissions inventory, this inventory is based on extensive data collection efforts conducted to prepare a 1995 particulate matter emissions inventory for Ada and Canyon Counties. The 1995 PM_{10} emissions inventory is documented in *Development of Base and Future Year Emissions Inventories for Area Sources, Nonroad Mobile Sources, and Onroad Motor Vehicles for the Northern Ada County PM_{10} Nonattainment Area*, (ICF Kaiser, November 1997). A copy of this inventory is supplied in Appendix A of the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory*.

Canyon County is located west of the Northern Ada County carbon monoxide not-classified nonattainment area. Emissions from this moderately populated, moderately industrialized area were not included in the base and future year Northern Ada County carbon monoxide emissions inventory. A carbon monoxide saturation study was conducted in Canyon County between 1995 and 1996. A carbon monoxide monitor has been located near the Nampa Public Library on 11th Street South since late 1998/early 1999. Monitored ambient carbon monoxide concentrations in Canyon County are usually slightly higher than the monitored concentrations in Ada County. However, monitoring data shows a strong correlation between carbon monoxide levels in Canyon and Ada Counties.

2. Emissions Calculations

Carbon monoxide emissions are reported in both metric and standard units. Emissions have been calculated for total annual emissions and daily average emissions during the peak carbon monoxide season. In the airshed, the time span between November and February is typically the period when stagnation events produce high concentrations of carbon monoxide. It is during those times that exceedances have been measured in Ada County.

3. Selection of Base Year 1995

IDEQ technical staff chose to establish the emissions inventory for the year 1995 because:

- Good quality emissions inventory data are available. This is due to the fact that 1995 was also chosen as the most recent PM_{10} emissions inventory base year.

- 1995 was the peak year for socioeconomic growth. There have been no major increases in point, area, off-road mobile, or on-road mobile emissions sources in the area since 1995.

- Carbon monoxide monitoring data from 1993, 1994, and 1995 for Ada County are more representative of the carbon monoxide concentrations in the nonattainment area than other, more recent years (i.e., 1998).

Although not required for Ada County's Limited Maintenance Plan, IDEQ decided to develop future year emissions estimates due to proposed emissions increases from major carbon monoxide sources in the nonattainment area. Future year emissions projections have been prepared for 2000 and 2010.

B. Inventory Contacts

The agencies with direct responsibility for preparing and submitting carbon monoxide air quality plans are IDEQ and APA. A complete Carbon Monoxide Limited Maintenance Plan for the Ada County Nonattainment Area, addressing all inventory components and establishing new control strategies and contingency measures as needed to demonstrate continued attainment of the carbon monoxide standards, will be completed and submitted to the EPA in July of 2000.

Individuals involved in this supplemental emissions inventory can be reached at the following phone numbers and E-mail addresses:

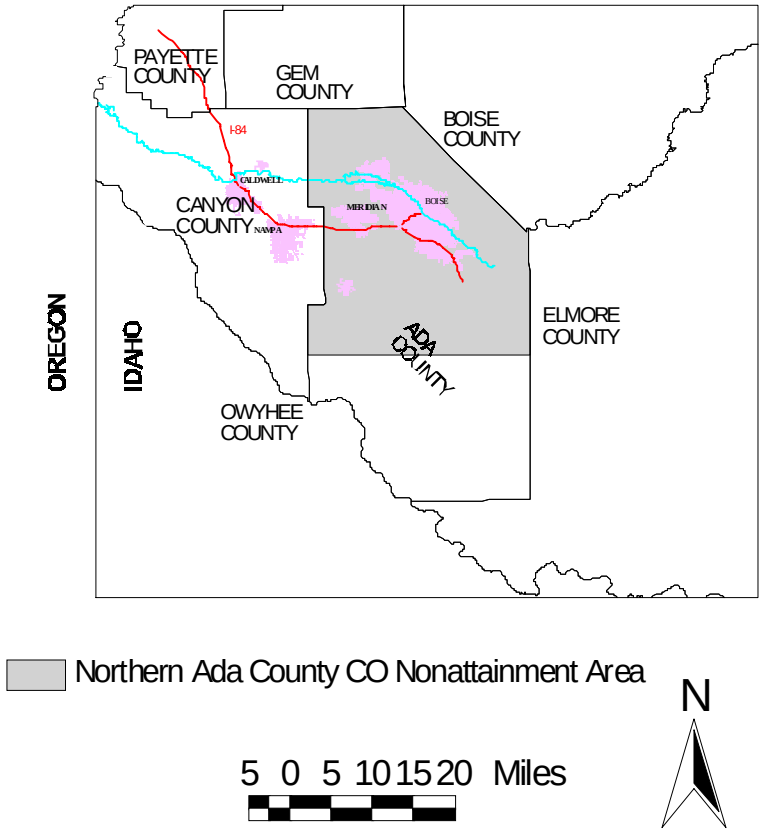
Idaho Division of Environmental Quality

Alison Miller	Regional Manager	373-0550	amiller@deq.state.id.us
Matt Stoll	Air Quality Monitoring & Emissions Manager	373-0502	mstoll@deq.state.id.us
Karin Hendrickson	area & nonroad sources	373-0550	khendric@deq.state.id.us
Jay Witt	industrial point sources, industrial area sources, & nonroad sources	373-0502	jwitt@deq.state.id.us
Val Bohdan	quality assurance	373-0502	vbohdan@deq.state.id.us

C. Geographic Area

The geographic region covered in this supplemental emissions inventory includes all of Canyon County. Canyon County is located to the west of Ada County and the carbon monoxide nonattainment area. Both counties are located in what is known as the Treasure Valley. Two sizable population/industrial centers (Nampa and Caldwell) are located in Canyon County.

Canyon County is bounded to the south by Owyhee County and the Owyhee Mountains, to the north by Payette and Gem Counties, to the west by the Snake River (the border between Idaho and Oregon), and to the east by Ada County, which contains the carbon monoxide nonattainment area. A low mountain range, the Boise Front, blocks the northern movement of air and pollution between Canyon County and its northern neighbors. Outside of the two population/industrial centers, the land is scarcely populated and is either used for agricultural purposes or managed by federal agencies such as the Bureau of Land Management. Figure 1 displays Canyon County's location relative to the non attainment area.


PAYETTE COUNTY
GEM COUNTY
BOISE COUNTY
I-84
CALDWELL
CANYON COUNTY
NAMPA
MERIDIAN
BOISE
ELMORE COUNTY
ADA COUNTY
OREGON
IDAHO
OWYHEE COUNTY
Northern Ada County CO Nonattainment Area
5 0 5 10 15 20 Miles
N

D. Document Organization

This document presents the base and future year emissions estimates for Canyon County's point, area, nonroad mobile, and on-road mobile sources, and provides details of the methods and data used to develop this emissions inventory supplement. This document is organized as follows:

Section I: presents the objectives of the inventory development, identifies the geographical coverage of the inventory, and lists the principal contacts for the inventory development.

Section II: presents a summary of estimated emissions.

Section III: describes the methods and data used to develop the point source emissions estimates

Section IV: describes the methods and data used to develop the area sources emissions estimates

Section V: describes the methods and data used to develop nonroad mobile source emissions estimates

Section VI: describes the methods and data used to develop on-road mobile source emissions estimates

Section VII: documents the quality assurance procedures which were performed.

Section VIII: lists the reference documents.

II. EMISSIONS SUMMARY

Table II-1 presents total annual emissions and average winter day emissions estimates. Major industrial point sources located in Canyon County are already accounted for in the Ada County Emissions Inventory, and are not included in this inventory. In the airshed, the time span between November and February (i.e., winter) is the typical carbon monoxide season. High ambient carbon monoxide concentrations are caused by stagnation events which are common during the winter months.

Table II-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions

Source	**1995 Annual Average**		**1995 Average Winter Day**	
	Tons/ Year	Metric Tonnes/ Year	Pounds/Day	Kilograms/ Day
Major Point (emit 100 tons per year or more of CO)	NA	NA	NA	NA
Area (includes minor point sources)	2,186.7	1,983.8	21,333	9,677
Nonroad Mobile	6,805.2	6,173.4	9,329	4,232
Onroad Mobile	27,023.5	24,511.1	148,073	67,155
Total	36,015.4	32,668.3	178,735	81,064

Due to proposed industrial expansion in Ada County, Boise Air Terminal expansion, and modifications to Ada County's vehicle inspection and maintenance (I/M) program, IDEQ decided to produce carbon monoxide emissions estimates for 2000 and 2010. Table II-2 gives the year 2000 carbon monoxide emissions estimates for Canyon County and Table II-3 displays the Canyon County estimates produced for 2010. New Ada County I/M program features are expected for 2000. The airport and industrial expansion in Ada County are expected to take place over the next several years.

Table II-2: Canyon County Annual and Average Winter Day Carbon Monoxide Emissions Projected for 2000

Source	2000 Annual Average		2000 Average Winter Day	
	Tons/ Year	Metric Tonnes/ Year	Pounds/Day	Kilograms/ Day
Major Point (emit 100 tons per year or more of CO)	NA	NA	NA	NA
Area (includes minor point sources)	2,186.7	2,524.7	25,813	11,709
Nonroad Mobile	8,732.5	7,921.9	15,062	6,833
On road Mobile	26,499.3	24,035.6	145,202	65,851
Total	37,418.5	34,482.2	186,077	84,392

Table II-3: Canyon County Annual and Average Winter Day Carbon Monoxide Emissions Projected for 2010

Source	2010 Annual Average		2010 Average Winter Day	
	Tons/ Year	Metric Tonnes/ Year	Pounds/Day	Kilograms/ Day
Major Point (emit 100 tons per year or more of CO)	NA	NA	NA	NA
Area (includes minor point sources)	3,528.2	3,200.9	33,364	15,135
Nonroad Mobile	10,864.5	9,855.9	19,031	8,633
On road Mobile	28,063.5	25,454.3	153,772	69,738
Total	42,455.7	38,511.1	206,167	93,506

III. POINT SOURCES

For both the Ada County and supplemental Canyon County inventories, point sources were defined as stationary, commercial/industrial operations emitting 100 tons per year (tpy) or more of carbon monoxide. A survey of industrial sources was conducted for the 1995 PM_{10} emissions inventory. This PM_{10} emission inventory and a copy of the industrial source survey are supplied in the Appendices of the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory*.

For the Ada and Canyon County emissions inventories, the list of possible point sources was compiled from the industrial source portion of the 1995 PM_{10} emissions inventory[1]. The list for the 1995 PM_{10} emissions inventory was compiled from three primary sources: IDEQ's air pollution source/fee tracking database, the American Business Listings proprietary database, and IDEQ's industrial source mailing list. Facilities on these lists were asked to complete a PM10, NOx, SOx, and ammonia emissions survey. Based on the results of these surveys, 59 sources in Ada and Canyon Counties were included as industrial point sources in the 1995 PM10 emissions inventory, while the remaining smaller sources were included in the area source portion of the 1995 PM10 emissions inventory.

Because the 1995 PM_{10} emissions inventory industrial source list was not specifically designed to include carbon monoxide sources, it was checked against a list of carbon monoxide emitting facilities from IDEQ's air pollution source/fee tracking database. This check assured that no significant stationary carbon monoxide point sources were omitted from the inventory. Stationary sources located in Boise, Elmore, and Gem Counties were omitted from the list, due to topographic impediments to air pollutant transport.

Activity data from the 1995 PM_{10} emissions inventory surveys completed by the 59 industrial point sources were used with AP-42 (fifth edition)[2] emissions factors to identify facilities in and around the nonattainment area that could possibly emit 100 tpy or more of carbon monoxide. This analysis identified no major point sources with the Ada County nonattainment area, and one major point source in Canyon County. However, this source was within 25 miles of the nonattainment area, and was therefore included in the Ada County inventory. To avoid double counting the emissions from this source, it is not included in this supplemental inventory.

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[1] *Development of Base and Future Year Emission Inventories for Industrial Sources for the Northern Ada County PM_{10} Nonattainment Area*, IDEQ, 1998. See Appendix A.

[2] *Compilation of Air Pollutant Emissions Factors*, EPA fifth edition.

IV. AREA SOURCES

A. Introduction

Emissions from Canyon County area sources were estimated by multiplying an emissions factor by activity data. Emissions factors were obtained from EPA's *Compilation of Air Pollution Emission Factors, Volume I* (AP-42) or from the *California Air Resources Board Emission Inventory Procedural Manual, Volume III: Methods for Assessing Area Sources*, 1996 (CARB).

For a number of area source categories general activity data were based on the extensive data collection conducted for the 1995 PM_{10} emissions inventory. Activity data for area sources not included in the PM_{10} emissions inventory were gathered specifically for the Ada County carbon monoxide inventory and this supplemental inventory.

Table IV.A-1 displays the specific area source categories excluded from the carbon monoxide emissions inventory. Emissions from barbecues and wildfires during the winter months are also assumed to be negligible or nonexistent. Therefore average winter day emissions calculations for these sources for were prepared using seasonal adjustment factors equal to zero. 1995 carbon monoxide emissions estimates were projected into future years based on socioeconomic or demographic data provided by APA.

Table IV.A-1: Area Source Categories Excluded From the Inventory

Source Excluded	Justification for Excluding
orchard heating	Fuel used for this activity were assumed to be included in the fuel sales data of commercial/institutional sources.
sewage sludge incineration	not conducted in Canyon County
automobile body incineration	not conducted in Canyon County
slash burning	not conducted in Canyon County
Incinerators	no data available
prescribed burning	not conducted in Canyon County
recycle, recovery of primary metals	not conducted in Canyon County

B. Emissions Summary

Table IV.B-1 presents the 1995 annual carbon monoxide emissions estimates and average winter day carbon monoxide emissions estimates. Winter day emissions for all area sources except industrial area sources are based on a four-month season (November through February). Industrial area sources are based on a three month (December through February) winter season because seasonal throughput information obtained via the 1995 PM_{10} industrial source emissions survey was given per three month season.

Table IV.B-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions from Area Sources

Source	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Residential Wood Fireplaces	409.6	371.6	6,733	3,054
Residential Wood Stoves	610.4	553.8	8,261	3,747
Residential Barbecues/Fire Pits	6.4	5.8	0	0
Total Residential Wood	1,026.4	931.2	14,994	6,801
Residential Natural Gas	18.4	16.7	141	64
Residential Propane	0.4	0.3	3	1
Residential Fuel Oil	4.2	3.8	21	10
Residential Coal	1.2	1.1	14	7
Total Residential Fuel (less wood)	24.2	21.9	179	82
Commercial Natural Gas	33.1	30.0	254	115
Commercial Propane	0.6	0.6	5	2
Commercial Fuel Oil	2.5	2.3	13	6
Commercial Coal	NA	NA	NA	NA
Total Commercial Fuel Use	36.2	32.9	272	123
Industrial Natural Gas	123.7	158.9	817	371
Industrial Propane	0.4	0.3	3	1
Industrial Fuel Oil	17.3	15.7	60	27
Industrial Diesel	1.2	1.1	6	3
Total Industrial Fuel Use	142.6	129.4	886	402
Open Burning	880.2	798.5	4,823	2,188
Structural Fires	31.0	28.1	170	77
Vehicle Fires	1.6	1.4	9	4
Wild Fires	14.0	12.7	0	0
Other Unplanned Fires	30.5	27.7	0	0
Total Other Burning	957.3	868.4	5,002	2,269
Total Area Sources	2,186.7	1,983.8	21,333	9,677

C. Methods and Data

1. Residential Wood Combustion

Table IV.C.1-1 provides annual average and average winter day emissions estimates from fireplaces, barbecues/firepits, and wood stoves. Conventional wood stoves, catalytic wood stoves, noncatalytic wood stoves, certified pellet stoves, exempt pellet stoves, and masonry heaters are all included in the general wood stove category. Emissions were calculated using AP-42 emissions factors. Activity data for residential wood combustion is based upon data gathered in an extensive survey that was conducted for the 1995 PM_{10} emissions inventory. Because wood stoves include many different groups of devices, a composite wood stove emissions factor was calculated using specific AP-42 emissions factors.

Table IV.C.1-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions from Residential Wood Combustion

Device	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Fireplaces	409.6	371.6	6,733	3,054
Wood Stoves (all)	610.4	553.8	8,261	3,747
Barbeques/Fire Pits	6.4	5.8	0	0
Total	1,026.4	931.2	14,994	6,801

a. Residential Wood Combustion Activity Data

An extensive survey was conducted in April 1997 for the 1995 PM_{10} emissions inventory to quantify residential wood burning in Ada and Canyon Counties. The study was conducted by an independent firm, and covered both counties using a telephone survey. The precision level for the survey was determined to be ± 15% for Canyon County. The study analyzed the use of: barbeques, fireplaces, conventional wood stoves, noncatalytic stoves, catalytic stoves, certified and exempt pellet stoves, and masonry heaters. This study also provided an estimate on: the types of wood burned, the number of residential wood burning devices, and device use patterns for the counties in 1995. Appendix C of the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory* provides more information on the Residential Wood Combustion Survey conducted for the 1995 PM_{10} emissions inventory.

Survey analysis assumed that per-house usage patterns were similar over the short (2 year) time span between the emissions inventory year (1995) and the survey data collection year (1997). The survey was designed to emphasize typical usage patterns rather than patterns for a specific time period. The amount of wood consumed by each type of residential wood burning device in each county was calculated using Equation IV.C.1.a-1. Table IV.C.1.a-1 displays the activity data used to calculate the amount of wood burned.

Equation IV.C.1.a-1:

The amount of wood consumed per device was estimated using the following equation[3]:

$$W = N \times L \times U \times D \times V \times C$$

Where:

W = Weight of wood (tons/year)
N = Number of devices
L = Average number of logs per use
U = Average number of uses per year
D = Average density of wood (lb/ft^3)
V =Average volume of a log (ft^3/log)
C = Conversion factor from pounds to tons (1 ton = 2000 pounds)

[3] Taken from the 1995 PM_{10} emissions inventory.

Table IV.C.1.a-1: Summary of Activity Data Used to Calculate Carbon Monoxide Emissions Estimates from Residential Wood Burning[4]

Device Type	Number of Households Using Device	Average Number Logs per Use	Average Uses per Year	Average Density of Wood Used (lbs/ft^3)	Average Log Volume (ft3 /log)	Tons Burned per Year
Fireplace	2,511	8.75	46.93	37.0	0.17	3,242.8
Wood Stove	6,278	4.13	78.57	37.1	0.17	6,424.2
Barbeque/Firepit	753	3.83	5.57	37.0	0.17	50.5

b. Residential Wood Combustion Emissions Factors

Table IV.C.1.b-1 supplies the emissions factors used to estimate carbon monoxide emissions from residential wood combustion. No emissions factors were available for wood burning barbeques or firepits. Therefore, the AP-42 emissions factor for fireplaces was used as a surrogate factor. This assumption is based on the similarities between the two classes of devices.

Table IV.C.1.b-1: Residential Wood Stove, Fireplace and Barbeque/Firepit Carbon Monoxide Emissions Factors

Device Type	**Emissions Factor** (lb. CO/ton fuel)[a]
Wood Stove	166.0
Fireplace	252.6
Barbeque/Firepit[b]	252.6

a Either taken directly from AP-42 Table 1.9-2 or calculated using factors using factors from AP-42 Table 1.9-2.

b Used AP-42 emissions factor for fireplaces as surrogate emissions factor.

Because many different types of wood burning devices can be classified as wood stoves, a composite emissions factor was calculated. Table IV.C.1.b-2 presents the data used to calculate the composite wood stove emissions factor. It was derived by multiplying the appropriate AP-42 factor for type of wood stove by the population percentage of the device type in Canyon County, as determined by the survey.

4 Activity data obtained from the wood combustion survey (Appendix). The data is also listed in the 1995 PM_{10} emissions inventory (Appendix A).

Table IV.C.1.b-2: Calculation of Composite Residential Wood Stove Emissions Factor

	Wood Stove					Masonry Heater	
	Conventional	Catalytic	Noncatalytic	Certified	Exempt		
Emissions Factor[a] (lb. CO/ton fuel)	230.8	104.4	140.8	39.4	52.2	149.0	NA
% Use in Ada County[b]	63.7%	10.0%	15.8%	2.65%	2.65%	5.3%	NA
Weighted Emissions Factor (lb. CO/ton fuel)	147.0	10.4	22.2	1.0	1.4	7.9	189.9

[a] Taken from AP-42 Table 1.10-2
[b] Taken from 1995 PM_{10} emissions inventory.

c. Residential Wood Stove Combustion Emissions Calculations
Carbon monoxide emissions were estimated using Equation IV.C.1.c-1. Emissions estimates were converted from pounds per year (lb/year) to tons per year (tpy) and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to pounds of carbon monoxide per winter day (lbs/day) and kilograms per winter day (kg/day).

Equation IV.C.1.c-1

The carbon monoxide emissions per device were estimated using the following equation:

$$E = F \times W$$

Where:
E = CO Emissions (lb/year)
F = Emissions factor (lbs. CO/ton fuel)
W = Weight of wood (tons/year)

2. Other Stationary Source Fuel Combustion
Table IV.C.2-1 illustrates carbon monoxide emission estimates from residential, commercial, and industrial source fuel combustion. Emissions were calculated using activity data obtained for the 1995 PM_{10} emissions inventory. Activity data was combined with AP-42 emissions factors to produce these emissions estimates.

Table IV.C.2-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions from Stationary Fuel Combustion Sources

Fuel Category	**Annual Average**		**Average Winter Day**	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Residential Natural Gas	18.4	16.7	141	64
Residential Propane	0.4	0.3	3	1
Residential Fuel Oil	4.2	3.8	21	10
Residential Coal	1.2	1.1	14	7
Total Residential Fuel	24.2	21.9	179	82
Commercial Natural Gas	33.1	30.0	254	115
Commercial Propane	0.6	0.6	5	2
Commercial Fuel Oil	2.5	2.3	13	6
Commercial Coal	NA	NA	NA	NA
Total Commercial Fuel Use	36.2	32.9	272	123
Industrial Natural Gas	123.7	112.2	817	371
Industrial Propane	0.4	0.3	3	1
Industrial Fuel Oil	17.3	15.7	60	27
Industrial Diesel	1.2	1.1	6	3
Total Industrial Fuel Use	142.6	129.3	886	402
Total Fuel Combustion	203.0	184.1	1,337	607

a. Stationary Source Fuel Combustion Activity Data

The 1995 PM_{10} emissions inventory initially identified local fuel dealers through telephone listings included in the regional yellow pages directory. To ensure completeness, the resulting list was reviewed by IDEQ personnel and modified to include additional fuel dealers. The listed dealers were then surveyed to collect 1995 monthly fuel sales data by fuel type and by end-use sector (industrial, commercial/institutional, and residential). The survey also requested fuel sales data by county. Sales data which were not broken out by county in the submitted fuel survey form were apportioned to Ada and Canyon counties based on APA 1995 population data. Fuels that were sold in the area, but then shipped outside of Ada and Canyon Counties were assumed to be excluded from the sales data provided by the survey. Fuels were assumed to be used within the area and during the month in which they were sold. For the one dealer that did not respond to the fuel sales survey, sales data were imputed by assuming sales were similar to those of other dealers of comparable size. Appendix C of the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory* presents the final list of fuel dealers used in this study, and includes a copy of the survey form and an accompanying information request letter used for the 1995 PM_{10} emissions inventory.

Carbon monoxide emissions from industrial area sources (i.e., industrial sources that emitted less than 100 tpy carbon monoxide) were included in the stationary source fuel combustion portion of the emissions inventory. To avoid double counting emissions, industrial fuel sales data were compared to estimates of natural gas use obtained from the PM_{10} industrial source

questionnaires (Section III). The fuel use estimates obtained from the PM_{10} industrial source questionnaires were greater than the fuel sales data indicated. This discrepency was accounted for by reassigning some fuel sales from commercial/institutional sources to industrial sources, on the assumption that the fuel dealers had misassigned some of the total fuel sales. Therefore, the commercial/institutional fuel sales data were adjusted so they would reconcile with the industrial source fuel use data obtained from the PM_{10} industrial source questionnaires. Also, because Amalgamated Sugar is located in Canyon County, Canyon County fuel sales data included fuel sold to Amalgamated. Amalgamated's carbon monoxide emissions are included in the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory*. Therefore, Amalgamated's fuel use was removed from the Canyon County fuel sales data before it was adjusted.

Similarly, for industrial diesel/fuel oil use activity data, the fuel sales data was adjusted by subtracting industrial fuel use estimates (obtained from the PM_{10} industrial source questionnaires) from the sales data. Table IV.C.2.a-1 displays the estimated amount of fuel used by industrial, commercial/institutional, and residential area sources.

Table IV.C.2.a-1: Activity Data Used to Calculate 1995 Canyon County Carbon Monoxide Emissions from Stationary Source Fuel Combustion

Fuel Type	End Use	1995 Annual Fuel Use
Natural Gas (10^6 ft^3)	Residential	922.1
	Commercial	787.3
	Industriala [b]	2,944.5
Propane (10^3 gallons)	Residential	379.2
	Commercial	649.1
	Industrial	225.1
Diesel/Fuel Oil (10^3 gallons)	Residential	1,686.5
	Commercial	1,013.0
	Industrial c	496.8
	Industrial engines <600 hpd	20.6
	Industrial engines >600 hpd	275.0
Coal (tons)	Residential	411.7
	Commercial	0

a The natural gas use data from 1995 PM_{10} emissions inventory industrial source questionnaire were larger than what was accounted for in industrial sales data. The difference was deducted from the natural gas sales data for nonspecific industrial sources.
[b] Natural gas use data from 1995 PM_{10} emissions inventory industrial source questionnaires. Includes nonspecific industrial fuel use.

[c] Diesel/Fuel Oil use from sales data attributed to industrial use, minus diesel/fuel oil use accounted for in the industrial source questionnaires.
[d] Diesel/Fuel Oil use data from 1995 PM_{10} emissions inventory industrial source questionnaires.

b. Stationary Source Fuel Combustion Emissions Factors
AP-42 emissions factors were used to estimate carbon monoxide emissions from industrial, commercial/institutional, and residential fuel combustion sources. However, no AP-42 emissions factor was available for residential propane combustion. Based on the assumption that commercial and residential propane combustion equipment have similar combustion properties, the AP-42 emissions factor for commercial boilers was used as a surrogate emissions factor. Specific information on the firing configuration of commercial/institutional and residential coal combustion equipment was also not available. Therefore, the AP-42 emissions factor for the overfeed stoker configuration, the firing configuration with the most conservative carbon monoxide emissions factor, was chosen as a surrogate. Table IV.C.2.b-1 lists the AP-42 emissions factors used in estimating emission.

Table IV.C.2.b-1: Stationary Source Fuel Combustion Carbon Monoxide Emissions Factors

Fuel Type[a]	Residential	Commercial	Industrial
Natural Gas (lb. CO/ 10^6 ft^3 fuel)	40.0	84.0	84.0
Propane (lb. CO/10^3 gal fuel)	1.9	1.9	3.2
Diesel (lb. CO/10^3 gal fuel)	***NA***	***NA***	
Industrial Engines			.13
Large Stationary			.12
Fuel Oil (lb. CO/10^3 gal fuel)	5.0	5.0	5.0
Coal (lb. CO/ton fuel)	6.0	6.0	***NA***

[a] Emissions factors: Natural Gas, AP-42 Table 1.4-2; Propane, AP-42 Table 1.5-2; Industrial Engines, AP-42 Table 3.3-1 (converted to lb. CO/10^3 gal fuel); Large Stationary Engines, AP-42 Table 3.4-1 (converted to lb. CO/10^3 gal fuel); Fuel Oil, AP-42 Table 1.3-2; Coal, AP-42 Table 1.1-2 (Overfeed Stoker).

c. Stationary Source Fuel Combustion Emissions Calculations
Carbon monoxide emissions were estimated using Equation IV.C.2.c-1. Emissions estimates were converted from pounds per year (lb/year) to tons per year (tpy) and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to pounds of carbon monoxide per winter day (lbs/day) and kilograms per winter day (kg/day).

Equation IV.C.2.c-1

The carbon monoxide emissions per fuel type were estimated using the following equation:

$$E = F \times U$$

Where:

E = CO Emissions (lb/year)
F = Emissions factor (lbs. CO/amount of fuel)
U = Fuel Use (amount of fuel used/year)

3. Open Burning

Table IV.C.3-1 presents approximate emissions from open burning of yard waste, ditch clearing, and agricultural residue clearing. Industrial facilities reported the mass of material burned in 1995 for the 1995 PM_{10} emissions inventory. Other open burning emissions were calculated based on the number of open burning permits issued. AP-42 emissions factors were applied to calculate carbon monoxide emissions. Because the type of material consumed in residential burning varies, a composite emissions factor was developed for this category of burning.

Table IV.C.3-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions from Open Burning

Open Burning	**Annual Average**		**Average Winter Day**	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
Agricultural	849.4	770.6	4,654	2,111
Ditch	4.1	3.7	23	10
Residential	26.5	24.1	145	66
Industrial	0.2	0.2	1	0.4
Total	880.2	798.6	4,823	2,187

a. Open Burning Activity Data

In Canyon County, a permit is not required to burn tree leaves, gardening waste, or yard trimming, to conduct weed control fires along ditch banks or canals, and for clearing of crop residues. However, Canyon County does issue permits for open burning. Permits are issued by local fire districts, and are valid for multiple uses through a one year period. Because both the PM_{10} emissions inventory and the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory* used permit data to estimate emissions from open burning, permit data were also used to estimate carbon monoxide emissions from open burning in Canyon County, as they are the best form of local activity data available.

In a survey conducted for the 1995 PM_{10} emissions inventory, each fire district was contacted to determine the number of open burning permits issued in 1995. For some agencies, 1995 numbers were extrapolated from data on 1996 or 1997. None of the fire districts kept records of the types of burning conducted with each permit. However, based on the information and recommendations from the fire districts, it was assumed that 15% of open burning permits issued in Canyon County were for agricultural field clearing, 5% were issued for ditch or fence clearing, and 80% were issued for residential yard waste burning. Table IV.C.3.a-1 summarizes the permit activity/assumptions used to estimate emissions from open burning in Canyon County in 1995.

Based on information and recommendations from fire districts, the following assumptions were made: the average agricultural burn is approximately 20 acres; the average acreage burned for ditch clearing is 0.25 acres; and a conservative assumption of 500 pounds (0.25 tons) per year of waste burned for each residential burning permit was used.

Table IV.C.3.a-1: Estimated Number of Open Burning Permits Issued in Canyon County in 1995

Permit Type	Total Number of Permits issued in Canyon County	Assumed Percent by Category	Estimated Number of Permits by Type
Agricultural	2,423	15%	363
Ditch Clearing		5%	121
Residential Waste		80%	1,938

Table IV.C.3.a-2 displays estimates of tons of fuel consumed by open burning produced using Equation IV.C.3.a-1 (for residential wastes) or Equation IV.C.3.a-2 (for agricultural burning and ditch clearing)[5]. To estimate the amount of material burned, the AP-42 fuel loading factor for unspecified weeds (3.2 tons/acre)[6] was used for ditch clearing. More information on all of the data and assumptions used to estimate open burning activity is located in the 1995 PM_{10} emissions inventory.

Equation IV.C.3.a-1

The amount of residential yard wastes openly (in tons) burned were calculated using the following equation:

$$M = N \times P \times T$$

Where:

M = Mass of fuel burned (ton/ year)
N = Total number of permits issued in 1995
P = Percent of permits issued for residential waste burning
T = Tons burned per permit per year

[5] Equations from 1995 PM_{10} Emissions Inventory.

[6] AP-42 Table 2.5-5

Equation IV.C.3.a-2

The tons of material burned during agricultural open burning and ditch clearing were calculated using the following equation:

$$M = N \times P \times A \times T$$

Where:

M = Mass of fuel burned (ton/ year)
N = Total number of permits issued
P = Percent of permits issued for agricultural burning or ditch clearing
A = Average number of acres burned in 1995 per permit
T = AP-42 Fuel Loading Factor (tons/acre)

Table IV.C.3.a-2: Estimated Tons of Fuel Consumed in Open Burning in Canyon County in 1995

Type of Permit	Number of Permits	Acres per Permit	Tons Fuel per Acre/Permit	Tons Burned
Agricultural	363	20.0	2.0[a]	14,520.0
Ditch Clearing	121	0.25	3.2[b]	96.8
Residential Waste	1,938	**NA**	0.25[c]	484.5

[a]A P-42 Table 2.5-5 Unspecified Field Crops
[b]AP-42 Table 2.5-5 Unspecified Weeds
[c]From 1995 PM_{10} emissions inventory, assumed 500 lbs./permit/year.

b. Open Burning Emissions Factors

It was assumed that residential wastes disposed via open burning consisted of yard wastes and other plant materials[7]. The AP-42 emissions factors[8] from four different types of yard wastes were averaged, and the resulting average emissions factor used to estimate open burning emissions for residential open burning. Table IV.C.3.b-1 details the creation of the composite emissions factor for the open burning of residential wastes.

[7] Assumption from 1995 PM_{10} emissions inventory.

[8] AP-42 Section 2.5 Tables2.5-5 and 2.5-6.

Table IV.C.3.b-1: Calculation of Composite Carbon Monoxide Emissions Factor for Residential Burning

Substance	**Emissions Factor** (lb. CO/ ton waste)
Unspecified Leaves[a]	112.0
Grasses[b]	101.0
Unspecified Weeds[b]	85.0
Unspecified Forest Residueb	140.0
Average Factor	**109.5**

a From AP-42 Table 2.5-6
b From AP-42 Table 2.5-5

AP-42 emissions factors for unspecified field crops and unspecified weeds were used to estimate carbon monoxide emissions from agricultural burning and ditch burning, respectively. Table IV.C.3.b-2 lists the AP-42 emissions factors used to estimate emissions for agricultural open burning and ditch clearing.

Table IV.C.3.b-2: Open Burning Carbon Monoxide Emissions Factors

Burning Type	**Emissions Factor** (lb. CO/ ton fuel)
Agricultural Burning[a]	117.0
Ditch Clearing[b]	85.0

a AP-42 Table 2.5.5 Unspecified Field Crops
b AP-42 Table 2.5-5 Unspecified Weeds

c. Open Burning Emissions Calculations

Carbon monoxide emissions were estimated with Equation IV.C.3.c-1. Emissions estimates were converted from lb/year to tpy and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to lbs./ winter day and kg/winter day.

Equation IV.C.3.c-1

The carbon monoxide emissions for open burning were estimated using the following equation:

$$E = F \times M$$

Where:

E = CO Emissions (lbs. CO/year)
F = Emissions factor (lbs. CO/ton fuel)
M = Mass of fuel burned (ton/year)

4. Other Combustion

Table IV.C.4-1 gives 1995 emissions estimates from structural fires, vehicle fires, wildland fires, and other unplanned fires. In a survey conducted for the 1995 PM_{10} emissions inventory, each fire district was contacted to determine the number of structural, vehicle, and other unplanned fires that occurred in 1995. Emissions factors from AP-42 and the California Air Resources Board (CARB, 1996) were applied to produce the carbon monoxide emissions estimates.

Table IV.C.4-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions from Other Combustion

Other Burning	**Annual Average**		**Average Winter Day**	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
Structural Fires	31.0	28.1	170	77
Vehicle Fires	1.6	1.4	9	4
Wildland Fires	14.0	12.7	0	0
Other Unplanned Fires	30.5	27.7	0	0
Total	77.1	69.9	179	81

a. Other Combustion Activity Data

The number of structural fires, vehicle fires, and other unplanned fires were obtained from local fire departments and agencies for the 1995 PM_{10} emissions inventory. The other unplanned fire category includes all outside fires occurring in such places as open lands, vacant lots, landfills, roadways, waterways, and construction sites. Based on information provided by fire control agencies, it was assumed that 0.5 acres burned per fire in this category. For the 1995 PM10 emissions inventory the U.S. Bureau of Land Management provided acreage burned by wildfires in 1995. Equation IV.C.4.1-a and Equation IV.C.4.a-2 were used to calculate the amount of fuel consumed in 1995 by wild fires and other unplanned fires, respectively. Both other unplanned and wildfire categories used the AP-42 fuel loading factor for unspecified weeds[9]. Table IV.C.4.a-1 supplies the fire activity data used to estimate carbon monoxide emissions.

Equation IV.C.4.a-1

The tons of material burned during wildfires were calculated using the following equation:

$$M = A \times T$$

Where:

M = Mass of fuel burned (ton/ year)
A = Acres burned 1995
T = AP-42 Fuel Loading Factor (tons/acre)

[9] 3.2 tons/acre, AP-42 Table 2.5-5

Equation IV.C.4.a-2

The tons of material burned during other unplanned burning were calculated using the following equation:

$$M = N \times A \times T$$

Where:

M = Mass of fuel burned (ton/ year)
N = Total number of fires
A = Average number of acres burned per fire (0.5 acres)
T = AP-42 Fuel Loading Factor (tons/acre)

Table IV.C.4.a-1: 1995 Canyon County Fire Activity Data

Source	Emissions Factor
Structural Fires[a]	189 fires
Vehicle Fires[a]	147 fires
Forest & Range Wild Fires[b]	329.6 tons of fuel
Other Unplanned Fires[a]	718.4 tons of fuel

a Data reported by local fire agencies for the 1995 PM_{10} emissions inventory.
b Data reported by U.S. Department of the Interior, Bureau of Land Management, for the 1995 PM_{10} emissions inventory.

b. Emissions Factors for Other Combustion

AP-42 emissions factors were used to estimate carbon monoxide emissions from wild fires and other unplanned fires. CARB emissions factors were used to estimate emissions from structural fires and vehicle fires because no AP-42 factors were available[10]. Table IV.C.4.b-1 lists the emissions factors used for estimating carbon monoxide emissions.

[10] *Emission Inventory Procedural Manual, Volume III, Methods for Assessing Area Source Emissions* (CARB, 1995)

Table IV.C.4.b-1: Other Combustion Carbon Monoxide Emissions Factors

Source	Emissions Factor
Structural Fires[a]	327.6 lb. CO/ fire
Vehicle Fires[a]	21.25 lb. CO/fire
Wildland Fires[b]	85.0 lb. CO/ton fuel
Other Unplanned Fires[b]	85.0 lb. CO/ton fuel

a CARB Document: Structural Fires Table 17.4-1, Vehicle Fires Table 7.14-3
[b] AP-42 Table 2.5-5 (Unspecified Weeds)

c. Other Combustion Emissions Calculations

Carbon monoxide emissions were approximated using Equation IV.C.4.c-1. Emissions estimates were converted from lb/year to tpy and metric tons per year. These annual emissions estimates were then seasonally adjusted (Section IV.D) to lbs./winter day and kg/winter day.

Equation IV.C.4.c-1

The carbon monoxide emissions from other combustion sources were estimated using the following equation:

$$E = F \times A$$

Where:

E = CO Emissions (lbs. CO/year)
F = Emissions factor (lbs. CO/ton fuel or lbs. CO /fire)
A = 1995 Activity Data (either in ton/year or fires/year)

D. Seasonal Adjustment

Nonindustrial area source emissions were seasonally adjusted from annual emissions to average winter day emissions by first converting annual average estimates to average daily emissions (dividing by 365 days/year), and then multiplying by a seasonal adjustment factor. The derivation of these factors is presented in Appendix C of the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory*. Industrial sources included in the area source inventory were seasonally adjusted using Equation IV.D-1 and seasonal operating factors obtained in the industrial source questionnaires collected for the 1995 PM_{10} emissions inventory.

Equation IV.D-1[11]

[11] From *Procedures for the Preparation of Emissions Inventories for Carbon Monoxide and Precursors of Ozone, Volume I: General Guidance for Stationary Sources*; EPA 1991.

The carbon monoxide emissions from industrial area sources were seasonally adjusted using the following equation:

$$E_{WD} = E_A \times (P_W / 25\%) \times D_w \times 52$$

Where:

EWD = Winter Day CO Emissions (lbs. CO/winter day)
E_A *= Annual CO Emissions (lbs. CO/year)*
P_W *= Percentage of 3-Month Winter Throughput (in %)*
D_w *= Winter Season Operation Schedule (in days/week)*

Table IV.D-1: Seasonal Adjustment Factors Used to Estimate Average Winter Day Emissions for Canyon County

Source	Seasonal Adjustment Factor	Data Source
Fireplaces	3.00	1
Wood stoves	2.47	1
Barbeques/Firepits	0.00	1
Natural Gas Combustion - Residential & Commercial	1.40	2
Natural Gas Combustion - Industrial	varies	3
Diesel/Fuel Oil Combustion - Residential & Commercial	0.91	2
Diesel/Fuel Oil Combustion - Industrial	varies	3
Coal Combustion	2.14	2
Propane Combustion	1.40	2
Structural Fires	1.00	4
Vehicle Fires	1.00	5
Wildland Fires	0.00	5
Other Unplanned Fires	0.00	5
Open Burning	1.00	5

Data Source	
1	1997 Wood Combustion Survey, conducted for 1995 PM_{10} emissions inventory
2	Monthly sales data, reported by local fuel dealers.
3	Calculated for individual industrial sources using Equation IV.D-1. See Appendix C
4	Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone, Volume I: General Guidance for Stationary Sources.
5	IDEQ judgement, based on information from fire control agencies.

E. Projection to Future Years

The 1995 area source emissions were projected to 2000 and 2010 using the latest population and socioeconomic projections provided by APA and presented in Table IV.E-1[12]. For each

[12] From *1997 Demographic Report for Ada and Canyon Counties*, APA Report No. 09-97, June 1997. Data can also be found in the PM_{10} emissions inventory.

category, an appropriate growth indicator was chosen. Table IV.E-2 lists the area source categories and the specific demographic used to project future year emissions. Emissions projections were calculated by multiplying the 1995 annual and winter day emissions by the ratio between the appropriate demographic factor for the future year and the factor for 1995. Table IV.E-3 displays the projected annual area source carbon monoxide emissions for 1995, 2000, and 2010, while Table IV.E-4 gives the winter day emissions estimates for 1995, 2000, and 2010.

Table IV.E-1: Canyon County Demographic Data

	1995	**2000**	**2010**
households	37,668	45,777	59,760
nonretail employment	19,441	47,437	56,501
retail employment	5,186	9,965	13,830
population	109,123	125,429	156,572

Table IV.E-2: Growth Indicators Used to Project Area Source Carbon Monoxide Emissions to Future Years in Canyon County

	Residential	**Commercial**	**Industrial**
Wood Combustion	Households	NA	NA
Natural Gas Combustion	Households	Retail Employment	Nonretail Employment
Fuel Oil Combustion	Households	Retail Employment	Nonretail Employment
Coal Combustion	Households	Retail Employment	NA
Diesel Combustion	NA	NA	Nonretail Employment
Propane Combustion	Households	Retail Employment	Nonretail Employment
Structural Fires	Households		
Vehicle Fires	Population		
Other Unplanned Fires	Constant-No growth anticipated[a]		
Wildland Fires	Constant-No growth anticipated[a]		
Open Burning	Population		

[a] Based on IDEQ engineering judgement.

Table IV.E-3: Base Year & Projected Annual Carbon Monoxide Emissions for Canyon County

Source	Tons per Year			Metric Tonnes per Year		
	1995	2000	2010	1995	2000	2010
Residential Wood Fireplaces	409.6	497.7	649.8	371.6	451.6	589.5
Residential Wood Stoves	610.4	741.8	968.4	553.8	673.0	878.5
Residential Barbeques/Fire Pits	6.4	7.8	10.1	5.8	7.0	9.2
Total Residential Wood	1,026.4	1,247.3	1,628.3	931.2	1,131.6	1,477.2
Residential Natural Gas	18.4	22.4	29.3	16.7	20.3	26.5
Residential Propane	0.4	0.4	0.6	0.3	0.4	0.5
Residential Fuel Oil	4.2	5.1	6.7	3.8	4.6	6.1
Residential Coal	1.2	1.5	2.0	1.1	1.4	1.8
Total Residential Fuel (less wood)	24.2	29.4	38.6	21.9	26.7	34.9
Commercial Natural Gas	33.1	63.5	88.2	30.0	57.6	80.0
Commercial Propane	0.6	1.2	1.6	0.6	1.1	1.5
Commercial Fuel Oil	2.5	4.9	6.8	2.3	4.4	6.1
Commercial Coal	NA	NA	NA	NA	NA	NA
Total Commercial Fuel Use	36.2	69.6	96.6	32.9	63.1	87.6
Industrial Natural Gas	123.7	301.8	359.4	112.2	273.8	326.1
Industrial Propane	0.4	0.9	1.0	0.3	0.8	0.9
Industrial Fuel Oil	17.3	35.0	41.7	15.7	31.8	37.9
Industrial Diesel	1.2	3.0	3.6	1.1	2.7	3.3
Total Industrial Fuel Use	142.6	340.7	405.7	129.3	309.1	368.2
Open Burning	880.2	1,012.0	1,263.2	798.5	918.1	1,146.0
Structural Fires	31.0	37.6	49.1	28.1	34.1	44.6
Vehicle Fires	1.6	1.8	2.2	1.4	1.6	2.0
Wild Fires	14.0	14.0	14.0	12.7	12.7	12.7
Other Unplanned Fires	30.5	30.5	30.5	27.7	27.7	27.7
Total Other Burning	957.3	83.9	1,359.0	868.4	994.2	1,233.0
Total Area Sources	2,186.7	2,782.9	3,528.2	1,983.8	2,524.7	3,200.9

Table IV.E-4: Base Year & Projected Average Winter Day Carbon Monoxide Emissions for Canyon County

Source	Pounds per Day			Kilograms per Day		
	1995	2000	2010	1995	2000	2010
Residential Wood Fireplaces	6,733	8,182	10,681	2,687	3,711	4,845
Residential Wood Stoves	8,261	10,040	13,106	3,717	4,554	5,945
Residential Barbeques/Fire Pits	0	0	0	0	0	0
Total Residential Wood	14,994	18,222	23,787	6,404	8,265	10,790
Residential Natural Gas	141	172	224	64	78	102
Residential Propane	3	3	4	1	2	2
Residential Fuel Oil	21	26	33	10	12	15
Residential Coal	14	18	23	7	8	10
Total Residential Fuel (less wood)	179	219	284	82	100	129
Commercial Natural Gas	254	487	676	115	221	307
Commercial Propane	5	9	13	2	4	6
Commercial Fuel Oil	13	24	34	6	11	15
Commercial Coal	NA	NA	NA	NA	NA	NA
Total Commercial Fuel Use	272	520	723	123	236	328
Industrial Natural Gas	817	996	1,250	371	452	567
Industrial Propane	3	7	8	1	3	4
Industrial Fuel Oil	60	73	91	27	33	41
Industrial Diesel	6	15	18	3	7	8
Total Industrial Fuel Use	886	1,091	1,367	402	495	620
Open Burning	4,823	5,545	6,922	2,188	2,515	3,140
Structural Fires	170	206	269	77	94	122
Vehicle Fires	9	10	12	4	4	6
Wild Fires	0	0	0	0	0	0
Other Unplanned Fires	0	0	0	0	0	0
Total Other Burning	5,002	5,761	7,203	2,269	2,613	3,268
Total Area Sources	20,458	25,813	33,364	9,280	11,709	15,135

V. NONROAD MOBILE SOURCES

A. Introduction

Emissions for nonroad mobile sources were estimated by combining an emissions factor with a measure of activity. Emissions factors used to estimate carbon monoxide emissions were taken from *Procedures for Emission Inventory Preparation: Volume IV Mobile Sources*, EPA, 1992. Some source activity data was gathered directly for this inventory. When specific activity data were not available, emissions were estimated by adjusting emissions data from the 1990 Provo-Orem Emissions Inventories conducted by the EPA for the *Nonroad Engine and Vehicle Emission Study - Report*, EPA 1991 (NEVES).

Section 4.2.3 of *Procedures for Emissions Inventory Preparation, Volume IV: Mobile Sources*, "Options for Areas Without EPA Provided Inventories," recommends that in the absence of specific activity data, areas "choose one of the 33 areas (for which inventories were prepared), which is similar in terms of climate and economic activity, so that the emissions inventories can be produced by applying the ratio of the populations for the two areas . . . " Of the 33 areas studied in NEVES, Provo-Orem, Utah was the area chosen to base Ada and Canyon Counties' nonroad carbon monoxide emissions estimates. This decision was based on similarities in size, location, elevation, and climate. To scale the 1990 Provo/Orem emissions estimates to 1995, the ratio of the 1990 population of Canyon County to the 1990 population of Provo/Orem was applied to the NEVES 1990 emissions estimates, and then projected to 1995 using a growth factor based on the Canyon County population growth between 1990 and 1995.

Table V.A-1 lists the sources excluded from the nonroad portion of the supplemental inventory and includes a brief justification. Emissions from lawn and garden equipment and marine recreational equipment are assumed to be negligible or nonexistent during the winter months. Therefore, calculations for average winter day emissions were prepared using a seasonal adjustment factor of zero. Emissions estimates for nonroad sources were projected to future years using demographic or economic factors provided by APA.

Table V.A-1: Nonroad Mobile Sources Not Considered in the Canyon County Emissions Inventory

Source Excluded	Justification for Excluding
Helicopters (Military and Civilian)	Negligible use in Canyon County
Military Aircraft	No military aircraft stationed in Canyon County
Commercial Aircraft/Ground Support Equipment	No commercial airport located in Canyon County
General Aircraft	Negligible use in Canyon County
Commercial Marine Vessels	Activity does not occur in Canyon County
Logging Equipment	Activity does not occur in Canyon County

B. Emissions Summary

Table V.B-1 gives the estimated annual and average winter day carbon monoxide emissions for 1995 from nonroad mobile sources. Winter day emissions for all sources were seasonally adjusted (section V.D) based on a four-month carbon monoxide season (November through February).

Table V.B-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions from Nonroad Mobile Sources

Source	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Construction Equipment	218.4	198.1	479	217
Light Commercial Equipment	734.8	666.6	4,026	1,826
Industrial Equipment	287.1	260.5	1,259	571
Agricultural Equipment	1,700.1	1,542.0	2,235	1,015
Lawn and Garden Equipment	3,475.6	3,153.1	0	0
Recreational Equipment	251.5	228.2	717	325
Marine Recreational Equipment	25.8	23.4	0	0
Total Other Nonroad	6,693.3	6,071.9	8,716	3,954
Locomotives	111.9	101.5	613	278
Total Nonroad Mobile Source	6,805.2	6,173.4	9,329	4,232

C. Methods and Data

1. Locomotives

Table V.C.2-1 reveals the carbon monoxide from emissions estimated from line haul locomotives. Emissions were calculated using activity data collected for this emissions inventory and emissions factors from *Procedures for Emission Inventory Preparation: Volume IV Mobile Sources*, (EPA, 1992).

Table V.C.1-1: Canyon County 1995 Annual Carbon Monoxide Emissions for Locomotives

Annual Average		Average Winter Day	
Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/Day
111.9	101.5	479	278

a. Locomotive Activity Data

The amount of fuel (in gallons) consumed per year was used to estimate emissions from locomotives. Local railroads were contacted via a telephone survey to determine fuel consumption of line haul locomotives in Ada and Canyon Counties in 1995. Of the four companies contacted, only one was operating line haul locomotives in Canyon County in 1995 and they used 3,575,593 gallons of fuel.

b. Locomotive Emissions Factors

Because specific data pertaining to the locomotive engines used in the area was not available, a default emissions factor of 0.0626 lbs. CO/gallon fuel was used to estimate emissions. The default factor was obtained from *Procedures for Emission Inventory Preparation: Volume IV Mobile Sources*, (EPA, 1992).

c. Locomotive Emissions Calculations

The default carbon monoxide emissions factor was multiplied by the fuel use data supplied by the phone survey to produce emissions estimates in lbs. CO/year. This estimate was then converted from lbs./year to tpy and metric tons/year. Annual carbon monoxide emissions estimates were seasonally adjusted (Section V.D) to lbs./winter day and kg/winter day.

2. Agricultural Equipment

Table V.C.2-1 provides carbon monoxide emissions estimates for agricultural equipment. Activity data, in horsepower-hours, were calculated based on equipment population estimates, horsepower estimates, general equipment population statistics, load factors, and hours of use[13]. Carbon monoxide emissions factors from NEVES were applied to the activity data to estimate emissions.

[13] Equipment population statistics from the PM_{10} emissions inventory, horsepower estimates, general equipment population statistics, load factor data, and use data from *Nonroad Engine and Vehicle Emission Study - Report*, EPA 1991 (NEVES).

Table V.C.2-1: 1995 Canyon County Annual Carbon Monoxide Emissions from Agricultural Equipment

Source	**Annual Average**				**Average Winter Day**			
	Tons/Year		Metric Tonnes/Year		Pounds/Day		Kilograms/Day	
Equipment Type	Gas	Diesel	Gas	Diesel	Gas	Diesel	Gas	Diesel
Two Wheel Tractor	531.6	0.0	482.1	0.0	699	0	317	0
Agricultural Tractor	40.4	932.3	36.6	845.6	53	1,226	24	556
Agricultural Mower	154.4	0.0	140.1	0.0	203	0	92	0
Baler	0.0	7.6	0.0	6.9	0	10	0	5
Combine	7.8	26.0	7.1	23.6	10	34	5	16
Total by Fuel Type	734.2	965.9	665.9	876.1	965	1,270	438	577
Total	1,700.1		1,542.0		2,235		1,015	

a. Agricultural Equipment Activity Data

Equipment activity data in terms of horsepower hours are needed to estimate emissions. Therefore, to calculate horsepower hours, 1995 Canyon County equipment fuel type and population data were estimated using the PM_{10} emissions inventory and 1990 Provo- Orem NEVES data. The PM_{10} emissions inventory provided estimated totals of 1995 equipment population data[14]. These equipment population totals were then apportioned to use categories based on NEVES fuel use data. Table V.C.2.a-1 presents the apportioned population data.

Table V.C.2.a-1: Canyon County Agricultural Equipment Population

Equipment Type	**Equipment Population[a]**	**Percent Gasoline**	**Number Gasoline**	**Percent Diesel[b]**	**Number Diesel**
2 Wheel Tractor	1,810	100.00%	1,810	0.00%	0
Agricultural Tractor	3,505	0.23%	8	99.77%	3,497
Agricultural Mower	519	100.00%	519	0.00%	0
Baler	735	0.00%	0	100.00%	735
Combine	513	0.64%	3	99.36%	510

a From PM10 emissions inventory
b From NEVES (pg. 20, average of Inventories A and B).

Once the population data was apportioned by equipment and fuel type, NEVES data on hours of use, engine load factors, and engine horsepower were selected. Table V.C.2.a-2 gives the

[14] 1995 equipment population was estimated using the *Census of Agriculture-1992* (U.S. Department of Commerce) and Ada county population growth from 1992-1995 (See Appendix A, PM_{10} inventory, for more detailed explanation).

NEVES factors used to calculate agricultural equipment activity data and the activity data used to estimate carbon monoxide emissions. The equipment's activity in horsepower-hours was calculated using Equation V.C.2.a-1.

Equation V.C.2.a-1

Annual agricultural equipment activity was estimated using the following equation:

$$A = N \times P \times hp \times lf \times U$$

Where:

A = Annual Activity (horsepower-hours/year)
N = 1995 Canyon County equipment population
P = Fraction of fuel type
hp = Average horsepower for equipment type (horsepower)
lf = Average load factor for equipment type (dimensionless)
U = Average usage hours (hours/ year)

Table V.C.2.a-2: 1995 Canyon County Agricultural Equipment Horsepower Hours

Fuel Type	Equipment Type	Canyon County Equipment Population	Avg Hp[a]	Load Factor[a]	Usage (hrs/yr)[a]	1995 Hp-Hrs
Gasoline	2 Wheel	1,810	7	0.62	225.9	1,774,534.9
	Tractor	8	87	0.62	456.5	196,988.9
	Mower	519	11	0.48	123.4	338,155.5
	Combine	3	131	0.74	86.3	25,097.8
Diesel	Tractor	3,497	98	0.7	394.3	94,590,283.1
	Baler	735	74	0.58	58.0	1,829,679.6
	Combine	510	152	0.7	103.5	5,616,324.0

[a] From NEVES pgs. 20-24

b. Agricultural Equipment Emissions Factors

Emissions factors, given in Table V.C.2.b-1 in terms of grams of carbon monoxide per horsepower-hour, were obtained from EPA's NEVES document and applied to the calculated activity data in TableV.C.2.a-2.

Table V.C.2.b-1: Agricultural Equipment Carbon Monoxide Emissions Factors

Equipment Type	**Emissions Factor** (g/Hp-hour)[a]	
	Gasoline	**Diesel**
2 Wheel Tractor	271.70	NA
Agricultural Tractor	185.90	8.94
Agricultural Mower	414.20	NA
Baler	NA	3.78
Combine	283.40	4.20

[a] From NEVES pages 28 and 32.

c. Agricultural Equipment Emissions Calculations

Equation V.C.2.c-1 was used to estimate carbon monoxide emissions from agricultural equipment. This equation produced estimates in terms of lbs. carbon monoxide/year. This annual emissions estimate was converted to tpy and metric tonnes/year and seasonally adjusted to produce estimates for lbs./winter day and kg/winter day.

Equation V.C.2.c-1

The carbon monoxide emissions for agricultural equipment were estimated using the following equation:

$$E = F \times A \times C$$

Where:

E = CO Emissions (lb./year)
F = Emissions factor (g CO/hp-hour)
A = Calculated activity data from Equation V.C.3.a-1 (hp-hour)
C = Conversion factor from grams to pounds (1 lb./453.59 grams)

3. Other Nonroad Sources

Table V.C.3-1 shows the emissions estimated from construction equipment, light commercial equipment, industrial equipment, lawn and garden equipment, recreational equipment, and marine recreational vessels (i.e., other nonroad emissions sources). Emissions were calculated by adjusting emissions data from the NEVES 1990 Provo-Orem emissions inventory to Canyon County levels using the difference in 1990 populations. These estimates were then projected to 1995 levels using the difference in population in Canyon County between 1990 and 1995.

Canyon County contains few trails, parks, and boating facilities where recreational vehicles and/or recreational marine vessels can be used. Because of this, the 1995 annual PM_{10} emissions estimates for recreational vehicles and marine vessels in the 1995 PM_{10} emissions inventory

were reduced from NEVES estimates by 50% and 75% respectively[15]. These reductions were also made for annual carbon monoxide emissions estimates.

Table V.C.3-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions from Other Nonroad Sources

Source	**Annual Average**		**Average Winter Day**	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Construction Equipment	218.4	198.1	479	217
Light Commercial Equipment	734.8	666.6	4,026	1,826
Industrial Equipment	287.1	260.5	1,259	571
Lawn and Garden Equipment	3,475.6	3,153.1	0	0
Recreational Equipment	251.5	228.2	717	325
Marine Recreational Vessels	25.8	23.4	0	0
Total	4,993.2	4,529.9	6,481	2,939

a. Emissions Adjustments from Provo-Orem Study for Other Nonroad Sources
Emissions for construction equipment, light commercial equipment, industrial equipment, lawn and garden equipment, recreational vehicles, and recreational marine vessels were calculated using procedures documented in EPA's *Procedures for Emissions Inventory Preparation, Volume IV: Mobile Sources* (EPA 1992). Section 4.2.3 of that document recommends that metropolitan areas for which EPA did not prepare 1990 NEVES inventory "choose one of the 33 areas (for which inventories were prepared), which is similar in terms of climate and economic activity, so that the emissions inventories can be produced by applying the ratio of the populations for the two areas. . . ." Of the 33 areas studied in for the NEVES, Provo-Orem, Utah was the area chosen on which to base Ada and Canyon Counties' nonroad carbon monoxide estimates, due to similarities in size, location, elevation, and climate.

The NEVES study conducted two separate emissions inventories: Inventory A was the EPA's best estimate of emissions using a top-down approach to allocate equipment populations to the NEVES metropolitan areas using state-level data. Inventory B was developed by updating Inventory A's equipment population data using equipment manufacturers' population statistics. In accordance with EPA's general recommendation, Canyon County's nonroad carbon monoxide emissions were estimated using the averaged emissions of NEVES (1990 Provo-Orem) Inventory A and Inventory B. Table V.C.3.a-1 displays NEVES Inventory A, Inventory B, and average carbon monoxide emissions for the Provo-Orem area.

[15] Based on IDEQ engineering judgement.

Table V.C.3.a-1: Average CO Emissions of 1990 Provo-Orem Inventory A and Inventory B

Equipment Type	**Inventory A** (tpy)	**Inventory B** (tpy)	**Average** (tpy)
Construction	593	462	528
Light Commercial	1,775	1,775	1,775
Industrial	892	495	694
Recreational	1,424	1,006	1,215
Marine Recreational	209	289	249
Lawn and Garden	8,900	7,891	8,396

The average emissions in Table V.C.3.a-1 were then multiplied by a growth and apportionment factor to adjust the 1990 Provo-Orem emissions to 1995 Canyon County levels. This growth and apportionment factor (0.4140) was calculated by dividing the 1995 population of Canyon County by the 1990 population of Provo-Orem, Utah.

b. Other Nonroad Sources Calculations

Equation V.C.3.b-1 was used to estimate carbon monoxide emissions from construction equipment, light commercial equipment, industrial equipment, lawn and garden equipment, recreational vehicles, and recreational marine vessels. This equation produced estimates in terms of tpy carbon monoxide. This annual emissions estimate was converted to metric tonnes/year and seasonally adjusted to produce estimates for lbs./winter day and kg/winter day. Emissions estimates for recreational vehicles and marine vessels were reduced by 50% and 75% respectively, because Canyon County contains few trails, parks, and boating facilities where recreational vehicles and/or recreational marine vessels can be used.

Equation V.C.3.b-1

The carbon monoxide emissions for construction equipment, light commercial equipment, industrial equipment, lawn and garden equipment, recreational vehicles, and recreational marine vessels were estimated using the following equation:

$$E_{Canyon} = E_{P\text{-}O} \times G$$

Where:

ECanyon = Canyon County CO Emissions (tpy)
EP-O = Average Provo-Orem Emissions from Table V.C.4.a-1(tpy)
G = Growth and apportionment factor (0.4140)

D. Seasonal Adjustment

Nonroad source emissions were seasonally adjusted from annual emissions to average winter day emissions by converting an annual average to an average daily emissions estimate (dividing by 365 days/year), and then multiplying by a seasonal adjustment factor. These factors are presented in Table V.D-1. Appendix D of the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory* contains the information used to produce seasonal adjustment

factors. The use of lawn and garden equipment and recreational marine vessels are assumed negligible in Canyon County in the winter months. Therefore, no winter day emissions estimates were made for these sources (i.e., these sources were given seasonal adjustment factors of 0).

Table V.D-1: Factors Used to Seasonally Adjust Nonroad Mobile Source Carbon Monoxide Emissions

	Seasonal Adjustment Factor	**Data Source**
Construction Equipment	0.40	1
Light Commercial Equipment	1.00	1
Industrial Equipment	0.80	1
Agricultural Equipment	0.24	1
Recreation Vehicles	0.52	1
Lawn and Garden Equipment	0.00	2
Recreational Marine Vessels	0.00	2
Locomotives	1.00	3

Data Source	
1	NEVES
2	IDEQ's engineering judgement - winter emissions are negligible
3	Based on Information supplied by locomotive companies

E. Projection to Future Years

1. Summary of Emissions Projections

1995 nonroad mobile source emissions were projected to 2000 and 2010 using the latest population and socioeconomic projections provided by APA (Table IV.E-1). For each category, an appropriate growth indicator was chosen. Emissions projections calculated with APA demographic data were calculated by multiplying the 1995 annual and winter day emissions by the ratio between the appropriate demographic factor for the future year and the factor for 1995. Table V.E-1 displays the projected annual nonroad mobile source carbon monoxide emissions for 1995, 2000, and 2010, while Table V.E-2 gives the winter day emissions estimates for 1995, 2000, and 2010.

Table V.E-1: Base Year & Projected Annual Carbon Monoxide Emissions for Canyon County

Source	Tons per Year			Metric Tonnes per Year		
	1995	2000	2010	1995	2000	2010
Construction Equipment	218.4	265.4	346.5	198.1	240.8	314.3
Light Commercial Equipment	734.8	1,412.0	1,959.6	666.6	1,281.0	1,777.8
Industrial Equipment	287.1	700.5	834.4	260.5	635.5	757.0
Agricultural Equipment	1,700.1	1,700.1	1,700.1	1,542.0	1,542.0	1,542.0
Lawn and Garden Equipment	3,475.6	4,223.9	5,514.1	3,153.1	3,831.9	5,002.4
Recreation Equipment	251.5	289.1	360.9	228.2	262.3	327.4
Marine Recreation Equipment	25.8	29.6	37.0	23.4	26.9	33.5
Total Other Nonroad	6,693.3	8,620.6	10,752.6	6,071.9	7,820.4	9,754.4
Locomotives	111.9	111.9	111.9	101.5	101.5	101.5
Total Nonroad	6,805.2	8,732.5	10,864.5	6,173.4	7,921.9	9,855.9

Table V.E-2: Base Year & Projected Average Winter Day Carbon Monoxide Emissions for Canyon County from Non-Road Mobile Sources

Source	Pounds per Day			Kilograms per Day		
	1995	2000	2010	1995	2000	2010
Construction Equipment	479	582	759	217	264	344
Light Commercial Equipment	4,026	7,737	10,738	1,826	3,509	4,871
Industrial Equipment	1,259	3,071	3,658	571	1,393	1,659
Agricultural Equipment	2,235	2,235	2,235	1,015	1,015	1,015
Lawn and Garden Equipment	0	0	0	0	0	0
Recreation Equipment	717	824	1,028	325	374	466
Marine Recreation Equipment	0	0	0	0	0	0
Total Other Nonroad	8,716	14,449	18,418	3,954	6,555	8,355
Locomotives	613	613	613	278	278	278
Total Nonroad	9,329	15,062	19,031	4,232	6,833	8,633

a. Nonroad Mobile Source Emissions Projections

Nonroad source emissions projections for 2000 and 2010 were based on the latest population and socioeconomic projections prepared by APA[16]. For each of these categories, an appropriate growth indicator was chosen. Table V.E.1.a-1 lists the nonroad mobile source categories and the specific demographic used to project future year emissions. Emissions projections were calculated by multiplying the 1995 emissions by the ratio of the appropriate demographic factors.

[16] From *1997 Demographic Report for Ada and Canyon Counties*, APA Report No. 09-97, June 1997. Data can also be found in the PM_{10} emissions inventory (see Appendix A).

Table IV.E-1 lists the Canyon County demographic data used to project area and nonroad mobile source emissions to the years 2000 and 2010.

Table V.E.1.a-1: Growth Indicators Used to Project Nonroad Mobile Source Carbon Monoxide Emissions to Future Years in Canyon County

Source	Growth Factor
Construction Equipment	Households
Light Commercial Equipment	Retail employment
Industrial Equipment	Nonretail employment
Agricultural Equipment	No growth anticipated[a]
Lawn and Garden Equipment	Households
Recreation Equipment	Population
Marine Recreation Equipment	Population
Locomotives	No growth anticipatedb

a Due to limited acreage available for additional agricultural use within the nonattainment area.
b Based on IDEQ engineering judgement.

VI. ON-ROAD MOBILE SOURCES

A. Introduction

This section deals specifically with carbon monoxide emissions created by onroad transportation sources such as cars, trucks, or other motor vehicles. The main references for preparation of this section are the PM_{10} emissions inventory, the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory*, the *Mobile 5 User's Guide* and *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources. (EPA-450/4-81-026d, Revised 1992).*

Vehicle miles traveled (VMT) are a measure of the total miles driven by all vehicles in the area per day. Canyon County VMT estimates were taken from the PM_{10} inventory for each roadway type. MOBILE 5b emissions factors generated for the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory* were used with VMT for each roadway type to estimate emissions.

In Ada and Canyon Counties, the time span between November and February is typically the period when cold temperatures or stagnation events produce high concentrations of carbon monoxide. Low ambient temperatures (i.e., winter day temperatures) cause vehicles to emit more carbon monoxide. To account for this, emissions estimates were derived using MOBILE 5b under winter conditions.

B. Emissions Summary

Carbon Monoxide emissions estimates for onroad mobile sources in Canyon County were produced by multiplying annual Canyon County VMT estimates obtained from the PM_{10} emissions inventory[17] by MOBILE 5b emissions factors. Some percentage of VMT in Canyon County originate from Ada County vehicles, which are required to pass a vehicle inspection and maintenance (I/M) program test. However, estimates of this percentage were not available. Therefore, estimation calculations were made using MOBILE 5b emissions factors for vehicles not subject to I/M program testing. Average winter day emissions were estimated by dividing the annual emissions estimate by 365 days/year. Table VI.B-1 summarizes the 1995 annual and average winter day emissions estimates from onroad mobile sources.

[17] Table 4-8

Table VI.B-1: 1995 Canyon County Annual and Average Winter Day Carbon Monoxide Emissions from On-Road Mobile Sources

Road Category	Annual Average		Average Winter Day	
	Tons/Year	Metric Tonnes/Year	Pounds/Day	Kilograms/ Day
Local	4,513.1	4,093.5	24,729	11,216
Collector	4,017.3	3,643.7	22,012	9,982
Arterial	11,785.2	10,689.6	64,577	29,287
Interstate	6,707.9	6,084.3	36,755	16,670
System Total	27,023.5	24,511.1	148,073	67,155

C. Methods and Data

1. VMT Estimation

Canyon County does not have a metropolitan planning organization. As a result transportation planning for Canyon County is conducted on a limited basis. For this supplemental emissions inventory, Canyon County VMT estimates were obtained from the 1995 PM_{10} emissions inventory. Table VI.C.1-1 displays the VMT estimates used in this supplemental inventory.

Table VI.C.1-1: 1995 Canyon County Annual VMT by Roadway Categorya

Roadway Category	Total VMT (Miles/year)	Daily VMT (Miles/day)
Interstate	244,160,000	668,932
Arterial	364,680,000	999,123
Collector	102,150,000	279,863
Local	75,350,000	206,438
Grand Total	786,340,000	2,154,356

[a] From Table 4-8 of the PM_{10} emissions inventory.

2. Emissions Modeling Inputs

The current model used to estimate onroad mobile source carbon monoxide emissions factors is MOBILE 5b. MOBILE 5b emissions factors produced to estimate out-of-county vehicle impacts in the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory* were utilized to estimate carbon monoxide emissions from Canyon County onroad mobile sources. All emissions factor processing was accomplished by APA using the guidance provided in the Mobile 5 User's Guide[18].

MOBILE 5b calculates emissions factors for various types of vehicles traveling on various road types. This model requires numerous inputs, including information about the vehicle mix (types and ages of vehicles found in the area), the vehicle emissions testing and anti-tampering programs, the average speeds traveled on roadways in the area, altitude, and average temperatures in the area. It was assumed that Canyon County's MOBILE 5b inputs would be identical to those used for Ada County, with the only exception being the presence of an I/M program. These input variables were developed through a collaborative effort by IDEQ, Air Quality Board, ITD, and APA.

Ada County's Air Quality Board maintains an active data base on the vehicle registration in Ada County. Local registration data provided by the Air Quality Board and ITD were reviewed to determine the vehicle mix. It was assumed this data would be similar to the vehicle mix present in Canyon County. In the absence of detailed data on certain types of vehicles, adjusted national defaults were used to reflect the composition of the local fleet. These adjustments, made cooperatively by APA and Air Quality Board, are detailed in Appendix E of the *Northern Ada County 1995 Carbon Monoxide Base and Future Year Emissions Inventory*.

Maximum and minimum ambient winter day temperatures were developed from data for those days with the highest 8-hour carbon monoxide concentrations during 1993, 1994, and 1995. Data were obtained from the National Oceanic and Atmospheric Administration monthly reports.

MOBILE 5b allows for either a low altitude input (500 feet) or a high altitude input (5,500 feet). Ada and Canyon Counties' average altitude is 2,800 feet. Because the area's altitude is not close to either possible input, the model was run for each altitude input, and the resulting emissions factors were averaged to produce more accurate emissions factors that account for Ada and Canyon Counties' altitude.

Chevron Corporation owns and operates the major gasoline pipeline serving Idaho. Chevron's Boise office was contacted to obtain the vapor pressure for gasoline (i.e., Reid Vapor Pressure) for the winter of 1995. This was input into MOBILE5b.

Where input information was unavailable, MOBILE 5b default factors were used. Specific input information used to produce onroad mobile carbon monoxide emissions factors with MOBILE

[18] *User's Guide to MOBILE 5 (Mobile Source Emission Factor Model)*, US EPA, OMS, Ann Arbor, MI, March 1993.

5b can be found in Appendix E of the Northern Ada County 1995 Carbon Monoxide Base and Future Year Emissions Inventory.

3. MOBILE 5b Model Results and Emissions Estimates

Table VI.C.3-1 gives the MOBILE 5b carbon monoxide emissions factors in grams CO/mile for each vehicle type and roadway type. These factors are the same ones that were generated for out-of-county vehicles in the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory*. MOBILE 5b emissions factors were multiplied by daily VMT estimates (obtained by dividing the annual VMT estimates for a given road type by 365 days/year) to produce 1995 average winter day carbon monoxide emissions estimates in kg/day. Average winter day emissions (in kg/day) for 1995 were converted to lbs./day, tpy, and tonnes/year. Tables VI.C.3-2 and VI.C.3-3 present the 1995 average winter day carbon monoxide emissions for each vehicle and roadway type. The 1995 annual carbon monoxide emissions estimates for each vehicle and roadway type are located in Tables VI.C.3-4 and VI.C.3-5.

Table VI.C.3-1: 1995 Canyon County Average Winter Day Carbon Monoxide Emissions Factors for Onroad Mobile Sources

Vehicle Type[a]	**Emission Factors (g/mile)**			
	Local	Collector	Arterial	Interstate
Light Duty Gas	48.18	31.77	26.01	21.78
Light Duty Gas Truck1	60.06	40.50	33.44	28.52
Light Duty Gas Truck2	78.09	53.75	45.72	39.97
Heavy Duty Gas	163.26	94.06	75.25	67.22
Light Duty Diesel	2.45	1.44	1.14	0.98
Light Duty Diesel Trucks	3.84	2.26	1.79	1.53
Heavy Duty Diesel	19.79	11.63	9.20	7.89
Motorcycles	49.82	33.94	26.94	22.62

[a] Vehicle types were derived from vehicle registration data. These 8 types represent 100% of the fleet mix.

Table VI.C.3-2: 1995 Average Winter Day Carbon Monoxide Emissions from Onroad Mobile Sources - Metric Units

Vehicle Type	**Average Winter Day Emissions - kg/day**				
	Local	Collector	Arterial	Interstate	Total
Light Duty Gas	6,366	5,690	16,629	9,324	38,009
Light Duty Gas Truck1	2,157	1,972	5,813	3,320	13,262
Light Duty Gas Truck2	1,338	1,249	3,791	2,219	8,597
Heavy Duty Gas	1,045	816	2,331	1,394	5,586
Light Duty Diesel	3	2	7	4	16
Light Duty Diesel Trucks	2	1	4	2	9
Heavy Duty Diesel	233	186	524	301	1,244
Motorcycles	72	66	188	106	432
Total	11,216	9,982	29,287	16,670	67,155

Table VI.C.3-3: 1995 Canyon County Average Winter Day Carbon Monoxide Emissions from Onroad Mobile Sources - Standard Units

Vehicle Type	**Average Winter Day Emissions - lbs./day**				
	Local	Collector	Arterial	Interstate	Total
Light Duty Gas	14,036	12,547	36,666	20,560	83,809
Light Duty Gas Truck1	4,757	4,349	12,819	7,320	29,245
Light Duty Gas Truck2	2,950	2,753	8,360	4,893	18,956
Heavy Duty Gas	2,304	1,799	5,139	3,073	12,315
Light Duty Diesel	7	5	15	9	36
Light Duty Diesel Trucks	3	3	8	4	18
Heavy Duty Diesel	513	409	1,155	663	2,740
Motorcycles	159	147	415	233	954
Total	24,729	22,012	64,577	36,755	148,073

Table VI.C.3-4: 1995 Canyon County Annual Carbon Monoxide Emissions from Onroad Mobile Sources - Metric Unitsa

Vehicle Type	Annual Average Emissions - Metric Tonnes/Year				
	Local	Collector	Arterial	Interstate	Total
Light Duty Gas	2,323.4	2,077.0	6,069.4	3,403.4	13,873.2
Light Duty Gas Truck1	787.4	719.9	2,121.9	1,211.6	4,840.8
Light Duty Gas Truck2	488.3	455.7	1,383.9	810.0	3,137.9
Heavy Duty Gas	381.4	297.8	850.7	508.7	2,038.6
Light Duty Diesel	1.1	0.9	2.5	1.4	5.9
Light Duty Diesel Trucks	0.6	0.5	1.3	0.7	3.1
Heavy Duty Diesel	85.0	67.7	191.1	109.7	453.5
Motorcycles	26.3	24.3	68.8	38.7	158.1
Total	4,093.5	3,643.8	10,689.6	6,084.2	24,511.1

[a] Annual emissions estimates were produced using emissions factors based on average winter temperatures.

Table VI.C.3-5: 1995 Canyon County Annual Average Carbon Monoxide Emissions from Onroad Mobile Sources - Standard Unitsa

Vehicle Type and Origin	Annual Average Emissions - Tons/Year				
	Local	Collector	Arterial	Interstate	Total
Light Duty Gas	2,561.6	2,289.9	6,691.6	3,752.2	15,295.3
Light Duty Gas Truck1	868.2	793.6	2,339.4	1,335.8	5,337.0
Light Duty Gas Truck2	538.4	502.4	1,525.7	893.0	3,459.5
Heavy Duty Gas	420.4	328.4	937.8	560.9	2,247.5
Light Duty Diesel	1.2	1.0	2.8	1.6	6.6
Light Duty Diesel Trucks	0.6	0.5	1.4	0.8	3.3
Heavy Duty Diesel	93.7	74.7	210.7	121.0	500.1
Motorcycles	29.0	26.8	75.8	42.6	174.2
Total	4,513.1	4,017.3	11,785.2	6,707.9	27,023.5

[a] Annual emissions estimates were produced using average winter temperatures.

D. Seasonal Adjustment

No seasonal adjustments were applied to carbon monoxide emissions from onroad mobile sources. Winter day carbon monoxide emissions were estimated using MOBILE 5b inputs that reflected winter conditions. Annual emissions were extrapolated from these emissions factors. Winter day VMT estimated using 1995 Canyon County annual average VMT did not account for any seasonal variation. Canyon County winter day carbon monoxide emissions were estimated by multiplying the MOBILE 5b emissions factors by the winter day VMT estimates.

E. Projection to Future Years

Future year emissions estimates, calculated by multiplying forecasted VMT for each roadway type by a MOBILE 5b emissions factor, are located in Table VI.E-2 and Table VI.E-3. Canyon County VMT projections for future years were taken from the PM_{10} emissions inventory[19] and are given in Table VI.E-1. These VMT projections were produced using base year VMT estimates and Canyon County VMT growth factors, provided by APA[20]. Emissions factors were projected by altering MOBILE 5b inputs. These inputs are given in Appendix E of the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory*.

Table VI.E-1: Future Year Daily VMT for Canyon County by Roadway Category[a]

Roadway Category	2000 VMT		2010 VMT	
	miles/year	miles/day	miles/year	miles/day
Interstate	297,570,000	815,260	388,500,000	1,064,384
Arterial	444,450,000	1,217,671	580,280,000	1,589,808
Collector	124,520,000	341,151	162,590,000	445,452
Local	91,870,000	251,699	119,950,000	328,630
Grand Total	958,410,000	2,625,781	1,251,320,000	3,428,274

[a] Either taken from or estimated using the PM10 emissions inventory.

Table VI.E-2: Base Year & Projected Annual Carbon Monoxide Emissions for Canyon County from Onroad Mobile Sourcesa

Roadway Category	Tons per Year			Metric Tonnes per Year		
	1995	2000[a]	2010	1995	2000[b]	2010
Local Vehicles	4,513.1	4,659.7	5,276.4	4,093.5	4,226.5	4,785.8
Collector Vehicles	4,017.2	4,058.1	4,418.2	3,643.7	3,680.8	4,007.4
Arterial Vehicles	11,785.2	11,581.6	12,279.9	10,689.6	10,504.8	11,138.2
Interstate Vehicles	6,708.0	6,199.9	6,089.0	6,084.3	5,623.5	5,522.9
System Total	27,023.5	26,499.3	28,063.5	24,511.1	24,035.6	25,454.3

[a] Annual emissions estimated using emissions factors based on average winter day temperature data.
[b] APA produced MOBILE 5b factors for 1999. It was assumed that the MOBILE 5b factors would not change significantly from 1999 to 2000. Therefore, the 1999 factors were used.

[19] Table 4-8 of the PM_{10} emissions inventory.

[20] Table 4-5 of the PM_{10} emissions inventory.

Table VI.E-3: Base Year & Projected Average Winter Day Carbon Monoxide Emissions for Canyon County from Onroad Mobile Sources

Roadway Category and Vehicle Origin	**Pounds per Day**			**Kilograms per Day**		
	1995	2000[a]	2010	1995	2000[a]	2010
Local Vehicles	24,729	25,533	28,912	11,216	11,579	13,112
Collector Vehicles	22,012	22,236	24,209	9,982	10,084	10,979
Arterial Vehicles	64,577	63,461	67,287	29,287	28,780	30,516
Interstate Vehicles	36,755	33,972	33,364	16,670	15,407	15,131
System Total	148,073	145,202	153,772	67,155	65,850	69,738

[a] APA produced MOBILE 5b factors for 1999. It was assumed that the MOBILE 5b factors would not change significantly from 1999 to 2000. Therefore, the 1999 factors were used.

VII. QUALITY ASSURANCE

A. Summary

Quality assurance (QA) and quality control (QC) measures for the *Canyon County 1995 Supplemental Carbon Monoxide (CO) Emissions Inventory* were done in accordance with EIIP guidance[21]. It should be noted that compiling of CO emissions for year 1995 heavily depended upon the data documented in *Development of Base and Future Year Emissions Inventories for Industrial Sources for the Northern Ada County PM_{10} Nonattainment Area* (ICF Kaiser, November 1997), and *Development of Base and Future Year Emissions Inventories for Area Sources, Nonroad Mobile Sources, and Onroad Motor Vehicles for the Northern Ada County PM_{10} Nonattainment Area* (ICF Kaiser, November 1997). One Major difference, however, occurred in the compiling of onroad mobile CO emissions. This is because in the PM_{10} emissions inventory, MOBILE 5a was utilized and for the CO inventory, MOBILE 5b was used. It should also be noted that QA/QC for the Supplemental Canyon County CO Emissions Inventory was done with the same degree of accuracy as the QA/QC for the Ada County inventory. Essentially the same formulas, methods, and procedures used in the Ada County inventory to estimate emissions were utilized in the Canyon County inventory.

B. Completeness Review

Point source CO emissions, based on the PM_{10} activity compilations (obtained in the 1997 documents cited above) were checked and updated. Because the only facility that conformed for inclusion in the point source (i.e., >100 tons/year category) section of the carbon monoxide emissions inventory was included in the *Northern Ada County 1995 Base and Future Year Carbon Monoxide Emissions Inventory*, no point sources were included in the Canyon County inventory. All the Canyon County PM_{10} point sources were relegated to inclusion into the industrial area source category of the carbon monoxide emissions inventory. The area, nonroad mobile, and onroad mobile CO source categories identified for inclusion in the inventory were compared to the categories which were outlined as appropriate in EPA guidance. Table VII.B-1 lists the area, nonroad mobile, and onroad mobile sources used in the Canyon County CO emissions inventory as compared to those required by EPA guidance. The completeness check indicated that all appropriate source categories stated in EPA guidance were included in the 1995, 2000, and 2010 CO emission estimates.

[21] EPA, 1997. *EIIP. Volume VI: Quality Assurance Procedures.* U.S. EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC. July 1997.

Table VII.B-1: Completeness Review for the Canyon County CO Emission Inventory as Compared to EPA Requirements.

Inventory	Component	Canyon '95 Inventory	EPA Requirement
Area Sources:	Residential Wood Fireplaces	X	X
	Residential Wood Stoves	X	X
	Residential Barbeque/Fire Pits	X	X
	Residential Natural Gas	X	X
	Residential Propane	X	X
	Residential Fuel Oil	X	X
	Residential Coal	X	X
	Commercial Natural Gas	X	X
	Commercial Propane	X	X
	Commercial Fuel Oil	X	X
	Commercial Coal	X	X
	Open Burning	X	X
	Structural Fires	X	X
	Vehicle Fires	X	X
	Wild Fires	X	X
	Other Unplanned Fires	X	X
Nonroad Mobile Sources:	Locomotives	X	X
	Construction Equipment	X	X
	Light Commercial Equipment	X	X
	Industrial Equipment	X	X
	Agricultural Equipment	X	X
	Lawn and Garden Equipment	X	X
	Recreation Equipment	X	X
	Marine Recreation Equipment	X	X
Onroad Mobile Sources:	Interstate Highways	X	X
	Arterial Roads	X	X
	Collector Roads	X	X
	Local Roads	X	X

C. Data Elements Review

Parameters used to calculate CO emissions consisted of equations and emission factors. These parameters were applied correctly to the various operational bases for the three main emissions source categories: area, nonroad mobile, and onroad mobile. CO emission factors from AP-42 were used most frequently. However, other appropriate references cited in the Appendix (i.e., NEVES, Provo-Orem CMSA study, FAA, US EPA Fire Data Base, US DOT, CARB) were utilized appropriately as needed.

As stated in the EIIP, corrective QA/QC review of each major source category was performed at the inventory's 10% completion of work. After the 10% review, all the errors were resolved. The final QA/QC review was performed at 100% work completion. Again, after the 100% review, all remaining errors were resolved. In both cases, the QA/QC reviews were performed by the QA/QC coordinator independently and without any outside influence.

1. Area Sources

Population, retail and nonretail employment, number of households, acreage, number of events (i.e., wildfires, ditch burns, vehicular fires, number of wood stoves, fireplaces, and barbeque pits), fuel use, and fuel sales data were taken from the compilation of 1995 year activity data. Annual and winter-day results were eventually compiled to include all CO emission estimates.

2. Nonroad Mobile Sources

Population, retail and nonretail employment, number of households, equipment population data, and equipment use data were taken into account from the compilation from 1995 year activities. Annual and winter-day results were calculated individually for each equipment type and eventually compiled to include all CO emissions estimates.

3. Onroad Mobile Sources

APA compiled the onroad mobile CO emission for Ada County utilizing MOBILE 5b and VMT generated by TP+. Unfortunately, APA did not generate Canyon County VMT estimates for this inventory. Therefore, the Ada County MOBILE 5b CO emissions factors for vehicles not subject to a I/M program were applied to VMT estimates taken from *Development of Base and Future Year Emissions Inventories for Area Sources, Nonroad Mobile Sources, and Onroad Motor Vehicles for the Northern Ada County PM_{10} Nonattainment Area* (ICF Kaiser, November 1997). The CO emission factor calculations (initially in grams per mile and eventually converted to tons/year) were performed by MOBILE 5b for the Ada County inventory under the complete quality assurance of APA and FHWA. IDEQ, however, did check the final spread sheets for accuracy and reasonableness of the methods used.

D. Reasonableness Review

The 1995 Ada County CO emissions inventory was compared to one done in 1996 for year 1993[22]. Table VII.D-1 displays the comparisons made between the four source categories in the Ada County emissions inventory. The comparison shows an overall decrease of 10.2% in CO emissions in Ada County. Because their was no historic Canyon County CO emissions inventory available, no comparisons between past and present inventories could be done for Canyon County. However, because the Ada County comparison is within reason and the Canyon County CO emissions inventory utilized similar emissions estimation methods, the Canyon County CO inventory is assumed to be reasonable.

[22] APA, 1996. *1993 Base Year Carbon Monoxide Emission Inventory for Northern Ada County, Idaho.* Submitted by IDEQ, prepared by APA. January 1997.

Table VII.D-1: Comparison of Ada County CO Emissions Inventories for Years 1993 and 1995.

Source Categories	**1993 Inventory** (tpy)	**1995 Inventory** (tpy)	**% Difference**
Point Sources	1,886	2,877	+52.5
Area Sources	16,043	10,743	-33.0
Nonroad Mobile Sources	3,976	14,793	+272.0
Onroad Mobile Sources	77,898	61,181	-21.5
TOTAL	99,803	89,594	-10.2

E. Software Tools

With the exception of the CO emissions results produced by using data output from MOBILE 5b, all computations were performed on MS Excel.

VIII. REFERENCES

APA, 1996. *1993 Base Year Carbon Monoxide Emission Inventory for Northern Ada County, Idaho.* Submitted by IDEQ, prepared by APA. January 1997.

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IDEQ, 1999. *Northern Ada County 1995 Carbon Monoxide Base and Future Year Emission Inventory.* Report and Appendices Submitted and prepared by IDEQ. October 1999.

Appendix A-3
Northern Ada and Canyon County 1995 Base and Future Year Carbon Monoxide Emissions Inventory Appendices

Appendix A-4
Calculation of Emissions Changes Due to Eliminating Transit and Improving I/M Program

Calculation of Emissions Changes Due to Eliminating Transit and Improving I/M Program

Evaluation of eliminating Transit and Rideshare TCMs from 1994 CO SIP Revision and improving I/M Program (Implemented on 7/2000)

Projected 2000 CO Emissions with improved I/M Program:	139,830	
Projected 2000 CO Emissions with previous I/M Program:	158,903	
Emissions Reduction Due to I/M Program Improvements[1]:		**-19,073**
CO emissions credit taken for 15% Transit:	2,978	
CO emissions credit taken for 22% Rideshare:	2,999	
Emissions Increases Due to Elimination of TCMs:		**5,977**
Net Emissions Change		**-13,096**

1. Based on Mobile 5(b) model with VMT, vehicle fleet mix, emissions factors and average speed by roadway category, etc. held constant. Changes are as follows:

I/M Descriptive Record	**Previous**	**New**
Stringency Level	17%	27%
Waiver Rates, pre 1981 vehicles	8%	1%
Waiver Rates, 1981 and newer vehicles	27%	0%
Program Type	Test & Repair	Test Only
Inspection Frequency[2]	Annual	Biennial
Test Type	Idle Only	2 Speed

2. Results in increased emissions. However, net change equals reduction of 19,037 tpy.

Appendix B.
Ada County Vehicle Inspection and Maintenance Program

B-1 **Description of Ada County Vehicle Inspection and Maintenance Program**

B-2 **Rules and Regulations for Ada County Automotive Inspection and Maintenance Program**

B-3 **Enforceable Regulations – Local Ordinances Requiring Emissions Testing**

Appendix B-1
Description of Vehicle Inspection and Maintenance Programs

Description of Vehicle Inspection and Maintenance Programs

A vehicle inspection and maintenance (I/M) program, operated under the auspices of the Ada County Air Quality Board (Air Quality Board) was established in 1984 as a joint action of Ada County, the Ada County Highway District (ACHD), and the cities of Boise, Eagle, Garden City and Meridian. In 1991, the rules and regulations were updated to change the requirements for testing equipment. At this time, new ordinances were passed in the county and cities to extend the program for future years.[1]

The cities of Boise, Eagle, Garden City, and Meridian, as well as the ACHD and Ada County re-adopted the I/M ordinances to extend them permanently unless an injunction is formally adopted. The City of Kuna has not participated in the testing program. However, as of October 2001, the Mayor of Kuna and the Idaho Department of Environmental Quality have agreed to work towards resolving this issue in the near future.

General Description of the Vehicle Inspection and Maintenance Program

An annual vehicle exhaust emissions test is required of all vehicles whose owners have a primary residence or domicile in Ada County. Vehicle registration may be revoked for vehicles that do not complete the emissions test or apply for a waiver. Vehicles that are model year 1965 or older, are registered as a motor home, or are under 1,500 pounds gross vehicle weight (e.g. motorcycles) are exempt from the emissions testing requirement.

Idaho motor vehicles may be registered in any county, but owners must designate a home county for the vehicle. It is thought that approximately 5000 owners who reside and drive in Ada County register their vehicles outside of the county. In addition, the Community Planning Association's transportation forecasting model estimates that 10.1% of all vehicle miles traveled in Ada County are vehicles from outside of Ada County which are not subject to the emissions testing program.

1 "The 1991 Motor Vehicle Control Ordinance", Ordinance number 5273, City of Boise;
"The 1991 Motor Vehicle Control Ordinance", Ordinance number 558, Garden City;
"The 1991 Motor Vehicle Control Ordinance", Ordinance number 547, City of Meridian;
"The 1991 Motor Vehicle Control Ordinance", Ordinance number 177, City of Eagle
"The 1991 Motor Vehicle Control Ordinance", Title 6, Chapter 1-3, Ada County Motor Vehicle Code

Any private entrepreneur who meets minimum licensing requirements may operate an exhaust emissions testing site. Minimum licensing requirements for technicians include passing a written and practical exam given by Air Quality Board personnel. Applicants must demonstrate knowledge of:

- The operation and purpose of emissions control systems
- The relationship of hydrocarbons and carbon monoxide emissions to timing and fuel management systems
- Adjustments of motor vehicles to manufacturer's specifications
- Operation of an exhaust gas analyzer

They must also demonstrate the ability to:

- Conduct a visual inspection of the required emissions control equipment
- Use, care and maintain the exhaust gas analyzer
- Conduct emissions tests
- Adjust the engine systems to manufacturer's specifications
- Use AIR program forms

In Ada County most exhaust emission tests are performed by operators of mobile vans. However, facilities must remain at a permanent location. Facilities are required to demonstrate the ability to:

- Perform emission tests
- Comply with reporting and record keeping requirements
- Employ at least one person who has a valid Emission Mechanic License

Facilities must conduct the exhaust emissions tests using approved equipment, including an NDIR exhaust analyzer that meets the 1990 California Bureau of Automotive Repair (BAR 90) or later specifications and the requirements of 207(b) of the Federal Clean Air Act. The BAR90 emission test sequence is a menu-driven, step by step procedure which insures that proper procedures are followed.

The maximum allowable charge for a vehicle emissions test is $12.00, which includes the test and a Certificate of Compliance. This fee is collected at the place of testing, and emission test information is forwarded to the Air Quality Board's vehicle registration. The Air Quality Board uses a computer data-base to track vehicle compliance with emission testing requirements. Vehicle registration may be revoked for vehicles that do not either successfully pass the emissions test or obtain a waiver.

The exhaust emissions test consists of an analysis of exhaust emissions for all vehicles, and a visual check of emission control devices on 1984 and newer vehicles. The check of emission

control devices includes verification of the presence and operation of a catalytic converter and an air injection system. When leaded fuel was still widely available, the test also included a visual check of the size of the fuel inlet restrictor. On 1984 and newer vehicles any emission control devices that have been removed or altered must be restored before a certificate of compliance will be issued.

Under this program, owners of vehicles exceeding the model year carbon monoxide percentage standard have ten days to adjust or repair the vehicle, and return for a free re-inspection.

The I/M program authorizes waivers for some vehicles that fail the exhaust emission test. Each waiver is valid for one year. Requirements for receiving a waiver have been altered over the years, and are more fully detailed below.

Description of the Vehicle Inspection and Maintenance Program prior to December 1998

The Vehicle Inspection and Maintenance Program has become progressively more stringent over the years. The following list defines specific issues and components of the program that existed prior to December 1998:

- Vehicle exhaust emissions tests were required annually.
- Diesel fueled vehicles were exempt from testing requirements.
- Most stations offered their customers some level of vehicle repair opportunity in the event of a failed test.
- Exhaust emissions were measured only at idle.
- Waiver policies for vehicles that failed the exhaust emission tests were somewhat lenient. Waivers were issued based upon a request by the vehicle owner and a promise that they would attempt to repair the failed engine in the future. The vehicle was not given another waiver on the next emission test unless the owner had paid for emission-related repairs of at least $175 for 1981 and newer vehicles, or at least $75 for 1980 and older vehicles. About 1000 vehicles annually received the one year waiver. Approximately 15.5% of vehicles that failed an emissions test were issued waivers in 1998.
- Thresholds for maximum allowable carbon monoxide emissions were somewhat lenient compared to thresholds used elsewhere in the nation.

Table 1: Allowable Carbon Monoxide Percentage of Total Tailpipe Emissions, 1984-1998

Light Duty Vehicles (1,500 -8,499 lbs. GVW)	
1965-1974	5.5%
1975-1979	3.5%
1980	1.5%
1981 & newer	1.2%

Heavy Duty Vehicles (Over 8,500 lbs. GVW)	
1965-1974	6.0%
1975-1980	5.0%
1981 & newer	3.0%

Description of Changes to the Vehicle Inspection and Maintenance Program beginning December 1998

Beginning in December 1998, several changes were made to the Vehicle Inspection and Maintenance Program. The following list defines specific issues and components of the program that were established in December 1998:

- The waiver policy was revised to require owners of vehicles that failed an emissions test to spend a minimum of $150 on emission related repairs before a waiver was issued. The percentage of waivers issued declined drastically. The percentage of waivers issued dropped from approximately 15.5% to only 1.5% of vehicles that failed an emissions test.
- The cut point for the allowable percentage of carbon monoxide in tailpipe emissions was made more stringent. The allowable percentage was lowered by 0.5 % for 1965 through 1979 model year light duty vehicles. The more stringent cut points resulted in an additional 0.4% of vehicles failing the carbon monoxide component of the test (from 4.5% to 4.9%).
- A standard for hydrocarbon emissions was added for all tested vehicles. 4.3% of tested vehicles failed the hydrocarbon test.

Table 2: Allowable Carbon Monoxide Percentage of Total Tailpipe Emissions, December 1998 to Current.

Light Duty Vehicles (1,500 -8,499 lbs. GVW)		**Change**
1965-1974	5.0%	-0.5%
1975-1979	3.0%	-0.5%
1980	1.5%	*
1981 & newer	1.2%	*

Heavy Duty Vehicles (Over 8,500 lbs. GVW)		**Change**
1965-1974	6.0%	*
1975-1980	5.0%	*
1981 & newer	3.0%	*

Table 3: Tailpipe Emissions Hydro Carbon Thresholds, Initiated December, 1998

Light Duty Vehicles (1,500 -8,499 lbs. GVW)	
1965-1974	900 ppm
1975-1979	700 ppm
1980	400 ppm
1981 & newer	220 ppm

Heavy Duty Vehicles (Over 8,500 lbs. GVW)	
1965-1974	900 ppm
1975-1980	700 ppm
1981 & newer	500 ppm

Description of Recent Changes to the Vehicle Inspection and Maintenance Program

Several additional changes were recently made to the Vehicle Inspection and Maintenance Program. These changes are reflected in emissions estimates for future years in the 1995 Carbon Monoxide Emissions Inventory. The following list defines specific issues and components of the program that have been established recently:

- Beginning in June of 2000, diesel powered vehicles, previously exempt, were required to pass an emissions test in order to retain their registrations.
- Beginning in January of 2000, the test was expanded from an idle only test to a two-speed test conducted at both idle and at 2500 rpm for 25 seconds.
- Beginning in January of 2000, the owners, operators, or affiliates of emissions testing stations are no longer permitted to offer repair services to correct emissions.
- Moving from annual to biennial (every other year) testing was planned to begin in July of 2000. The Emissions Inventory for the *Northern Ada County Carbon Monoxide Limited Maintenance Plan* reflects this change. The Mobile 5b model used to estimate emissions interprets this change to result in slightly increased carbon monoxide emissions, as vehicles with excessive emissions would potentially not be repaired as often.

Appendix B-2
Rules and Regulations for Ada County Automotive Inspection and Maintenance Program

AIR QUALITY BOARD
200 n. 4th St., Suite 10
Boise, ID 83702
(208) 345-9191

AUTOMOTIVE INSEPCTION AND MAINTENANCE PROGRAM

RULES AND REGULATIONS

From website October 11, 2001

AIR QUALITY BOARD
Rules and Regulations

I. AUTHORITY FOR ADOPTION

These Rules and Regulations are established by the Air Quality Board under authority of ordinances titled "the 1991 Motor Vehicle Emissions Control Ordinance".

Title 6, Chapter 1-3 of the Ada County Motor Vehicle Code
City of Boise, Idaho Ordinance Number 5273
Garden City Ordinance Number 558
City of Meridian Ordinance 547
City of Eagle Ordinance Number 177

II. DEFINITIONS

A. Air Quality Board (AQB): the governing body of the AIR Program.

B. AIR Program Station: an approved inspection facility which meets the licensing requirements for an initial emissions test station as outlined in these Rules and Regulations.

C. AIR Program Retest Station: an approved repair facility which meets the licensing requirements for a repair and retest station as outlined in these Rules and Regulations.

D. Audit Gas: the gas specified by the AQB to be used for AIR Program station audits.

E. Automotive Inspection and Readjustment Program (AIR): the program established by Joint Powers Agreement # 1291 between Ada County, and the cities of Boise, Meridian, Eagle, and Garden City to reduce vehicular pollution levels in Ada County.

F. Calibration Gases: gases of manufacturer's specified concentration which are used as references for establishing or verifying the calibration curve of an exhaust analyzer.

G. Certificate of Compliance: the printout from an Air Quality Board approved analyzer showing the results of an emissions inspection (failed test results are valid certificates when accompanied by a Request for Waiver form).

H. "Emissions Technician" means a person who has:

1) Qualified by passing a written and practical exam given by Air Quality Board personnel.

2) Successfully demonstrated the ability to operate, calibrate, and maintain the required analyzers.

3) Applied for and maintains a valid "Emissions Technician" license.

I. Emission Test: the analysis of the exhaust gases emitted from a motor vehicle.

J. Exempt Motor Vehicle: A vehicle which:

1) Is a 1964 or older model year vehicle.

2) Is powered by other than gasoline or diesel fuel (propane, electric, etc.).

3) Is in its first year of operation and being operated by the original owner. (Resold vehicles, even though in their first year of operation, are required to be emissions tested.)

4) Has a maximum vehicle gross weight of less than 1,500 pounds.

5) Is registered as a Motor Home.

6) Is registered as an Idaho Old Timer or Classic Vehicle.

K. Model Year: the year shown on the motor vehicle registration.

L. Motor Vehicle: as defined by the Idaho Code.

M. Non-Exempt Motor Vehicle: Any vehicle which:

1) Is a 1965 or newer model year vehicle.

2) Is gasoline or diesel fuel powered.

3) Weighs over 1,500 pounds.

4) Is not in its first year of operation by the original owner.

5) Is not registered as a Motor Home.

6) Is not registered as an Idaho Old Timer vehicle or Classic vehicle.

N. Span Gas: an authorized AIR Program gas used in weekly analyzer span procedure as described in Section IV.H.

O. Station Sign: the official public designation of an AIR Program Station.

III. EMISSIONS TECHNICIAN LICENSE

A. Applications for License: Application for a license as an Emissions Technician shall be filed with the Air Quality Board. Applications for the Emissions Technician License shall be completed on forms provided by the AQB.

B. Fees:

1) The application fee for an Emissions Technician License is $30.00, payable to the Air Quality Board (AQB). There is no fee for annual renewal.

2) Fees for an Emissions Technician License shall be due upon application for license. Payment must be made with a check or money order drawn to the Air Quality Board.

C. Requirements For Issuance of An Emissions Technician License: An applicant must demonstrate the knowledge and skill necessary to perform an emissions test of motor vehicle engines. Such knowledge and skill will be shown by passing:

1) A written or oral Emissions Technician Qualification Test that tests the applicant's knowledge of the following:

   a) Operation of an exhaust gas analyzer, including the performance of a span gas procedure and

   b) Those portions of the "Rules and Regulations" with which a technician needs to be familiar in order to effectively carry out his duties.

   Note: If an oral exam is given, a written list of answers must accompany the test answer sheet. Interpreters for non-English speaking applicants are to be provided by the applicants.

2) A performance test that demonstrates the applicant's skill in the performance of emissions testing. The performance test will be comprised of one or more of the following items as determined by the Air Quality Board personnel administering the evaluation.

   a) Visual inspection of the required emissions control equipment for 1984 and newer vehicles.

   b) Demonstration of skill in the proper analyzer use, care, maintenance, and gas spanning.

   c) Demonstration of ability to conduct the emissions test.

   d) Demonstration of ability to properly use AIR Program forms.

D. Approval Procedure: Applications submitted to the AQB will be reviewed for compliance with paragraph IIIC above. Applicants successfully meeting the requirements for Emissions Technician License will be issued an Emissions Technician License by the AQB.

E. Transfer of Emissions Technician License:

1) The Emissions Technician must notify the AQB, in writing within five (5) days, when he/she begins employment at another AIR Program Station or is no longer employed as an Emissions Technician.

2) The AIR Program Station must notify the AQB in writing within five (5) days after employing an Emission Technician who is transferring his/her Emissions Technician License.

F. Lapse of Emissions Technician License:

1) It is the responsibility of the Emissions Technician to pursue license renewal.

2) A person issued an Emissions Technician License who does not make application for renewal prior to expiration shall be deemed to have forfeited the said License and shall be required to reapply, remit the required application fee, and pass the Emissions Technician Qualification Test before a new license will be issued.

G. Re-qualification Requirements for Emissions Technician:

1) Emission Technicians shall be required to re-qualify if the AQB determines it is necessary to update their technical qualifications.

2) The AQB will mail a notice to the Emissions Technician's AIR Program Station address specifying requirements for re-qualification.

H. Revocation of Emissions Technician License:

1) The AQB has the authority to issue warnings, and suspend, or revoke an Emissions Technician License upon showing that emission tests are not being performed in accordance with established ordinances and these Rules and Regulations. This authority is established under the Motor Vehicle Emissions Control Ordinances. The AQB, in accordance with controlling ordinances, delegates authority to its Quality Assurance employees to issue notices of alleged violation of these Rules and Regulations.

2) Upon notice of alleged violation as described in paragraph 1 above, the technician /station cited may, within three work days, notify the AQB that he requests a hearing on the issue. The Executive Director of the AQB (or the Chief, Quality Assurance in the Director's absence) will convene a hearing panel within five work days to determine the validity of the accusations and, if validated, impose penalties. This panel will consist of at least three members, one of whom will be a licensed emissions technician or station owner. Rulings of this panel will be imposed upon completion of said hearing. Findings of this panel may be appealed to the AQB in accordance with Section V.J.

3) If a hearing is not requested the Executive Director will determine the validity of the accusation and, when necessary, impose appropriate penalties.

4) Violations and penalty guidelines are listed in Section V, Item H, Violations and Penalties.

IV. LICENSING OF AIR PROGRAM STATIONS AND AIR PROGRAM RETEST STATIONS

A. General:

1) No person or enterprise shall in any manner represent any place as an AIR Program Station or AIR Program Retest Station unless such station is operated under a valid license issued by the Air Quality Board.

2) No license for any AIR Program Station or AIR Program Retest Station may be assigned, transferred or used by other than the original applicant for that specific station.

3) Applications for license as an AIR Program Station or AIR Program Retest Station shall be made on the forms provided by the AQB. No license shall be issued unless the AQB finds that the facilities, tools and equipment of the applicant comply with the requirements set forth in Section IV.C, Requirements for Licensing of an AIR Program Station or AIR Program Retest Station.

    a) Applicants may choose to limit the performance of Emissions Tests to a particular fleet of motor vehicles, make, model, type of motor vehicle or list of customers.

    b) Should the station applicant elect to limit the performance of Emissions Tests, the station representative must indicate on the application form, the type(s) of motor vehicle or fleet

the station will test. The AIR Program Station may be required to furnish the AQB with special reports describing the station's operating procedures.

c) Should the AIR Program Station desire to expand the emissions testing service to include new vehicle types or additional fleets, the station must notify the AQB in writing five (5) days prior to performing emissions tests on the additional vehicles.

B. Fees:

1) The fee for issuance of an initial station license is $30.00.

2) Fees for issuance of the station license shall be due upon issuance. Payment must be made with a check or money order drawn to the Air Quality Board.

C. Requirements for Licensed AIR Program Stations: In order to qualify for issuance and continuance of an AIR Program Station License, an establishment must meet the following requirements:

1) Must have a permanent location.

2) Must sign a contract pledging the station will not make any emissions related adjustments or repairs on the vehicles it emissions tests. (AIR Program Stations limiting emissions testing to a particular fleet of vehicles are exempted from this paragraph.)

3) Must employ at least one individual who has been issued an Emissions Technician License by the Air Quality Board.

4) Must demonstrate the ability to perform the emissions test and comply with reporting and record keeping requirements described in Section V.E.

5) Must obtain and maintain in force appropriate business liability insurance.

6) Must have the following tools, equipment and supplies available for performance of the emissions test.

a) AQB approved NDIR exhaust analyzer that meets the 1990 California Bureau of Automotive Repair (BAR 90) or later specifications and the requirements of Subsection 207(b) of the Federal Clean Air Act. The analyzers will be kept in an environment which complies with the manufacturer's specifications. Repair of all exhaust gas analyzers shall be in accordance with the manufacturer's procedures using specified replacement parts. Each NDIR exhaust analyzer will have an associated users manual, published by the original equipment manufacturer, which includes analyzer model and serial number, analyzer calibration instructions, operating instructions, and the manufacturer's recommended periodic maintenance/inspection schedule and procedures. The service(s) to be performed only by the manufacturer shall be clearly identified.

b) Test gas bottles, a gas pressure meter which registers calibration bottle pressure, and a pressure regulator for gas spanning of the analyzer or other systems that equalizes pressure and flow between the test gas bottle and the analyzer.

c) Non-reactive tailpipe extenders or probe adapter for inspecting vehicles with screened or baffled exhaust systems.

d) A diesel exhaust opacity analyzer approved by the Air Quality Board for use in the AIR Program.

7) Pay to AQB the required licensing fee.

D. Requirements for Licensed AIR Program Retest Stations: In order to qualify for issuance and continuance of an AIR Program Retest Station License, an establishment must meet the following requirements:

1) Must have a permanent location.

2) Must employ at least one individual who has been issued an Emissions Technician License by the Air Quality Board.

3) Must demonstrate the ability to perform the emissions test and comply with reporting and record keeping requirements described in Section V.E.

4) Must obtain and maintain in force appropriate business liability insurance.

5) Must have the following tools, equipment and supplies available for performance of the emissions test.

a) AQB approved NDIR exhaust analyzer that meets the 1990 California Bureau of Automotive Repair (BAR 90) or later specifications and the requirements of Subsection 207(b) of the Federal Clean Air Act. The analyzers will be kept in an environment which complies with the manufacturer's specifications. Repair of all exhaust gas analyzers shall be in accordance with the manufacturer's procedures using specified replacement parts. Each NDIR exhaust analyzer will have an associated users manual, published by the original equipment manufacturer, which includes analyzer model and serial number, analyzer calibration instructions, operating instructions, and the manufacturer's recommended periodic maintenance/inspection schedule and procedures. The service(s) to be performed only by the manufacturer shall be clearly identified.

b) Test gas bottles, a gas pressure meter which registers calibration bottle pressure, and a pressure regulator for gas spanning of the analyzer or other systems that equalizes pressure and flow between the test gas bottle and the analyzer.

c) Non-reactive tailpipe extenders or probe adapter for inspecting vehicles with screened or baffled exhaust systems.

d) A diesel exhaust opacity analyzer approved by the Air Quality Board for use in the AIR Program.

e) An AIR Program Retest Station can act as a retest station for either gasoline powered vehicles, diesel powered vehicles or both. The AIR Program Retest Station must have the appropriate gas analyzer, as described above, for the type of retest being performed.

6) Pay to AQB the required licensing fee.

E. Approval Procedure:

1) Applications received by the Air Quality Board will be reviewed for completeness and an inspection of the facility will be performed. An inspection report will be prepared for the Air Quality Board's review.

2) Stations which meet the requirements of Section IV.C will be granted an AIR Program Station License or AIR Program Retest Station License and issued an AIR Program Station sign. The station sign and license shall be posted in a conspicuous place, readily visible to the public. The station sign and license shall remain the property of the Air Quality Board.

F. Revocation of AIR Program Station or AIR Program Retest Station license: The Air Quality Board has the authority to issue warnings and suspend or revoke a station license upon a showing that emission tests are not being performed in accordance with established ordinances and these Rules and Regulations. This authority is established under the Motor Vehicle Emissions Control Ordinances. The AQB may assign the authority to issue warnings, and issue a Notice of Suspension or Notice of Revocation to its designated agents.

1) The AQB, in accordance with controlling ordinances, delegates authority to its Quality Assurance employees to issue notices of alleged violation of these Rules and Regulations.

2) Upon notice of alleged violation as described in paragraph 1 above, the station cited may, within three work days, notify the AQB that it requests a hearing on the issue. The Executive Director of the AQB (or the Chief, Quality Assurance in the Director's absence) will convene a hearing panel within five work days to determine the validity of the accusations and, if validated, impose penalties. This panel will consist of at least three members, one of whom will be a licensed emissions mechanic or station owner. Rulings of this panel will be imposed upon completion of said hearing. Findings of this panel may be appealed to the AQB in accordance with Section VJ.

3) If a hearing is not requested the Executive Director will determine the validity of the accusation and, when necessary, impose appropriate penalties.

4) Violations and penalty guidelines are listed in Section V, Item H, Violations and Penalties.

G. Analyzer Specifications:

1) No emissions test of a gasoline powered vehicle shall be performed unless the type of instrument used for measuring the exhaust gases meets the 1990 California Bureau of Automotive Repair Standards (BAR 90) and the requirements of Section 207(b) of the Clean Air Act. A copy of the current list of approved NDIR exhaust gas analyzers may be obtained from the Air Quality Board.

2) No emissions test of a diesel powered vehicle shall be performed unless the type of instrument used for measuring the exhaust gases has been approved by the Air Quality Board for use in the AIR Program.

H. Test Gas Specifications:

1) Test Gas Blend

   a) Test gas used for spanning exhaust gas analyzers will be produced and supplied to AIR Program Stations in accordance with EPA-A-A-TSS-83-8-B. A copy of this document is available at the Air Quality Board.

   b) Containers

      i. Test gases shall be supplied in containers which meet all the provisions of the Occupational Safety and Health Administration (OSHA), as specified in 36 Federal Register 105, dated May 29, 1971.

      ii. Containers may either be low pressure, 7.5 cubic foot DOT 39 non-rechargeable bottles or high pressure, reusable cylinder type. If high pressure, reusable type they must meet the following requirements:

         (a) The cylinder shall meet DOT specifications for 1-A, 3-A, 3-AA, T, or equivalent cylinders.

         (b) The rated service pressure shall be a minimum of 1800 psi.

         (c) GGA-350 Diaphragm packless valves shall be installed in the cylinders.

2) Production

   a) The gas blender shall produce the test gas in batch form. A batch shall be considered to be any number of cylinders of identical concentrations produced at any given blending.

   b) The gas blender must follow the blending procedure listed in the technical report, "EPA Recommended Practice For Naming T/M Calibration Gas," EPA-AA-TSS-83-8-B, September 1983. The gas supplier must provide the Air Quality Board with documentation that will certify the gas was blended according to the above procedure. Copies of the procedure are available from the AQB.

3) Gas Supplier Records. - For each batch blended, a record must be kept by the gas supplier as to the whereabouts of each bottle sold. These records must be made available to the Air Quality Board. The records must be kept for one year from the time the last bottle of the batch is sold to an AIR Program Station.

4) Batch Recall Procedure - In the event a batch of test gas is suspected a being out of the specifications listed in Section IV.H.la. the AQB will follow the procedure below:

   a) The AQB will request the gas blender to locate all of the bottles from the batch.

   b) A check to verify the cylinder concentration will be made.

c) If the batch is confirmed to be out of specifications, the gas supplier will be notified in writing. The gas supplier will have 14 days from the time of notification to provide the Air Program stations new bottles of test gas.

d) The replacement test gas must be produced and undergo the same name verification and approval as specified above.

e) A count of the recalled gas bottles and any bottles which were not located or recalled, for any reason, will be provided to the AQB. This information shall be provided to the AQB within 21 days of written notice.

V. AIR PROGRAM STATION AND RETEST STATION OPERATION

A. General:

1) No person shall in any manner represent any place as an AIR Program Station for the performance of emissions tests unless the station has obtained an AIR Program Station license.

2) No person shall in any manner represent any place as an AIR Program Retest Station for the performance of emissions tests unless the station has obtained an AIR Program Retest Station license.

3) No person shall perform an AIR Program vehicle exhaust emissions test unless he/she possesses a valid Emissions Technician's License.

4) The station is required to notify the AQB in writing five (5) days after employing an Emissions Technician.

5) The station is required to notify the AQB within five (5) days of terminating an Emissions Technician.

6) Noncompliance with any section of this document can be justification for denial, suspension or revocation of either the Station License, Emissions Technician's License or both.

B. Verification of Exemption:

1) Alternate Fuel Identification. AIR Program Stations are required to identify, at no charge, motor vehicles that do not have gasoline or diesel fueled engines. Vehicle owners may bring their motor vehicles to any AIR Program Station to have their vehicle identified. The licensed Emissions Technician will verify that the vehicle matches the information on the AQB notice form (if presented) and then the Technician will fill out a Alternative Powered Certification form, give one copy to the vehicle owner and keep the other copy until picked up by Air Quality Board personnel.

2) Vehicles of less than 1500 pounds gross vehicle weight. AIR Program Stations are required to use title/registration documents, technical descriptions, etc. to identify vehicles with a gross vehicle weight of less than 1500 pounds. When documentation is inconclusive, refer customer to the Air Quality Board.

3) New, First Owner Vehicles. Vehicles in the current or preceding model year with less than 5,000 miles, or any vehicle which the owner can show proof is in its first year of use, should be exempted from testing. When new vehicles, as described above, are issued a notice that emissions testing is due, the licensed Emissions Technician will verify the vehicle is a new, first owner vehicle. The station will perform the verification at no charge and enter the verification in the analyzer. If unable to enter the data in the analyzer, "New Vehicle Exempt" forms may be used. The Air Quality Board's copy of the "New Vehicle Exempt" forms are to be held for pickup by AQB personnel.

4) Motorcycles, Farm Tractors, Classics and Idaho Old Timers. These vehicles should be exempted by Air Quality Board staff and should not receive notifications. If vehicle owners of these vehicles receive a notice of inspection, they should be referred to the Air Quality Board.

C. Certificates of Compliance:

1) General

a) No person shall willfully make, issue or knowingly use any imitation or counterfeit Certificate of Compliance that designates the motor vehicle complies with the AIR Program.

b) No person shall possess a Certificate of Compliance if he knows the same is counterfeit or was issued for another motor vehicle, or was issued without an emissions test having been made.

2) Purchase of Certificates of Compliance

a) Any person acquiring a business which has been licensed as an AIR Program Station or AIR Program Retest Station is prohibited from using the AIR Program Station License or AIR Program Retest Station License and is prohibited from using the BAR9O equipment to produce a Certificate of Compliance.

b) The act of performing an emissions test and issuing a Certificate of Compliance constitutes the purchase of the Certificate of Compliance from the Air Quality Board. Air Quality Board personnel will periodically collect test data from all authorized BAR 90 analyzers. The Air Quality Board will then bill stations for the number of certificates issued. Failure of a station to pay for Certificates of Compliance when charged is grounds for suspension of the station's license.

c) Payment for Certificates of Compliance is due ten (10) days from the billing date.

d) Certificates of Compliance cost $2.00 each.

D. Public Notices:

1) Licensed AIR Program Stations and AIR Program Retest Stations shall post in a clearly legible fashion, in a conspicuous place inside the station:

a) Maximum fee chargeable for the emissions test;

b) Minimum expenditure required to quality for waiver of emissions standards.

c) Station license;

d) Each Emissions Technician's License certificate;

e) AIR Program motor vehicle model year emissions standards;

2) The station shall post in a clearly visible place outside the station the official program sign issued by the Air Quality Board. AIR Program Stations that limit the performance of Emissions Tests as described in Section IV.A.3.a through c, are not required to display the station sign along with the public notice signs listed in Section V.D.1.a through e above.

3) Mobile stations must post in a visible place, either on a sign board or the body of the motor vehicle used to transport the analyzer and supplies, the notices in Section V.D.1 and 2 above.

E. Record Keeping: The BAR 90 tester maintains internal records of sufficient quality and redundancy to eliminate the need for additional record keeping by AIR Program Stations. Stations are only responsible for maintaining copies of Alternate Powered /New Vehicle Certifications and Waiver forms until collected by Air Quality Board personnel.

F. Quality Control: Quality control is the responsibility of the AIR Program Station. The BAR 90 analyzer is designed to require the accomplishment of certain quality control measures on a regular basis. Emissions inspections cannot be performed if these quality control measures are not accomplished.

G. AIR Program Station Reporting:

1) Vehicles tested during registration month: The AIR Program Station will keep all Alternate Powered /New Vehicle Certifications and Waiver forms until picked up by Air Quality Board personnel.

2) Vehicles tested after their required inspection month: The AIR Program Station will keep all Alternate Powered /New Vehicle Certifications and Waiver forms until picked up by Air Quality Board personnel. In addition:

a) Individuals who have their vehicles tested after the required inspection month may be required to pay a late charge, established by the Air Quality Board. Thus far, no late charge penalty has been established. If the incidence of late inspections is great, this charge may be instituted to cover the increased workload caused by special handling required.

b) If late charges are imposed, the AIR Program Station shall collect the late charge when performing the emissions test. The AIR Program Station will be billed for all late tests accomplished.

H. Violations and Penalties:

1) The complete operation of an AIR Program Station or AIR Program Retest Station shall be the responsibility of the station owner. Failure to comply with the appropriate provisions of these Rules and Regulations adopted by the Air Quality Board or the provisions of the enabling county/city ordinances will be considered sufficient cause for warning, imposing fines, and/or

suspension or revocation of inspection licenses for either the station, emissions technician or both.

2) Notice of Alleged Violation. If a violation of the enabling ordinances or these rules and regulations is detected or alleged, a Notice of Alleged Violation will be issued. Once a Notice of Alleged Violation is issued, the following procedures will be followed:

   a) Notice issued to Emission Technician. The Executive Director of the AQB (or the Chief, Quality Assurance in the Director's absence) will convene a hearing panel within five work days to determine the validity of the accusations and, if validated, impose penalties. This panel will consist of at least three members, one of whom will be a licensed emissions technician or station owner. Rulings of this panel will be decided by majority vote of the members. Penalties, when appropriate, will be imposed immediately upon completion of hearing. Findings of this panel may be appealed to the full AQB at its next scheduled meeting.

   b) Notice issued to AIR Program Station or AIR Program Retest Station. The Executive Director of the AQB (or the Chief, Quality Assurance in the Director's absence) will complete an investigation into the alleged violation within three work days. If the violation is validated, the Director or his representative will immediately impose appropriate penalties. Rulings by the Director may be appealed to the full AQB at its next scheduled meeting.

3) Penalties. Upon the determination of a violation of these Rules and Regulations or enabling ordinances, the Air Quality Board, or its designated representatives, may assess warnings, impose fines, and/or suspend or revoke the station and/or emissions technician licenses. The station owner/agent bears the burden of proving that proper supervision was provided so that the violation by employed emissions technician could have been prevented.

4) Application. Violation numbers 1.0 through and including 11.0 are of such serious nature that they jeopardize the integrity of the AIR Program. As such, penalties for these may be imposed without prior warning, either verbal or written. The following list of violations and penalties is a guideline. It is not mandatory that these guidelines be followed, however, in the interest of promoting a strong AIR program, it is highly recommended that penalties be enforced as shown.

5) Definitions:

   a) Notice of Alleged Violation. Notice given to station or technician that a violation of enabling ordinances or rules and regulations is alleged and disciplinary action may result.

   b) Warning. A written warning advising the AIR Program Station and/or licensed Emissions Technician of the violation and the corrective action to eliminate the violation. The original copy of the warning will be placed in the station's audit history file. A copy will also be delivered to the station and/or technician to whom the warning was issued.

   c) Suspension. A specified period of time, during which the license of an AIR Program Station and/or Emissions Technician is withheld by the Air Quality Board. All official AQB documents and materials may be retained by the Air Quality Board until the suspension period is completed and any reapplication requirements are fulfilled.

d) Revocation. A permanent forfeiture of license and privileges as an AIR Program Station and/or Emissions Technician. All official documents and material will be confiscated by the AQB.

e) Notice of Suspension or Revocation. A written notification issued by the Air Quality Board or its agents indicating that there are sufficient grounds to require a license suspension or revocation subject to the right of appeal. The notice shall further specify the action being taken and its effective dates.

f) Fine. Monetary penalty imposed for violations of these Rules and Regulations.

6) Official documents and materials. Whenever an AIR Program Station, AIR Program Retest Station or Emission Technician License is suspended or revoked, the Air Quality Board or its agents may order the surrender to the Air Quality Board of the following items (as appropriate):

a) Inspection records.

b) Air Station license and sign.

c) Unused AQB certificate of compliance.

d) Technician license

e) Blank data forms.

7) Subsequent violations. Determination of second or subsequent violations is made on the basis of previous violations in the same category within a three (3) year period.

8) Multiple violations. In the case of multiple violations considered at one time, the Air Quality Board of its agents will impose separate penalties for each violation. The Air Quality Board or its agents, at their discretion, may direct that suspensions run concurrently.

9) Voluntary discontinuance. An Air Station License shall be canceled by the Air Quality Board or its agents whenever the owner voluntarily discontinues the operation of an AIR Program Station. Remaining emission inspection materials shall be returned to the air Quality Board or its agents immediately.

10) Abandonment. An Air Station License shall be canceled by the Air Quality Board or its agents, and inspection materials confiscated when the owner of record abandons the place of business and cannot be located within ninety (90) days.

11) Sale of business. If an AIR Program Station is sold or leased to a new owner, an application will not be considered while the station is suspended, or restored pending an appeal of suspension.

12) Confiscated materials. Certificates of compliance and records confiscated as the result of a suspension or revocation will be retained by the Air Quality Board or its agents. They shall be returned to the AIR Program Station if inspection privileges are restored or the station is relicensed.

13) Remedial Training. Following any suspension, a licensed technician will not be allowed to return to emissions testing duties until he has successfully completed a remedial training course taught by the Air Quality Board or their designated representative.

I. Reapplication:

1) If an AIR Program Station, AIR Program Retest Station or Emissions Technician license expires during a suspension period, inspection privileges shall not be restored until an application and fees for relicensing have been received and reviewed by the Air Quality Board.

2) Following a suspension of three months or more, a complete and thorough investigation by quality assurance personnel will be conducted to determine if the applicant qualifies for relicensing under the requirements of the Air Quality Board. Other applications for relicensing are subject to investigation at the discretion of the Air Quality Board.

J. Appeal for Hearing:

1) Requests for an Air Quality Board hearing following a notice of suspension or revocation of license must be made in writing to the Air Quality Board within five (5) days of the date of the notice. The right to appeal and a hearing shall be considered relinquished if the request is not made within the above allotted time period.

2) Upon receipt of an appeal, a Hearing Committee consisting of at least three members will be selected from regular members of the Air Quality Board.

   a) Notice of hearing will be furnished to the appellant in writing within five (5) working days of receipt of the request. The Hearing Committee will normally meet within five (5) working days of the notice, at which time the parties may present evidence, cross-examination or argument. The Hearing Committee, after considering all evidence, will determine if sufficient grounds for suspension or revocation exists, and if so, the Hearing Committee will evaluate the imposed penalty. The Hearing Committee shall have the authority to approve, amend, delete, or otherwise change the imposed penalty as they see fit. The decision of the Hearing Committee is final.

   b) Notice of decision will be made to the appellant in writing within five (5) working days of the hearing. The notice will include the findings of fact that form the basis for the Hearing Committee's decision. A record of the hearing shall be maintained for a period of one year.

   c) The Air Quality Board or its agents shall not be held liable for any loss of revenue as the result of a suspension or revocation.

VI. EMISSIONS TEST PROCEDURE

A. General:

1) The Emissions Test must be performed by a licensed Emissions Technician.

2) The Emissions Test must be performed at a licensed AIR Program Station or AIR Program Retest Station, as described in Section IV, and operated in accordance with procedures established in Section V, "Air Program Station Operation".

3) The maximum amount a station may charge for the labor involved to inspect a vehicle is ten dollars ($10.00).

4) Certificates of Compliance shall cost no more than two dollars ($2.00).

5) The maximum test charge shall therefore be twelve dollars ($12.00).

6) AIR Program Retest Stations can only test vehicles which have failed an emissions test at a licensed AIR Program Station.

7) AIR Program Retest Stations can only charge for Certificates of Compliance. (It may not charge the emissions test labor charge.)

B. Applicability: All nonexempt motor vehicles must be inspected annually on or before the end of its AIR Program required inspection month. The purpose of this inspection is to verify compliance with the emission standards established by the Air Quality Board and published in paragraph VI.D below. Non-exempt vehicles will have their required inspection month established as the second month following the month in which the vehicle is registered/re-registered. Once the AIR Program required inspection month is established, it will not normally be changed unless the vehicle registration is allowed to expire (in which case a new AIR Program required inspection month will be established when the vehicle is again re-registered as a non-exempt vehicle.) In cases where the inspection has been delayed more than six months, the inspection month will be changed to coincide with the most recent emissions test to avoid having to test the vehicle again in less than six months.

C. Identification of Motor Vehicles Complying With the Automotive Inspection and Readjustment Program: Motor vehicles that are required to comply with the AIR Program will be identified by review of Idaho Transportation Department motor vehicle registration records and tracked for compliance by the Air Quality Board. Vehicle owners will be given a Certificate of Compliance when their vehicle is emissions tested. It is recommended, though not required, that the owner keep the Certificate of Compliance with the vehicle as proof of compliance with emissions testing requirements.

D. Standards:

1) Tampering: Motor vehicles of the model years 1984 and newer are to be inspected for the presence of the catalytic converter, and air injection system. Motor vehicles which have had those systems removed or defeated are to be denied a Certificate of Compliance until the motor vehicle owner restores them to their original or operating condition. (The systems are not required to be installed on motor vehicles which at the time of production did not have the system installed by the manufacturer.) WAIVERS UNDER SECTION VI.F. DO NOT APPLY. However, the cost of repairs to vehicle emission systems may be included for waiver requirements for additional repairs after the tampered emissions system is fully functional.

2) Emissions Standards:

LIGHT DUTY GASOLINE VEHICLES

	CO	HC
Model Years 1965 to 1974	5.0%	900 ppm
Model Years 1975 to 1979	3.0%	700 ppm
Model Year 1980	1.5%	400 ppm
Model Years 1981 & Newer	1.2%	220 ppm

HEAVY DUTY GASOLINE VEHICLES (over 8.500 lbs GVW)

	CO	HC
Model Years 1965 to 1974	6.0%	900 ppm
Model Years 1975 to 1980	5.0%	700 ppm
Model Years 1981 & Newer	3.0%	500 ppm

DIESEL

	CO
Model Years 1965 to 1974	70%
Model Years 1975 to 1991	55%
Model Years 1991 & Newer	40%

E. Emissions Test Procedure:

1) General

a) The inspections are to be performed at licensed AIR Program Station or AIR Program Retest Station by licensed Emissions Technician.

b) Emissions test will be performed using the BAR 90 emissions test sequence. This is a menu driven, step by step procedure which insures proper procedures are followed. The 30 second preconditioning is intended to assure that the vehicle is warmed up, however, a cold vehicle may require additional warm-up for proper testing. If a vehicle engine appears to be cold, have the owner drive the vehicle around for 2 to 5 minutes to adequately warm up the engine.

c) AIR Program Stations will record and charge the appropriate emissions test fee for all tests performed including vehicles failing visual checks.

d) AIR Program Retest Stations cannot perform initial emissions tests on vehicles, i.e. they can only perform emissions tests on vehicles which have failed (either gas check or visual check) an emissions test at a licensed test only station.

2) First Test Procedure

a) Select the appropriate menu item to begin a certified emissions inspection and type in the identifying vehicle information.

b) Follow the step by step test procedures established by the BAR 90 analyzer.

c) If the motor vehicle is of the model year 1984 or newer a visual inspection will have to be performed. Open the motor vehicle hood and check for the presence and operation of the air injection system. Examine the exhaust system for the presence of the catalytic converter. If any of the systems have been tampered with, the inspection station will take the following actions:

   i. Select "F" in the appropriate blank on the "visual inspection" screen during the test sequence.

   ii. Complete the test, sign the printout from the analyzer and give it to the motor vehicle owner. (Stations may, at their option, keep a copy of the test data printout.) Inform the vehicle owner he/she has thirty (30) days to restore the emission systems to the original operating condition and comply with the AIR Program model year CO and/or HC standards. (If additional time is required, contact the AQB.)

d) Complete the test in accordance with the computer directed test sequence. (If the exhaust pipe is baffled, a tailpipe probe extender at least 12 inches long must be inserted in the exhaust prior to the emissions test.)

e) At the completion of the test sequence the analyzer will print a result of the test. The emissions technician will sign the printout and give it to the motor vehicle owner. If the vehicle fails the first test, the vehicle owner has thirty (30) days to perform or have performed adjustments/repairs. If the vehicle is brought back within the thirty (30) days, it must be given another emissions test without charging an additional labor charge. (The only additional charge allowed is the Certificate of Compliance fee for a completed test.)

f) Should the motor vehicle owner wish to challenge the analyzer readings, the motor vehicle owner must notify the AQB within 72 hours. The Board will either immediately perform an audit of the analyzer or arrange for an audit in the presence of the motor vehicle owner, station representative and AQB auditor according to the procedure described in Section VII, "Air Station Audit Procedure".

3) Repair Procedures

a) Vehicles exceeding the model year CO and/or HC standards have thirty (30) days to have adjustments and/or repairs performed and return for a free re-inspection at original place of inspection. Vehicle owners of vehicles which fail an emissions test will be given a list of AIR Program Retest Stations where the vehicle can be repaired and receive a free retest.

b) Failed vehicles covered by 2 year/24,000 mile, Section 207(b) "Performance Warranty" provisions of the Federal Clean Air Act.

   i. Vehicles covered by the 207(b) warranty should be repaired or adjusted by an authorized warranty repair facility to protect the entitlements granted by the motor

vehicle warranty and to protect the motor vehicle owner from any charges that may be covered by the 207(b) warranty.

ii. The only fees that the motor vehicle owner is required to pay are the maximum Emissions Test fee and the Certificate of Compliance fee as specified in paragraph VI.A.

iii. The warranty provisions of Section 207(b) of the Clean Air Act specify that the repairs or adjustments are to be performed at no cost to the vehicle owner and must lower the CO percentage emission level to the specified model year CO percentage standard.

c) Failed motor vehicles covered by the 5 year/50,000 mile Section 207(a), "Defect Warranty Provisions" of the federal Clean Air Act.

i. The motor vehicle owner may have to pay a diagnostic fee to identify faulty emissions control components in addition to the maximum Emissions Test fee and Certificate of Compliance fee as specified in paragraph VI.A. If the faulty component is covered under the 207(a) Warranty provision and the diagnosis was performed at an authorized warranty repair facility, the diagnosis fee is to be refunded or not charged to the motor vehicle owner.

ii. If the component(s) are not covered under the Section 207(a) warranty, the vehicle owner is required to have repairs or adjustments performed until either the vehicle is in compliance with emission standards or the repair costs have met or exceeded the maintenance waiver amounts shown in Section VI.F.

d) Vehicles that fail the emissions standards and do not qualify for warranty repairs must receive repairs until either the vehicle is in compliance with inspection standards or the applicable waiver amount has been exceeded (see paragraph VI.F.).

4) Retest Procedures

a) Test Only Station - re-analyze the motor vehicle's exhaust gas according to the procedures specified in Section VI.E.2, "First Test Procedures" except enter "xR" (where x= 1 to 9) for type of test instead of "I" for initial test and proceed according to the results of the retest as follows:

i. Vehicle passes retest. Sign test results and give copy to vehicle owner. Charge Certificate of Compliance fee.

ii. Vehicle fails retest and maintenance costs have exceeded maintenance waiver amount. Fill out the data blocks for Name, VIN and License on the Request for Waiver form and have the vehicle owner sign the form. Give the long copy of the form to the vehicle owner and hold the short copy until picked up by Air Quality Board personnel. Charge the vehicle owner for the completed test including the Certificate of Compliance fee. (The test data results page and Request for Waiver together comprise the Certificate of Compliance.)

iii. Vehicle fails retest but repair costs have not exceeded maintenance waiver amounts. The owner must seek additional repairs and adjustments and retest, however, the station is only required to give one free retest. DO NOT collect the Certificate of Compliance fee.

b) Repair and Retest Station

i. Before performing any retest, be sure the vehicle has failed an emissions test at a licensed AIR Program "test only" station.

ii. After repairs have been performed, re-analyze the motor vehicle's exhaust in accordance with paragraph E.4.a. above.

iii. Do not charge for the emissions test itself. If the vehicle passes the retest or a waiver is granted collect the Certificate of Compliance fee and remit the fee to the AQB.

F. Waiver of AIR Program Emission Standards:

1) Any vehicle which fails to pass an emissions test must receive repairs in a sincere effort to fix whatever malfunction(s) are causing the high level(s) of pollutants. It is recognized that some mechanical problems may be difficult to diagnose and fix and that open ended, expensive repairs could pose a hardship. Therefore, provisions for granting a waiver of the AIR Program emission standards are established in the following paragraphs. In all cases where a waiver is granted, the Emissions Technician will explain to the vehicle owner that failure of the emissions test means the vehicle is not running properly, excess fuel is being burned, and, in the worst case, damage may occur to engine components.

2) Procedures

a) The owner of a vehicle which fails its emissions test must show proof that a minimum of $150.00 has been spent on emissions related repairs subsequent to the failure of the emissions test.

b) A vehicle whose owner has spent in excess of the above amount in attempting to adjust and repair the emissions system of a vehicle qualifies for a waiver to the AIR Program emissions standards.

c) The Emissions Technician will fill out a Request for Waiver form and have the vehicle owner sign it. The vehicle owner will be given the long copy of the form (which explains the waiver policy) and the short copy will be held until picked up by Air Quality Board personnel.

d) The Emissions Technician will collect copies of receipts for parts and repairs which demonstrate that $150.00 has been spent attempting to fix the vehicles problems. The copies of the receipts will be submitted to the Air Quality Board with the short copy of the Request for Waiver form.

3) A vehicle which has had its emissions system tampered with (parts missing or intentionally defeated) will not be granted a waiver under this paragraph unless the emissions equipment has been made fully functional. If, after repairing the tampered emissions equipment, the vehicle

requires further repairs to be brought within emissions standards, the cost required to repair the emissions equipment can be considered for waiving further repairs.

4) All cases where the technician is uncertain as to whether the repairs qualify towards the waiver minimums should be referred to the Air Quality Board Quality Assurance office.

5) The intent of the waiver provisions of this section is to avoid financial hardship on vehicle owners who would otherwise have to spend excessive amounts in order to bring their vehicles into AIR Program compliance. If repairs required under this paragraph pose a financial hardship on a vehicle owner(s), the Air Quality Board shall have the authority to issue waivers without requiring the expenditure of the amounts listed in paragraph VI.F. 1 above. Such determination of hardship shall be made on a case-by-case basis by the Air Quality Board staff.

6) A waiver under this paragraph is only valid until the vehicle's next required inspection cycle.

VII. AIR PROGRAM STATION AUDIT PROCEDURE

A. Applicability:

1) Each AIR Program Station and AIR Program Retest Station is required to follow the Quality Control Procedures described in Section V.F. "Quality Control".

2) The AQB will perform a monthly audit of each AIR Program Station and AIR Program Retest Station to certify that the quality assurance procedures are being followed.

3) Should a test given by the station be challenged, the AQB will resolve the complaint using the procedure in paragraph B below.

B. Audit Procedure:

1) Analyzer Audit - The Air Quality Board's auditor will review the current analyzer calibration data stored in the computer and may ask to observe the station's Emissions Technician perform a three day calibration and/or a leak check on the station's analyzer. The computer keeps a record of all calibrations done and these will be reviewed for any developing trends.

2) Emissions Test Audit Procedures

   a) The Air Quality Board's auditor may, during the monthly station audit, observe one or all of the station's Emissions Technicians perform either the Automotive Emissions Procedure, First Test Procedure Section VI E.2. or the Retest Procedure Section VI E.4.

   b) Should a vehicle owner request a challenge test, the Air Quality Board's auditor will arrange a time for performance of both the station Audit Procedure (Section VII B) and the Automotive Exhaust Emissions Test Audit. If it is determined that the station's analyzer is out of calibration or if the exhaust emission analysis was not performed in accordance with the requirements of Section VI, the station will be required to refund to the vehicle owner any collected moneys and have the analyzer repaired or the procedure corrected. A summary report describing the result of the challenge test and audits along with the audit checklist will be prepared for AQB review.

Appendix B-3
Enforceable Regulations – Local Ordinances Requiring Emissions Testing

ADA COUNTY

6-1-3: MOTOR VEHICLE EMISSIONS CONTROL

6-1-3-1: SHORT TITLE
This section 6-1-3 may be cited as the *1999 MOTOR VEHICLE EMISSIONS CONTROL ORDINANCE*.

(Ord. 130, 8-28-1984; amd. Ord. 145, 2-18-1985; amd. Ord. 206, 8-10-1989; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-2: LEGISLATIVE FINDINGS AND PURPOSE OF ORDINANCE

It is found and declared that exhaust emissions from motor vehicles are a major source of air pollution throughout Ada County and such air pollution is a health hazard to all residents of the county and its incorporated cities;

It is further found and declared that an effective system of periodic motor vehicle inspection and maintenance will reduce the level of vehicular-based air pollution;

It is further found and declared that the federal government has mandated to the several states and local entities the ultimate responsibility for periodic motor vehicle inspection and maintenance;

It is further found and declared that Ada County has been designated as a nonattainment area for both carbon monoxide and small particulate matter (PM10) and as such is mandated under the federal clean air act to reduce emissions so that the national ambient air quality standards will be attained and maintained;

It is further found and declared that Ada County and its incorporated cities will be monitored for PM2.5 and ozone in the immediate future, and that the primary source of both of these pollutants in Ada County is exhaust emissions from motor vehicles;

It is further found and declared that fuel economy is a legitimate legislative purpose and that an efficient emissions control program will result in motor vehicle fuel savings for the residents of Ada County and its incorporated cities;

It is further found and declared that Ada County and its incorporated cities are duly authorized to enact and enforce this section 6-1-3 under Idaho Code section 31-714;

The purposes of this section 6-1-3, therefore, are to protect the health and welfare of the citizens of Ada County and its incorporated cities, to provide for the continued control and management of exhaust emissions above certain levels as determined by the federal clean air act, as amended, as well as rules for the control of air pollution in the state of Idaho (IDAPA 16.01.01, et seq.), and to empower the air quality board to design and

implement required periodic inspection of certain motor vehicles. (Ord. 130, 8-28-1984; amd. Ord. 145, 2-18-1985; amd. Ord. 206, 8-10-1989; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-3: DEFINITIONS:

AUTOMOTIVE INSPECTION PROGRAM: That program established by the board in accordance with this section 6-1-3 and whose purpose is to implement the requirements of this section 6-1-3.

AUTOMOTIVE INSPECTION STATION: A facility licensed in accordance with board specifications or operating under a contract with the board for the purpose of performing exhaust emissions inspections.

BOARD: The air quality board, chartered under the automotive inspection and readjustment program joint powers agreement and this section 6-1-3.

CARBON MONOXIDE (CO): An inorganic chemical compound containing one atom of carbon and one atom of oxygen.

CERTIFICATE OF COMPLIANCE: A board-approved certificate verifying that the motor vehicle described thereon is in compliance with the requirements of this section 6-1-3 and the rules and regulations adopted pursuant to this section 6-1-3.

EMISSIONS INSPECTION MECHANIC: An individual who performs exhaust emissions inspections on behalf of the board in compliance with a formal written agreement with the board.

EMISSIONS REPAIR MECHANIC: An individual who performs exhaust emissions repairs to motor vehicles on behalf of the board in compliance with a formal written agreement with the board.

EXHAUST ANALYZER: A device for calculating the proportion of various gases, vapors and particles present in the exhaust emissions of a motor vehicle, specifically including carbon monoxide, hydrocarbon, oxides of nitrogen, sulfur dioxide, volatile organic compounds and any other gases, vapors and particles as required by the board.

EXHAUST EMISSIONS: Substances emitted into the atmosphere from any opening downstream of the exhaust port(s) of any motor vehicle engine.

EXHAUST EMISSIONS CONTROL DEVICE: Equipment designed by the manufacturer for installation on a motor vehicle for the purpose of reducing pollutants emitted from the motor vehicle, or a system or engine modification of a vehicle which causes a reduction of pollutants emitted from the motor vehicle, as required by federal law.

EXHAUST EMISSIONS INSPECTION AND EXHAUST EMISSIONS REINSPECTION: That test, performed at an automotive station or a repair and reinspection station by an emissions inspection mechanic, which determines whether a motor vehicle's exhaust emissions meet or do not meet applicable pass-adjust.

FINE PARTICULATE MATTER (PM2.5): All particulate matter, including condensable particulates, with an aerodynamic diameter of less than or equal to a nominal two and one-half (2.5) micrometers.

GROSS VEHICLE WEIGHT: The weight in pounds of a fully fueled empty motor vehicle plus any additional carrying capacity specified by the vehicle manufacturer.

HYDROCARBON (HC): An organic compound consisting exclusively of the elements carbon and hydrogen.

INSPECTION PERIOD: That period, determined according to applicable rules and regulations, during which a nonexempt motor vehicle is scheduled to be presented for an exhaust emissions inspection.

JOINT POWERS AGREEMENT: That agreement entered into pursuant to the joint powers provisions of Idaho Code chapter 23, title 67, among and between the incorporated cities of Ada County, the county of Ada, and the Ada County highway district, which creates the board.

MODEL YEAR: The year of origin of a motor vehicle so designated by that vehicle's certificate of registration filed with the Idaho department of transportation.

MOTOR VEHICLE: Any self-propelled motor vehicle with four (4) or more wheels in contact with the ground.

MOTOR VEHICLE OWNER: An individual, partnership, firm, public, private, or municipal corporation, association, trust, estate, agency, lessee, political subdivision of the state of Idaho or the government of the United States or any other legal entity or their legal representatives, agents or assigns whose name appears as owner of a motor vehicle on its certificate of registration.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS): Standards developed by the U.S. environmental protection agency in accordance with its responsibilities under the federal clean air act, as amended, and its implementing regulations.

NONEXEMPT MOTOR VEHICLE: A motor vehicle which is subject to the automotive inspection program and its exhaust emissions inspections.

OXIDES OF NITROGEN (NOx): A group of chemical compounds formed by the combination of oxygen and nitrogen.

OZONE (O3): A molecule composed of three (3) atoms of oxygen.

PARTICULATE MATTER (PM10): All particulate matter, including condensable particulates, with an aerodynamic diameter of less than or equal to a nominal ten (10) micrometers.

PASS-ADJUST CRITERIA: Those standards set forth in the rules and regulations adopted by the board pursuant to this section 6-1-3 which specify the maximum allowable components which may exist in exhaust emissions of a nonexempt motor vehicle.

PUBLIC NOTICE: A statement of the board's intent to modify the rules and regulations, including a summary of the proposed modifications, published in at least one newspaper of general circulation within Ada County, posted at the offices of the air quality board, and mailed to all participants in the joint powers agreement and all automotive inspection stations.

REPAIR AND REINSPECTION STATION: A facility licensed in accordance with board specifications or operating under a contract with the board for the purpose of repairing nonexempt motor vehicles which have failed an exhaust emissions inspection and to perform a reinspection of exhaust emissions in a manner specified by the board.

RULES AND REGULATIONS: Specific written provisions governing the automotive inspection program, as adopted and amended by the board from time to time.

SULFUR DIOXIDE (SO2): A chemical compound consisting exclusively of the elements sulfur and oxygen.

TAMPERING: Removal of or rendering wholly or partially inoperative an exhaust emissions control device, including, but not limited to, the catalytic converter, air injection system, fuel inlet restrictor or other subsequent systems and devices designed and installed to reduce exhaust emissions.

VOLATILE ORGANIC COMPOUND (VOC): Any organic compound which readily evaporates in the atmosphere and, through its participation in atmospheric photochemical reactions, contributes to the formation of ozone. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 168, 8-24-1987; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-4: CREATION OF AN INSPECTION-MAINTENANCE PROGRAM:

A. An air quality board is hereby created pursuant to the joint powers provisions of Idaho Code chapter 23, title 67 in a joint powers agreement executed by the participating public agencies. The composition and organization of the board shall be as set forth in the joint powers agreement.

B. The board shall design and implement an automotive inspection program for the mandatory exhaust emissions analysis, inspection, maintenance and repair of nonexempt motor vehicles to ensure continued compliance with national ambient air quality standards and in accordance with applicable rules and regulations of the U.S. environmental protection agency, the state of Idaho division of environmental quality and the Ada planning association board.

C. The exhaust emissions of each nonexempt motor vehicle will be measured and evaluated periodically and the owner of any such vehicle is required to present the vehicle at an automotive inspection station for an exhaust emissions inspection unless specifically exempted from this requirement by the board or by this section 6-1-3. Failure to do so within the inspection period constitutes prima facie evidence of a violation of this section 6-1-3. The frequency and timing of the inspection period will be determined by the board.

D. The owner of a nonexempt motor vehicle which passes an exhaust emissions inspection as provided herein shall be presented with a certificate of compliance. The owner shall maintain the certificate in a place and manner specified by the board in the rules and regulations and present it to the board or other authority upon demand. Failure to do so constitutes prima facie evidence of a violation of this section 6-1-3.

E. A motor vehicle is classified as a nonexempt motor vehicle if all of the following are true:

1. The certificate of registration has "ADA COUNTY" entered upon it as the county of residence or would be required to have "ADA COUNTY" entered upon it as the county of residence pursuant to Idaho Code section 49-401B;

2. The gross vehicle weight equals or exceeds one thousand five hundred (1,500) pounds; and

3. The model year is 1965 or newer.

F. The following are hereby specifically exempted from compliance with the automotive inspection program, subject to verification in a manner specified by the board and included in the rules and regulations:

1. Motorcycles as defined in Idaho Code section 40-114;

2. "Idaho Old Timers" as defined in Idaho Code section 49-406;

3. Farm tractors as defined in Idaho Code section 49-107;

4. Motor vehicles registered under the prorated registration provisions of Idaho Code section 49-437 for a period of less than six (6)

5. Idaho classic vehicles as defined in Idaho Code section 49-406A;

6. Motor vehicles for which an alternate fuel type has been established according to rules and regulations adopted by the board; and

7. Such other motor vehicles as may be exempted by rules and regulations adopted by the board.

G. An exhaust emissions inspection may only be performed by and in a manner consistent with rules and regulations adopted by the board. An exhaust emissions inspection shall include all of the following:

1. A measurement of exhaust emissions using an approved exhaust analyzer or other procedure or device approved by the board to sample the motor vehicle's exhaust emissions, specifically including carbon monoxide and hydrocarbon content of the exhaust emissions and any other gases, vapors and particles as adopted by the board to comply with the purposes of this section 6-1-3 as expressed in section 6-1-3-2 of this chapter; and

2. A determination as to whether exhaust emissions meet the pass-adjust criteria; and

3. A visual inspection, for model year 1984 and newer, to verify presence of the catalytic converter, air injection system, size of the fuel restrictor and any other visual inspection component(s) specified by the board in the rules and regulations; and

4. Any other inspection adopted by the board in the rules and regulations; and

5. Where exhaust emissions do not meet the pass-adjust criteria, an indication to a motor vehicle owner of the repair and reinspection provisions of the automotive inspection program.

H. It is the responsibility of the owner of a nonexempt motor vehicle which was found not to comply with the pass-adjust criteria to have the motor vehicle brought into compliance at the owner's expense and to have it reinspected within ten (10) calendar days of the failed exhaust emissions inspection according to procedures and criteria established by the board and included in the rules and regulations.

I. Each nonexempt motor vehicle shall bear a share of the cost of the automotive inspection program regardless of whether the board elects to waive one or more exhaust emissions inspections for that vehicle. The motor vehicle owner for each nonexempt motor vehicle is required to submit payment to the board or other authorized representative under terms and conditions specified in the rules and regulations.

J. An emissions inspection mechanic who performs an exhaust emissions inspection on a motor vehicle shall, when the motor vehicle is found to comply with the pass-adjust criteria, immediately issue a certificate of compliance in accordance with procedures adopted by the board in the rules and regulations. The certificate of compliance will expire on the last day of the next inspection period for that motor vehicle. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 168, 8-24-1987; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-5: DUTIES AND POWERS OF THE BOARD:

A. The board shall conduct regular monthly meetings at such time and place as the board shall determine. Meetings are open to the public.

B. The board, in accordance with the criteria expressed herein, shall adopt rules and regulations for the implementation and operation of the automotive inspection program and amend those rules and regulations from time to time as it deems necessary. Rules and regulations and amendments to same may only be adopted at an air quality board meeting with a minimum of fourteen (14) days' public notice of the board's intent to amend the rules and regulations.

C. Rules and regulations shall include, but not be limited to, the following:

1. Determining Exempt, Nonexempt Status: Procedures for determining the exempt or nonexempt status of any motor vehicle and releasing exempt motor vehicles from further compliance with the automotive inspection program.

2. Inspection Period: Procedures for establishing the inspection period for a nonexempt motor vehicle;

3. Structure Of Program: Structure of the automotive inspection program, specifically including whether repairs and adjustments to motor vehicles failing to comply with the pass-adjust criteria may or may not be made by emissions inspection mechanics who perform the original exhaust emissions inspection;

4. Licensing, Contracting Procedures: Procedures for licensing or contracting for automotive inspection stations, repair and reinspection stations, emissions inspection mechanics and emissions repair mechanics and for the potential termination thereof;

5. Pass-Adjust Criteria: Pass-adjust criteria for all nonexempt motor vehicles;

6. Nature And Display Of Certificates: Nature and display of certificates of compliance on nonexempt motor vehicles which successfully comply with the pass-adjust criteria;

7. Exhaust Analyzer Specifications: Specifications for approved exhaust analyzers or other emissions measurement devices or systems;

8. Determination Of Fee: Procedures by which the fee to be charged each motor vehicle owner for each nonexempt motor vehicle is determined, or, alternatively, the fee itself;

9. Waiver: Circumstances under which a waiver may be granted to exempt a nonexempt motor vehicle from the provisions of this section 6-1-3, either temporarily or permanently;

10. Noncomplying Vehicles: Minimum effort(s) which will be required of the owner of a nonexempt motor vehicle which fails to comply with the pass-adjust criteria in order to bring the failing vehicle into compliance with the pass-adjust criteria, as well as procedures by which such minimum effort provisions may be amended from time to time. This effort shall generally be the minimum necessary to accommodate typical repair and reinspection needs and may be different for different model years;

11. Cost Of A Certificate Of Compliance: This shall be the minimum necessary to provide for the ongoing operation, administration, maintenance and enforcement of the automotive inspection program and shall not exceed four dollars ($4.00) without concurrence of all parties to the joint powers agreement;

12. Processing Fee: The processing fee which may be assessed upon owners of nonexempt motor vehicles who fail to present their nonexempt motor vehicle for inspection within the inspection period and the procedure by which this fee is established. This fee shall be sufficient to recover costs of processing notices of violation for all nonexempt motor vehicles which do not comply with the provisions of this section 6-1-3 within the inspection period;

13. Contracting And Licensing Procedures: Procedures governing the contracting for or licensing of automotive inspection stations, repair and reinspection stations and emissions inspection mechanics and the suspension, revocation, or termination of those contracts or licenses when appropriate;

14. Schedules And Deadlines For Data: Schedules and deadlines for the flow of data, paperwork and information pertaining to exhaust emissions inspections among automotive inspection stations, repair and reinspection stations, exhaust emissions mechanics and the automotive inspection program staff; and

15. Other Matters: Any other matters deemed to be within the authority of the board.

D. The board may, at its discretion, employ the full power and authority of law to ensure that motor vehicle owners comply fully and completely with Idaho Code section 49-401B, specifically including correct designation of the county of residence as provided therein.

E. The board shall conduct an ongoing quality assurance program to determine that all automotive inspection stations, repair and reinspection stations and exhaust emission mechanics perform automotive inspection program tasks in conformance with the adopted rules and regulations.

F. The board or its authorized representative, upon written notice and an opportunity for a hearing, may suspend, revoke and/or require the surrender and forfeiture of any license granted by the board which is not utilized in accordance with this section 6-1-3 or the rules and regulations. The procedure and grounds for suspension or revocation shall be set forth in the rules and regulations and shall comply with current Idaho law.

G. The board shall have the authority to undertake any additional actions reasonably necessary to the operation of the automotive inspection program, including, but not limited to:

1. Employing necessary staff;

2. Executing necessary contracts and documents;

3. Authorizing deposits into and expenditures from the motor vehicle emissions inspection fund;

4. Acquiring and disposing of personal property;

5. Establishing an annual budget for the automotive inspection program;

6. Operating the automotive inspection program in accordance with standard fiscal practice; and

7. Providing for an annual audit of both financial and management practices of the automotive inspection program.

H. The board shall conduct ongoing evaluations of the automotive inspection program sufficient to satisfy requirements of the U.S. environmental protection agency, the Ada planning association board and other applicable rules and statutes. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 168, 8-24-1987; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-6: FINANCING:

A. There is hereby established a motor vehicle emissions inspection fund which shall consist of the following:

1. Money appropriated thereto by the board or any local entity;

2. Money remitted by automotive inspection stations and repair and reinspection stations which is collected as fees;

3. Money received by the board from private grants or donations;

4. Money received by the board from processing fees assessed to owners of nonexempt motor vehicles who do not present their vehicle for an exhaust emissions inspection during the inspection period;

5. Federal or state funds received by the board for the automotive inspection program; and

6. Any other funds received by the board from any source.

B. Monies in the motor vehicle emissions inspection fund may be used to pay all costs incurred by the board in administering any aspect of the automotive inspection program.

C. The board shall appropriate and budget on a fiscal year basis, indicating expenditures to be made in implementing and administering the automotive inspection program and sources of income to be used for such expenditures. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 168, 8-24-1987; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-7: INSPECTION CRITERIA AND COSTS:

A. A nonexempt motor vehicle's exhaust emissions must be less than or equal to the approved pass-adjust criteria in order for a certificate of compliance to be issued without further repair, adjustment or testing.

B. Nonexempt motor vehicles of the model year 1984 and newer must have a fully operational catalytic converter, air injection system, fuel restrictor and any other component(s), devices or systems specified by the board in the rules and regulations. The owner of a nonexempt motor vehicle is required to see that these systems are fully operational. An exhaust emissions inspection will not be performed on any

vehicle on which one or more of these components have been subject to tampering. The owner of any nonexempt motor vehicle which has been subject to tampering must bring all components into compliance and have the vehicle inspected within the inspection period.

C. A certificate of compliance may be issued by an emissions inspection mechanic who personally has performed an exhaust emissions inspection and found the nonexempt motor vehicle to be in full compliance with the automotive inspection program or by an emissions repair mechanic who has personally performed repairs and adjustments to a motor vehicle which bring such vehicle into full compliance with the automotive inspection program or by the board.

D. No person shall represent himself or herself as an emissions inspection mechanic unless he or she has a current license issued by the board or is operating under a current contract with the board.

E. No person shall demand or collect a fee for the exhaust emissions inspection of a nonexempt motor vehicle unless authorized by this section 6-1-3. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 168, 8-24-1987; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-8: ACQUISITION OF PROPERTY; CERTIFICATES PROPERTY OF BOARD:

A. The board may acquire by purchase, donation, dedication, or other lawful means any special equipment, tools, materials or facilities needed to adequately administer, investigate or enforce the provisions of this section 6-1-3 or the rules and regulations adopted pursuant hereto, provided, however, any acquisition made by the board shall comply with all statutory requirements imposed upon the county of Ada for the purpose of receipt of property.

B. All certificates of compliance are the property of the board until such time as they are issued to properly inspected motor vehicles. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-9: FALSIFICATION OF CERTIFICATES:

A. No person shall wilfully make, issue, display, sell or possess any imitation, counterfeit, or alteration of a certificate of compliance. Such activities so constitute prima facie evidence of a violation of this section 6-1-3.

B. No person shall display upon nor carry within any nonexempt motor vehicle a certificate of compliance knowing it to be issued without compliance with this section 6-1-3. Such activities so constitute prima facie evidence of a violation of this section

6-1-3. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-10: ENFORCEMENT:
Any owner who fails to present a nonexempt motor vehicle for an exhaust emissions inspection during the inspection period is in violation of this section 6-1-3 and will be subject to a board processing fee and any and all other enforcement mechanisms available through Idaho Code (including, but not limited to, the provisions of Idaho Code section 4-202(12)(9)), this section 6-1-3, and other applicable municipal or county ordinances. Nothing in this section 6-1-3 shall be construed to prevent the board from requesting or utilizing any and all enforcement mechanisms granted by law. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 374, 6-15-1999)

6-1-3-11: PENALTIES:

A. Any person who violates any provision of this section 6-1-3 shall be deemed guilty of an infraction and, upon judgment thereof, shall be subject to the penalties set forth in Idaho infraction rule 9(b), (other infractions). Failure to satisfy judgment as ordered by the court pursuant to this section 6-1-3 shall be deemed in contempt of court punishable as a misdemeanor pursuant to Idaho Code section 18-1801.

B. In addition to the penalties set forth in subsection A of this section, pursuant to Idaho Code section 49-202(12)(g), a motor vehicle subject to emissions inspection as required by this section 6-1-3, which has not been inspected, shall have its registration revoked. The owner of such vehicle shall be subject to the misdemeanor penalty provisions of Idaho Code section 49-236 for violation of the registration and inspections requirements. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 206, 8-10-1989; amd. Ord. 374, 6-15-1999)

6-1-3-12: EFFECTIVE DATES:
This section 6-1-3 shall be effective upon publication. (Ord. 130, 8-28-1984; amd. Ord. 145, 12-18-1985; amd. Ord. 206, 8-10-1989; amd. Ord. 228, 11-29-1990, eff. 1-1-1991; amd. Ord. 228-1-95, 12-26-1995; amd. Ord. 322, 12-17-1996; amd. Ord. 350, 12-23-1997; amd. Ord. 372, 5-25-1999; amd. Ord. 374, 6-15-1999)

6-1-3-13: SEVERABILITY:
If any section, sentence, clause, word or phrase of this section 6-1-3 is for any reason held to be unconstitutional or otherwise invalid or unenforceable by any court of competent jurisdiction, such shall not affect the validity and enforceability of the remaining portions of this section 6-1-3, all of which shall remain in full force and effect. (Ord. 374, 6-15-1999)

6-1-4: AIR COMPRESSION BRAKES:

A. Use Of Air Compression Brakes Prohibited: The use of air compression brakes (also known as "jake brakes") by vehicles or trucks, as defined in Idaho Code title 49, chapter 1, within unincorporated Ada County is hereby prohibited and shall be unlawful, except under emergency circumstances where the use of air compression brakes is necessary to prevent an accident or injury to persons or property.

B. Penalties: Any person who violates any provision of this section shall be deemed guilty of an infraction and upon judgment thereof shall be subject to the penalty set forth in Idaho infraction rule 9(b) (other infractions). Failure to satisfy judgment as ordered by the court pursuant to this section shall be deemed contempt of court punishable as a misdemeanor pursuant to Idaho Code section 18-1801. (Ord. 349, 11-18-1997)

CITY OF BOISE

Chapter 8-13

MOTOR VEHICLE EMISSIONS CONTROL

Sections:
8-13-01 SHORT TITLE
8-13-02 LEGISLATIVE FINDINGS AND PURPOSE OF ORDINANCE
8-13-03 DEFINITIONS
8-13-04 CREATION OF AN INSPECTION-MAINTENANCE PROGRAM
8-13-05 DUTIES AND POWERS OF THE BOARD
8-13-06 FINANCING
8-13-07 INSPECTION CRITERIA AND COSTS
8-13-08 ACQUISITION OF PROPERTY; CERTIFICATES PROPERTY OF BOARD
8-13-09 FALSIFICATION OF CERTIFICATES
8-13-10 ENFORCEMENT
8-13-11 PENALTIES
8-13-12 EFFECTIVE DATES
8-13-13 SEVERABILITY

Section 8-13-01 SHORT TITLE
This Ordinance may be cited as The 1999 Motor Vehicle Emissions Control Ordinance.
(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-02 LEGISLATIVE FINDINGS AND PURPOSE OF ORDINANCE
A. It is found and declared that exhaust emissions from Motor Vehicles are a major source of air pollution throughout Ada County and such air pollution is a health hazard to all residents of the County and its incorporated cities;

B. It is further found and declared that an effective system of periodic motor vehicle inspection and maintenance will reduce the level of vehicular-based air pollution;

C. It is further found and declared that the federal government has mandated to the several states and local entities the ultimate responsibility for periodic motor vehicle inspection and maintenance;

D. It is further found and declared that Ada County has been designated as a non-attainment area for both carbon monoxide and small particulate matter (PM10) and as such is mandated under the Federal Clean Air Act to reduce emissions so that the National Ambient Air Quality Standards will be attained and maintained;

E. It is further found and declared that Ada County and its incorporated cities will be monitored for PM2.5 and ozone in the immediate future, and that the primary source of both of these pollutants in Ada County is exhaust emissions from motor vehicles;

F. It is further found and declared that fuel economy is a legitimate legislative purpose and Boise Municipal Code that an efficient emissions control program will result in motor vehicle fuel savings for the residents of Ada County and its incorporated cities;

G. It is further found and declared that Ada County and its incorporated cities are duly authorized to enact and enforce this Ordinance under Idaho Code §31-714 and §50-302, respectively;

H. The purposes of this Ordinance, therefore, are to protect the health and welfare of the citizens of Ada County and its incorporated cities, to provide for the continued control and management of exhaust emissions above certain levels as determined by the Federal Clean Air Act, as amended, as well as Rules for the Control of Air Pollution in the State of Idaho (IDAPA 16.01.01, et seq), and to empower the Air Quality Board to design and implement required periodic inspection of certain motor vehicles in order to comply with the Federal Clean Air Act, as amended.

(Ord. No. 5661, Amended, 09/26/95)
(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-03 DEFINITIONS

A. AUTOMOTIVE INSPECTION PROGRAM: That program established by the Board in accordance with this Ordinance and whose purpose is to implement the requirements of this Ordinance.

B. AUTOMOTIVE INSPECTION STATION: A facility licensed in accordance with Board specifications or operating under a contract with the Board for the purpose of performing Exhaust Emissions Inspections.

C. BOARD: The Air Quality Board, chartered under the Automotive Inspection and Readjustment Program Joint Powers Agreement and this Ordinance.

D. CARBON MONOXIDE (CO): An inorganic chemical compound containing one atom of carbon and one atom of oxygen.

E. CERTIFICATE OF COMPLIANCE: A Board-approved certificate verifying that the Motor Vehicle described thereon is in compliance with the requirements of this Ordinance and the Rules and Regulations adopted pursuant to this Ordinance.

F. EMISSIONS INSPECTION MECHANIC: An individual who performs Exhaust Emissions Inspections on behalf of the Board in compliance with a formal written agreement with the Board.

G. EMISSIONS REPAIR MECHANIC: An individual who performs exhaust emissions repairs to Motor Vehicles on behalf of the Board in compliance with a formal written agreement with the Board.

H. EXHAUST ANALYZER: A device for calculating the proportion of various gases, vapors and particles present in the Exhaust Emissions of a Motor Vehicle, specifically Boise Municipal Code including Carbon Monoxide, Hydrocarbon, Oxides of Nitrogen, Sulfur Dioxide, Volatile Organic Compounds and any other gases, vapors and particles as required by the Board.

I. EXHAUST EMISSIONS: Substances emitted into the atmosphere from any opening downstream of the exhaust port(s) of any Motor Vehicle engine.

J. EXHAUST EMISSIONS CONTROL DEVICE: Equipment designed by the manufacturer for installation on a Motor Vehicle for the purpose of reducing pollutants emitted from the Motor

Vehicle, or a system or engine modification of a vehicle which causes a reduction of pollutants emitted from the Motor Vehicle, as required by federal law.

K. EXHAUST EMISSIONS INSPECTION AND EXHAUST EMISSIONS RE- INSPECTION: That test, performed at an Automotive Inspection Station or a Repair and Re-Inspection Station by an Emissions Inspection Mechanic, which determines whether a Motor Vehicle's Exhaust Emissions meet or do not meet applicable Pass-Adjust Criteria.

L. FINE PARTICULATE MATTER (PM2.5): All particulate matter, including condensable particulates, with an aerodynamic diameter of less than or equal to a nominal two and one half (2.5) micrometers.

M. GROSS VEHICLE WEIGHT: The weight in pounds of a fully-fueled empty Motor Vehicle plus any additional carrying capacity specified by the vehicle manufacturer.

N. HYDROCARBON (HC): An organic compound consisting exclusively of the elements carbon and hydrogen.

O. INSPECTION PERIOD: That period, determined according to applicable Rules and Regulations, during which a Non-Exempt Motor Vehicle is scheduled to be presented for an Exhaust Emissions Inspection.

P. JOINT POWERS AGREEMENT: That agreement entered into pursuant to the joint powers provisions of Idaho Code Chapter 23 Title 67, among and between the incorporated cities of Ada County, the County of Ada, and the Ada County Highway District, which creates the Board.

Q. MODEL YEAR: The year of origin of a Motor Vehicle so designated by that vehicle's Certificate of Registration filed with the Idaho Department of Transportation.

R. MOTOR VEHICLE: Any self-propelled Motor Vehicle with four or more wheels in contact with the ground.

S. MOTOR VEHICLE OWNER: An individual, partnership, firm, public, private, or municipal corporation, association, trust, estate, agency, lessee, political subdivision of the State of Idaho or the Government of the United States or any other legal entity or their legal representatives, agents or assigns whose name appears as owner of a Motor Vehicle on its Certificate of Registration.

T. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS): Standards developed by the U.S. Environmental Protection Agency in accordance with its responsibilities under the Federal Clean Air Act, as amended, and its implementing regulations.

U. NON-EXEMPT MOTOR VEHICLE: A motor vehicle which is subject to the Automotive Inspection Program and its Exhaust Emissions Inspections.

V. OXIDES OF NITROGEN (NOX): A group of chemical compounds formed by the combination of oxygen and nitrogen.

W. OZONE (O3): A molecule composed of three atoms of oxygen.

X. PARTICULATE MATTER (PM10): All particulate matter, including condensable particulates, with an aerodynamic diameter of less than or equal to a nominal ten (10) micrometers.

Y. PASS-ADJUST CRITERIA: Those standards set forth in the Rules and Regulations adopted by the Board pursuant to this Ordinance which specify the maximum allowable components which may exist in Exhaust Emissions of a Non-Exempt Motor Vehicle.

Z. PUBLIC NOTICE: A statement of the Board's intent to modify the Rules and Regulations, including a summary of the proposed modifications, published in at least one newspaper of general circulation within Ada County, posted at the offices of the Air Quality Board, and mailed to all participants in the Joint Powers Agreement and all Automotive Inspection Stations.

AA. REPAIR AND RE-INSPECTION STATION: A facility licensed in accordance with Board specifications or operating under a contract with the Board for the purpose of repairing Non-Exempt Motor Vehicles which have failed an Exhaust Emissions Inspection and to perform a re-inspection of Exhaust Emissions in a manner specified by the Board.

BB. RULES AND REGULATIONS: Specific written provisions governing the Automotive Inspection Program, as adopted and amended by the Board from time to time.

CC. SULFUR DIOXIDE (SO2): A chemical compound consisting exclusively of the elements sulfur and oxygen.

DD. TAMPERING: Removal of or rendering wholly or partially inoperative an Exhaust Emissions Control Device, including but not limited to the catalytic converter, air injection system, fuel inlet restrictor or other subsequent systems and devices designed and installed to reduce exhaust emissions.

EE. VOLATILE ORGANIC COMPOUND (VOC): Any organic compound which readily evaporates in the atmosphere and, through its participation in atmospheric photochemical reactions, contributes to the formation of Ozone.

(Ord. No. 5661, Amended, 09/26/95)
(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-04 CREATION OF AN INSPECTION-MAINTENANCE PROGRAM

A. An Air Quality Board is hereby created pursuant to the joint powers provisions of Idaho Code Chapter 23 Title 67 in a Joint Powers Agreement executed by the participating public agencies. The composition and organization of the Board shall be as set forth in the Joint Powers Agreement.

B. The Board shall design and implement an Automotive Inspection Program for the mandatory Exhaust Emissions analysis, inspection, maintenance and repair of Non-Exempt Motor Vehicles to insure continued compliance with National Ambient Air Quality Standards and in accordance with applicable rules and regulations of the U.S. Environmental Protection Agency, the State of Idaho Division of Environmental Quality and the Ada Planning Association Board.

C. The Exhaust Emissions of each Non-Exempt Motor Vehicle will be measured and evaluated periodically and the Owner of any such vehicle is required to present the vehicle at an Automotive

Inspection Station for an Exhaust Emissions Inspection unless specifically exempted from this requirement by the Board or by this Ordinance. Failure to do so within the Inspection Period constitutes prima facie evidence of a violation of this Ordinance. The frequency and timing of the Inspection Period will be determined by the Board.

D. The Owner of a Non-Exempt Motor Vehicle which passes an Exhaust Emissions Inspection as provided herein shall be presented with a Certificate of Compliance. The Owner shall maintain the certificate in a place and manner specified by the Board in the Rules and Regulations and present it to the Board or other authority upon demand. Failure to do so constitutes prima facie evidence of a violation of this Ordinance.

E. A Motor Vehicle is classified as a Non-Exempt Motor Vehicle if all of the following are true:

1. The Certificate of Registration has 'ADA COUNTY' entered upon it as the county of residence or would be required to have 'ADA COUNTY' entered upon it as the county of residence pursuant to Idaho Code 49-401B;

2. The Gross Vehicle Weight equals or exceeds 1500 pounds; and

3. The Model Year is 1965 or newer.

F. The following are hereby specifically exempted from compliance with the Automotive Inspection Program, subject to verification in a manner specified by the Board and included in the Rules and Regulations:

1. Motorcycles as defined in Idaho Code 40-114;

2. "Idaho Old Timers" as defined in Idaho Code 49-406;

3. Farm tractors as defined in Idaho Code 49-107;

4. Motor vehicles registered under the pro-rated registration provisions of Idaho Code 49-437 for a period of less than six (6) months;

5. Idaho Classic vehicles as defined in Idaho Code 49-406A;

6. Motor Vehicles for which an alternate fuel type has been established according to Rules and Regulations adopted by the Board; and

7. Such other Motor Vehicles as may be exempted by Rules and Regulations adopted by the Board.

G. An Exhaust Emissions Inspection may only be performed by and in a manner consistent with Rules and Regulations adopted by the Board. An Exhaust Emissions Inspection shall include all of the following:

1. A measurement of Exhaust Emissions using an approved Exhaust Analyzer or other procedure or device approved by the Board to sample the Motor Vehicle's Exhaust Emissions, specifically including the Carbon Monoxide and Hydrocarbon content of the

Exhaust Emissions and any other gases, vapors and particles as adopted by the Board to comply with the purposes of this Ordinance as expressed in Section 8-13-02; and.

2. A determination as to whether Exhaust Emissions meet the Pass-Adjust Criteria; and

3. A visual inspection, for Model Years 1984 and newer, to verify presence of the catalytic converter, air injection system, size of the fuel restrictor and any other visual inspection component(s) specified by the Board in the Rules and Regulations; and.

4. Any other inspection adopted by the Board in the Rules and Regulations.

H. Where Exhaust Emissions do not meet the Pass-Adjust Criteria, an indication to a Motor Vehicle Owner of the repair and Re-Inspection provisions of the Automotive Inspection Program.

I. It is the responsibility of the Owner of a Non-Exempt Motor Vehicle which was found not to comply with the Pass-Adjust Criteria to have the Motor Vehicle brought into compliance at the Owner's expense and to have it re-inspected within ten (10) calendar days of the failed Exhaust Emissions Inspection according to procedures and criteria established by the Board and included in the rules and Regulations.

J. Each Non-Exempt Motor Vehicle shall bear a share of the cost of the Automotive Inspection Program regardless of whether the Board elects to waive one or more Exhaust Emissions Inspections for that vehicle. The Motor Vehicle Owner for each Non-Exempt Motor Vehicle is required to submit payment to the Board or other authorized representative under terms and conditions specified in the Rules and Regulations.

K. An Emissions Inspection Mechanic who performs an Exhaust Emissions Inspection on a Motor Vehicle shall, when the Motor Vehicle is found to comply with the Pass-Adjust Criteria, immediately issue a Certificate of Compliance in accordance with procedures adopted by the Board in the Rules and Regulations. The Certificate of Compliance will expire on the last day of the next Inspection Period for that Motor Vehicle.

(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-05 DUTIES AND POWERS OF THE BOARD

A. The Board shall conduct regular monthly meetings at such time as the Board shall determine. Meetings are open to the public.

B. The Board, in accordance with the criteria expressed herein, shall adopt Rules and Regulations for the implementation and operation of the Automotive Inspection Program and amend those Rules and Regulations from time to time as it deems necessary. Rules and Regulations and amendments to same may only be adopted at an Air Quality Board meeting with a minimum of fourteen (14) days Public Notice of the Board's intent to amend the Rules and Regulations.

C. Rules and Regulations shall include but not be limited to the following:

1. Procedures for determining the exempt or non-exempt status of any Motor Vehicle and releasing exempt Motor Vehicles from further compliance with the Automotive Inspection Program;

2. Procedures for establishing the Inspection Period for a Non-Exempt Motor Vehicle;

3. Structure of the Automotive Inspection Program, specifically including whether repairs and adjustments to Motor Vehicles failing to comply with the Pass-Adjust criteria may or may not be made by Emissions Inspection Mechanics who perform the original Exhaust Emissions Inspection;

4. Procedures for licensing or contracting for Automotive Inspection Stations, Repair and Re-Inspection Stations, Emissions Inspection Mechanics and Emissions Repair Mechanics and for the potential termination thereof;

5. Pass-Adjust Criteria for all Non-Exempt Motor Vehicles;

6. Nature and display of Certificates of Compliance on Non-Exempt Motor Vehicles which successfully comply with the Pass-Adjust Criteria:

7. Specifications for approved Exhaust Analyzers or other emissions measurement devices or systems;

8. Procedures by which the fee to be charged each Motor Vehicle Owner for each Non-Exempt Motor Vehicle is determined, or, alternatively, the fee itself;

9. Circumstances under which a waiver my be granted to exempt a Non-Exempt Motor Vehicle from the provisions of this Ordinance, either temporarily or permanently;

10. Minimum effort(s) which will be required of the Owner of a Non-Exempt Motor Vehicle which fails to comply with the Pass-Adjust Criteria in order to bring the failing vehicle into compliance with the Pass-Adjust Criteria, as well as procedures by which such minimum effort provisions may be amended from time to time. This effort shall generally be the minimum necessary to accommodate typical repair and reinspection needs and may be different for different Model Years;

11. Cost of a Certificate of Compliance. This shall be the minimum necessary to provide for the on-going operation, administration, maintenance and enforcement of the Automotive Inspection Program and shall not exceed $4.00 without concurrence of all parties to the Joint Powers Agreement;

12. The processing fee which may be assessed upon Owners of Non-Exempt Motor Vehicles who fail to present their Non-Exempt Motor Vehicle for inspection within the Inspection Period (and the procedure by which this fee is established. This fee shall be sufficient to recover costs of processing notices of violation for all Non-Exempt Motor Vehicles which do not comply with the provisions of this Ordinance within the Inspection Period);

13. Procedures governing the contracting for or licensing of Automotive Inspection Stations, Repair and Re-Inspection Stations and Emissions Inspection Mechanics and the suspension, revocation, or termination of those contracts or licenses when appropriate;

14. Schedules and deadlines for the flow of data, paperwork and information pertaining to Exhaust Emissions Inspections among Automotive Inspection Stations, Repair and Re-

Inspection Stations, Exhaust Emissions Mechanics and the Automotive Inspection Program staff; and

15. Any other matters deemed to be within the authority of the Board.

D. The Board may, at is discretion, employ the full power and authority of law to insure that Motor Vehicle Owners comply fully and completely with Idaho Code 49-401B, specifically including correct designation of the county of residence as provided therein.

E. The Board shall conduct an on-going quality assurance program to determine that all Automotive Inspection Stations, Repair and Re-Inspection Stations and Exhaust Emission Mechanics perform Automotive Inspection Program tasks in conformance with the adopted Rules and Regulations.

F. The Board or its authorized representative, upon written notice and an opportunity for a hearing, may suspend, revoke and/or require the surrender and forfeiture of any license granted by the Board which is not utilized in accordance with this Ordinance or the Rules and Regulations. The procedure and grounds for suspension or revocation shall be set forth in the Rules and Regulations and shall comply with current Idaho law.

G. The Board shall have the authority to undertake any additional actions reasonably necessary to the operation of the Automotive Inspection Program, including but not limited to:

1. Employing necessary staff;

2. Executing necessary contracts and documents;

3. Authorizing deposits into and expenditures from the Motor Vehicle Emissions Inspection Fund;

4. Acquiring and disposing of personal property;

5. Establishing an annual budget for the Air Inspection Program;

6. Operating the Automotive Inspection Program in accordance with standard fiscal practice; and

7. Providing for an annual audit of both financial and management practices of the Automotive Inspection Program.

H. The Board shall conduct ongoing evaluations of the Automotive Inspection Program sufficient to satisfy requirements of the US Environmental Protection Agency, the Ada Planning Association Board and other applicable rules and statutes.

(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-06 FINANCING

A. There is hereby established a Motor Vehicle Emissions Inspection Fund which shall consist of the following:

1. Money appropriated thereto by the Board or any local entity;

2. Money remitted by Automotive Inspection Stations and Repair and Re-Inspection Stations which is collected as fees;

3. Money received by the Board from private grants or donations;

4. Money received by the Board from processing fees assessed to Owners of Non- Exempt Motor Vehicles who do not present their vehicle for an Exhaust Emissions Inspection during the Inspection Period;

5. Federal or state funds received by the Board for the Automotive Inspection Program; and

6. Any other funds received by the Board from any source.

B. Moneys in the Motor Vehicle Emissions Inspection Fund may be used to pay all costs incurred by the Board in administering any aspect of the Automotive Inspection Program.

C. The Board shall appropriate and budget on a fiscal year basis, indicating expenditures to be made in implementing and administering the Automotive Inspection Program and sources of income to be used for such expenditures.

(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-07 INSPECTION CRITERIA AND COSTS

A. A Non-Exempt Motor Vehicle's Exhaust Emissions must be less than or equal to the approved Pass-Adjust Criteria in order for a Certificate of Compliance to be issued without further repair, adjustment or testing.

B. Non-Exempt Motor Vehicles of the Model Year 1984 and newer must have a fully operational catalytic converter, air injection system, fuel restrictor and any other component(s), devices or systems specified by the Board in the Rules and Regulations. The Owner of a Non-Exempt Motor Vehicle is required to see that these systems are fully operational. An Exhaust Emissions Inspection will not be performed on any vehicle on which one or more of these components have been subject to Tampering. The Owner of any Non-Exempt Motor Vehicle which has been subject to Tampering must bring all components into compliance and have the vehicle inspected within the Inspection Period.

C. Certificate of Compliance may be issued by an Emissions Inspection Mechanic who personally has performed an Exhaust Emissions Inspection and found the Non-Exempt Motor Vehicle to be in full compliance with the Automotive Inspection Program or by an Emissions Repair Mechanic who has personally performed repairs and adjustments to a Motor Vehicle which bring such vehicle into full compliance with the Automotive Inspection Program or the Board.

D. No person shall represent himself or herself as an Emissions Inspection Mechanic unless he or she has a current license issued by the Board or is operating under a current contract with the Board.

E. No person shall demand or collect a fee for the Exhaust Emissions Inspection of a Non-Exempt Motor Vehicle unless authorized by this Ordinance.

(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-08 ACQUISITION OF PROPERTY; CERTIFICATES PROPERTY OF BOARD

A. The Board may acquire by purchase, donation, dedication, or other lawful means any special equipment, tools, materials or facilities needed to adequately administer, investigate or enforce the provisions of this Ordinance or the Rules and Regulations adopted pursuant hereto provided, however, any acquisition made by the Board shall comply with all statutory requirements imposed upon the City of Boise for the purpose of receipt of property.

B. All Certificates of Compliance are the property of the Board until such time as they are issued to properly inspected Motor Vehicles.

(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-09 FALSIFICATION OF CERTIFICATES

A. No person shall willfully make, issue, display, sell or possess any imitation, counterfeit, or alteration of a Certificate of Compliance. Such activities so constitute prima facie evidence of a violation of this Ordinance.

B. No person shall display upon any Non-Exempt Motor Vehicle a Certificate of Compliance knowing it to be issued without compliance with this Ordinance. Such activities so constitute prima facie evidence of a violation of this Ordinance.

(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-10 ENFORCEMENT

Any Owner who fails to present a Non-Exempt Motor Vehicle for an Exhaust Emissions Inspection during the Inspection Period is in violation of this Ordinance and will be subject to a Board processing fee and any and all other enforcement mechanisms available through Idaho Code, this Ordinance, and other applicable municipal or county ordinances. Nothing in this Ordinance shall be construed to prevent the Board from requesting or utilizing any and all enforcement mechanisms granted by law.

(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-11 PENALTIES

Any person who violates any provision of this Ordinance shall be deemed guilty of an infraction and, upon judgment thereof, shall be subject to the penalties set forth in Idaho Infraction Rule 9(b) (Other Infractions). Failure to satisfy judgment as ordered by the Court pursuant to this Ordinance shall be deemed contempt of court punishable as a misdemeanor pursuant to Idaho Code 18-1801.

(5925, Amended, 07/20/1999; 5831, Amended, 01/20/1998)

Section 8-13-12 EFFECTIVE DATES

This Ordinance shall be effective beginning on the date on which the Joint Powers Agreement is adopted and continuously thereafter through and including December 31, 2002.

(5925, Amended, 07/20/1999; 5832, Amended, 02/03/1998; 5831, Repealed, 01/20/1998; 5774, Amended, 12/17/1996)

Section 8-13-13 SEVERABILITY

If any section, sentence, clause, word or phrase of this Ordinance is for any reason held to be unconstitutional or otherwise invalid or unenforceable by any court of competent jurisdiction, such shall not affect the validity and enforceability of the remaining portions of this Ordinance, all of which shall remain in full force and effect. (Ord. 5273, 11-20-90)

(5831, Amended, 01/20/1998)

CITY OF EAGLE

4-4-1: SHORT TITLE:
This Chapter may be cited as the *1999 MOTOR VEHICLE EMISSIONS CONTROL ORDINANCE*. (Ord. 346, 4-27-1999)

4-4-2: LEGISLATIVE FINDINGS AND PURPOSE:
It is found and declared that exhaust emissions from motor vehicles are a major source of air pollution throughout Ada County and such air pollution is a health hazard to all residents of the County and its incorporated cities.

A. It is further found and declared that:

1. An effective system of periodic motor vehicle inspection and maintenance will reduce the level of vehicular-based air pollution;

2. The Federal Government has mandated to the several states and local entities the ultimate responsibility for periodic motor vehicle inspection and maintenance;

3. Ada County has been designated as a nonattainment area for both carbon monoxide and small particulate matter (PM_{10}) and as such is mandated under the Federal Clean Air Act to reduce emissions so that the National Ambient Air Quality Standards will be attained and maintained;

4. Ada County and its incorporated cities will be monitored for $PM_{2.5}$ and ozone in the immediate future, and that the primary source of both of these pollutants in Ada County is exhaust emissions from motor vehicles.

5. Fuel economy is a legitimate legislative purpose and that an efficient emissions control program will result in motor vehicle fuel savings for the residents of Ada County and its incorporated cities;

6. The City is duly authorized to enact and enforce this Chapter under Idaho Code 31-714 and 50-302, respectively.

B. The purposes of this Chapter, therefore, are to protect the health and welfare of the citizens of Ada County and its incorporated cities, to provide for the continued control and management of exhaust emissions above certain levels as determined by the Federal Clean Air Act, as amended, as well as Rules for the Control of Air Pollution in the State of Idaho, and to empower the Air Quality Board to design and implement required periodic inspection of certain motor vehicles. (Ord. 346, 4-27-1999)

4-4-3: DEFINITIONS:

AUTOMOTIVE INSPECTION PROGRAM: That program established by the Board in accordance with this Chapter and whose purpose is to implement the requirements of this Chapter.

AUTOMOTIVE INSPECTION STATION: A facility licensed in accordance with Board specifications or operating under a contract with the Board for the purpose of performing exhaust emissions inspections.

BOARD: The Air Quality Board, chartered under the automotive inspection and readjustment program, joint powers agreement and this Chapter.

CARBON MONOXIDE (CO): An inorganic chemical compound containing one atom of carbon and one atom of oxygen.

CERTIFICATE OF COMPLIANCE: A Board-approved certificate verifying that the motor vehicle described thereon is in compliance with the requirements of this Chapter and the rules and regulations adopted pursuant to this Chapter.

EMISSIONS INSPECTION MECHANIC: An individual who performs exhaust emissions inspections on behalf of the Board in compliance with a formal written agreement with the Board.

EMISSIONS REPAIR MECHANIC: An individual who performs exhaust emissions repairs to motor vehicles on behalf of the Board in compliance with a formal written agreement with the Board.

EXHAUST ANALYZER: A device for calculating the proportion of various gases, vapors and particles present in the exhaust emissions of a motor vehicle, specifically including carbon monoxide, hydrocarbon, oxides of nitrogen, sulfur dioxide, volatile organic compounds and any other gases, vapors and particles as required by the Board.

EXHAUST EMISSIONS: Substances emitted into the atmosphere from any opening downstream of the exhaust port(s) of any motor vehicle engine.

EXHAUST EMISSIONS CONTROL DEVICE: Equipment designed by the manufacturer for installation on a motor vehicle for the purpose of reducing pollutants emitted from the motor vehicle, or a system or engine modification of a vehicle which causes a reduction of pollutants emitted from the motor vehicle, as required by Federal law.

EXHAUST EMISSIONS INSPECTION AND EXHAUST EMISSIONS REINSPECTION: That test, performed at an automotive inspection station or a repair and reinspection station by an emissions inspection mechanic, which determines whether a motor vehicle's exhaust emissions meet or do not meet applicable pass-adjust criteria.

FINE PARTICULATE MATTER ($PM_{2.5}$): All particulate matter, including condensable particulates, with an aerodynamic diameter of less than or equal to a nominal two and one-half (2.5) micrometers.

GROSS VEHICLE WEIGHT: The weight in pounds of a fully fueled empty motor vehicle plus any additional carrying capacity specified by the vehicle manufacturer.

HYDROCARBON (HC): An organic compound consisting exclusively of the elements carbon and hydrogen.

INSPECTION PERIOD: That period, determined according to applicable rules and regulations, during which a nonexempt motor vehicle is scheduled to be presented for an exhaust emissions inspection.

JOINT POWERS AGREEMENT: That agreement entered into pursuant to the joint powers provisions of Idaho Code chapter 23 title 67, among and between the incorporated cities of Ada County, the County of Ada, and the Ada County Highway District, which creates the Board.

MODEL YEAR: The year of origin of a motor vehicle so designated by that vehicle's certificate of registration filed with the Idaho Department of Transportation.

MOTOR VEHICLE: Any self-propelled motor vehicle with four (4) or more wheels in contact with the ground.

MOTOR VEHICLE OWNER: An individual, partnership, firm, public, private, or municipal corporation, association, trust, estate, agency, lessee, political subdivision of the State of Idaho or the Government of the United States or any other legal entity or their legal representatives, agents or assigns whose name appears as owner of a motor vehicle on its certificate of registration.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS): Standards developed by the U.S. Environmental Protection Agency in accordance with its responsibilities under the Federal Clean Air Act, as amended, and its implementing regulations.

NONEXEMPT MOTOR VEHICLE: A motor vehicle which is subject to the automotive inspection program and its exhaust emissions inspections.

OXIDES OF NITROGEN (NO_x): A group of chemical compounds formed by the combination of oxygen and nitrogen.

OZONE (O_3): A molecule composed of three (3) atoms of oxygen.

PARTICULATE MATTER (PM_{10}): All particulate matter, including condensable particulates, with an aerodynamic diameter of less than or equal to a nominal ten (10) micrometers.

PASS-ADJUST CRITERIA: Those standards set forth in the rules and regulations adopted by the Board pursuant to this Chapter which specify the maximum allowable components which may exist in exhaust emissions of a nonexempt motor vehicle.

PUBLIC NOTICE: A statement of the Board's intent to modify the rules and regulations, including a summary of the proposed modifications, published in at least one newspaper of general circulation within Ada County, posted at the offices of the Air Quality Board, and mailed to all participants in the joint powers agreement and all automotive inspection stations.

REPAIR AND REINSPECTION STATION: A facility licensed in accordance with Board specifications or operating under a contract with the Board for the purpose of repairing nonexempt motor vehicles which have failed an exhaust emissions inspection and to perform a reinspection of exhaust emissions in a manner specified by the Board.

RULES AND REGULATIONS: Specific written provisions governing the automotive inspection program, as adopted and amended by the Board from time to time.

SULFUR DIOXIDE (SO_2): A chemical compound consisting exclusively of the elements sulfur and oxygen.

TAMPERING: Removal of or rendering wholly or partially inoperative an exhaust emissions control device, including, but not limited to, the catalytic converter, air injection system, fuel inlet restrictor or other subsequent systems and devices designed and installed to reduce exhaust emissions.

VOLATILE ORGANIC COMPOUND (VOC): Any organic compound which readily evaporates in the atmosphere and, through its participation in atmospheric photochemical reactions, contributes to the formation of ozone. (Ord. 346, 4-27-1999)

4-4-4: CREATION OF AN INSPECTION-MAINTENANCE PROGRAM:

A. An Air Quality Board is hereby created pursuant to the joint powers provisions of Idaho Code chapter 23 title 67 in a joint powers agreement executed by the participating public agencies. The composition and organization of the Board shall be as set forth in the joint powers agreement.

B. The Board shall design and implement an automotive inspection program for the mandatory exhaust emissions analysis, inspection, maintenance and repair of nonexempt motor vehicles to ensure continued compliance with National Ambient Air Quality Standards and in accordance with applicable rules and regulations of the U.S. Environmental Protection Agency, the State of Idaho Division of Environmental Quality and the Ada Planning Association Board.

C. The exhaust emissions of each nonexempt motor vehicle will be measured and evaluated periodically and the owner of any such vehicle is required to present the vehicle at an automotive inspection station for an exhaust emissions inspection unless specifically exempted from this requirement by the Board or by this Chapter. Failure to do so within the inspection period constitutes prima facie evidence of a violation of this Chapter. The frequency and timing of the inspection period will be determined by the Board.

D. The owner of a nonexempt motor vehicle which passes an exhaust emissions inspection as provided herein shall be presented with a certificate of compliance. The owner shall maintain the certificate in a place and manner specified by the Board in the rules and regulations and present it to the Board or other authority upon demand. Failure to do so constitutes prima facie evidence of a violation of this Chapter.

E. A motor vehicle is classified as a nonexempt motor vehicle if all of the following are true:-

1. The certificate of registration has "Ada County" entered upon it as the County of residence or would be required to have "Ada County" entered upon it as the County of residence pursuant to Idaho Code 49-401B;

2. The gross vehicle weight equals or exceeds one thousand five hundred (1,500) pounds; and

3. The model year is 1965 or newer.

F. The following are hereby specifically exempted from compliance with the automotive inspection program, subject to verification in a manner specified by the Board and included in the rules and regulations:

1. Motorcycles as defined in Idaho Code 49-114;

2. "Idaho Old Timers" as defined in Idaho Code 49-406;

3. Farm tractors as defined in Idaho Code 49-107;

4. Motor vehicles registered under the prorated registration provisions of Idaho Code 49-437 for a period of less than six (6) months;

5. Idaho classic vehicles as defined in Idaho Code 49-406A;

6. Motor vehicles for which an alternate fuel type has been established according to rules and regulations adopted by the Board; and

7. Such other motor vehicles as may be exempted by rules and regulations adopted by the Board.

G. An exhaust emissions inspection may only be performed by and in a manner consistent with rules and regulations adopted by the Board. An exhaust emissions inspection shall include all of the following:

1. A measurement of exhaust emissions using an approved exhaust analyzer or other procedure or device approved by the Board to sample the motor vehicle's exhaust emissions, specifically including carbon monoxide and hydrocarbon content of the exhaust emissions and any other gases, vapors and particles as adopted by the Board to comply with the purposes of this Chapter as expressed in Section 4-4-2 of this Chapter; and

2. A determination as to whether exhaust emissions meet the pass-adjust criteria; and

3. A visual inspection, for model years 1984 and newer, to verify presence of the catalytic converter, air injection system, size of the fuel restrictor and any other visual inspection component(s) specified by the Board in the rules and regulations; and

4. Any other inspection adopted by the Board in the rules and regulations.

H. Where exhaust emissions do not meet the pass-adjust criteria, an indication to a motor vehicle owner of the repair and reinspection provisions of the automotive inspection program.

I. It is the responsibility of the owner of a nonexempt motor vehicle which was found not to comply with the pass-adjust criteria to have the motor vehicle brought into compliance at the owner's expense and to have it reinspected within ten (10) calendar days of the failed exhaust emissions inspection according to procedures and criteria established by the Board and included in the rules and regulations.

J. Each nonexempt motor vehicle shall bear a share of the cost of the automotive inspection program regardless of whether the Board elects to waive one or more exhaust emissions

inspections for that vehicle. The motor vehicle owner for each nonexempt motor vehicle is required to submit payment to the Board or other authorized representative under terms and conditions specified in the rules and regulations.

K. An emissions inspection mechanic who performs an exhaust emissions inspection on a motor vehicle shall, when the motor vehicle is found to comply with the pass-adjust criteria, immediately issue a certificate of compliance in accordance with procedures adopted by the Board in the rules and regulations. The certificate of compliance will expire on the last day of the next inspection period for that motor vehicle. (Ord. 346, 4-27-1999)

4-4-5: DUTIES AND POWERS OF THE BOARD:

A. The Board shall conduct regular monthly meetings at such time and place as the Board shall determine. Meetings are open to the public.

B. The Board, in accordance with the criteria expressed herein, shall adopt rules and regulations for the implementation and operation of the automotive inspection program and amend those rules and regulations from time to time as it deems necessary. Rules and regulations and amendments to same may only be adopted at an Air Quality Board meeting with a minimum of fourteen (14) days' public notice of the Board's intent to amend the rules and regulations.

C. Rules and regulations shall include, but not be limited to, the following:

1. Procedures for determining the exempt or nonexempt status of any motor vehicle and releasing exempt motor vehicles from further compliance with the automotive inspection program;

2. Procedures for establishing the inspection period for a nonexempt motor vehicle;

3. Structure of the automotive inspection program, specifically including whether repairs and adjustments to motor vehicles failing to comply with the pass-adjust criteria may or may not be made by emissions inspection mechanics who perform the original exhaust emissions inspection;

4. Procedures for licensing or contracting for automotive inspection stations, repair and reinspection stations, emissions inspection mechanics and emissions repair mechanics and for the potential termination thereof;

5. Pass-adjust criteria for all nonexempt motor vehicles;

6. Nature and display of certificates of compliance on nonexempt motor vehicles which successfully comply with the pass-adjust criteria;

7. Specifications for approved exhaust analyzers or other emissions measurement devices or systems;

8. Procedures by which the fee to be charged each motor vehicle owner for each nonexempt motor vehicle is determined, or, alternatively, the fee itself;

9. Circumstances under which a waiver may be granted to exempt a nonexempt motor vehicle from the provisions of this Chapter, either temporarily or permanently;

10. Minimum effort(s) which will be required of the owner of a nonexempt motor vehicle owner which fails to comply with the pass-adjust criteria in order to bring the failing vehicle into compliance with the pass-adjust criteria, as well as procedures by which such minimum effort provisions may be amended from time to time. This effort shall generally be the minimum necessary to accommodate typical repair and reinspection needs and may be different for different model years;

11. Cost of a certificate of compliance. This shall be the minimum necessary to provide for the ongoing operation, administration, maintenance and enforcement of the automotive inspection program and shall not exceed four dollars ($4.00) without concurrence of all parties to the joint powers agreement;

12. The processing fee which may be assessed upon owners of nonexempt motor vehicles who fail to present their nonexempt motor vehicle for inspection within the inspection period and the procedure by which this fee is established. This fee shall be sufficient to recover costs of processing notices of violation for all nonexempt motor vehicles which do not comply with the provisions of this Chapter within the inspection period;

13. Procedures governing the contracting for or licensing of automotive inspection stations, repair and reinspection stations and emissions inspection mechanics and the suspension, revocation, or termination of those contracts or licenses when appropriate;

14. Schedules and deadlines for the flow of data, paperwork and information pertaining to exhaust emissions inspections among automotive inspection stations, repair and reinspection stations, exhaust emissions mechanics and the automotive inspection program staff; and

15. Any other matters deemed to be within the authority of the Board.

D. The Board may, at its discretion, employ the full power and authority of law to ensure that motor vehicle owners comply fully and completely with Idaho Code 49-401B, specifically including correct designation of the county of residence as provided therein.

E. The Board shall conduct an ongoing quality assurance program to determine that all automotive inspection stations, repair and reinspection stations and exhaust emission mechanics perform automotive inspection program tasks in conformance with the adopted rules and regulations.

F. The Board or its authorized representative, upon written notice and an opportunity for a hearing, may suspend, revoke and/or require the surrender and forfeiture of any license granted by the Board which is not utilized in accordance with this Chapter or the rules and regulations. The procedure and grounds for suspension or revocation shall be set forth in the rules and regulations and shall comply with current Idaho law.

G. The Board shall have the authority to undertake any additional actions reasonably necessary to the operation of the automotive inspection program, including, but not limited to:

1. Employing necessary staff;

2. Executing necessary contracts and documents;

3. Authorizing deposits into and expenditures from the motor vehicle emissions inspection fund;

4. Acquiring and disposing of personal property;

5. Establishing an annual budget for the air inspection program;

6. Operating the automotive inspection program in accordance with standard fiscal practice; and

7. Providing for an annual audit of both financial and management practices of the automotive inspection program.-

H. The Board shall conduct ongoing evaluations of the automotive inspection program sufficient to satisfy requirements of the U.S. Environmental Protection Agency, the Ada Planning Association Board and other applicable rules and statutes. (Ord. 346, 4-27-1999)

4-4-6: FINANCING:

A. There is hereby established a motor vehicle emissions inspection fund which shall consist of the following:

1. Money appropriated thereto by the Board or any local entity;

2. Money remitted by automotive inspection stations and repair and reinspection stations which is collected as fees;

3. Money received by the Board from private grants or donations;

4. Money received by the Board from processing fees assessed to owners of nonexempt motor vehicles who do not present their vehicle for an exhaust emissions inspection during the inspection period;

5. Federal or State funds received by the Board for the automotive inspection program; and

6. Any other funds received by the Board from any source.

B. Monies in the motor vehicle emissions inspection fund may be used to pay all costs incurred by the Board in administering any aspect of the automotive inspection program.

C. The Board shall appropriate and budget on a fiscal year basis, indicating expenditures to be made in implementing and administering the automotive inspection program and sources of income to be used for such expenditures. (Ord. 346, 4-27-1999)

4-4-7: INSPECTION CRITERIA AND COSTS:

A. A nonexempt motor vehicle's exhaust emissions must be less than or equal to the approved pass-adjust criteria in order for a certificate of compliance to be issued without further repair, adjustment or testing.

B. Nonexempt motor vehicles of the model year 1984 and newer must have a fully operational catalytic converter, air injection system, fuel restrictor and any other component(s), devices or systems specified by the Board in the rules and regulations. The owner of a nonexempt motor vehicle is required to see that these systems are fully operational. An exhaust emissions inspection will not be performed on any vehicle on which one or more of these components have been subject to tampering. The owner of any nonexempt motor vehicle which has been subject to tampering must bring all components into compliance and have the vehicle inspected within the inspection period.

C. A certificate of compliance may be issued by an emissions inspection mechanic who personally has performed an exhaust emissions inspection and found the nonexempt motor vehicle to be in full compliance with the automotive inspection program or by an emissions repair mechanic who has personally performed repairs and adjustments to a motor vehicle which bring such vehicle into full compliance with the automotive inspection program or by the Board.

D. No person shall represent himself or herself as an emissions inspection mechanic unless he or she has a current license issued by the Board or is operating under a current contract with the Board.

E. No person shall demand or collect a fee for the exhaust emissions inspection of a nonexempt motor vehicle unless authorized by this Chapter. (Ord. 346, 4-27-1999)

4-4-8: ACQUISITION OF PROPERTY; CERTIFICATES PROPERTY OF BOARD:

A. The Board may acquire by purchase, donation, dedication, or other lawful means any special equipment, tools, materials or facilities needed to adequately administer, investigate or enforce the provisions of this Chapter or the rules and regulations adopted pursuant hereto, provided, however, any acquisition made by the Board shall comply with all statutory requirements imposed upon the County for the purpose of receipt of property.

B. All certificates of compliance are the property of the Board until such time as they are issued to properly inspected motor vehicles. (Ord. 346, 4-27-1999)

4-4-9: FALSIFICATION OF CERTIFICATES:

A. No person shall wilfully make, issue, display, sell or possess any imitation, counterfeit, or alteration of a certificate of compliance. Such activities so constitute prima facie evidence of a violation of this Chapter.

B. No person shall display upon nor carry within any nonexempt motor vehicle a certificate of compliance knowing it to be issued without compliance with this Chapter. Such activities so constitute prima facie evidence of a violation of this Chapter. (Ord. 346, 4-27-1999)

4-4-10: ENFORCEMENT:

Any owner who fails to present a nonexempt motor vehicle for an exhaust emissions inspection during the inspection period is in violation of this Chapter and will be subject to a Board processing fee and any and all other enforcement mechanisms available through Idaho Code, this Chapter, and other applicable Municipal or County ordinances. Nothing in this Chapter shall be construed to prevent the Board from requesting or utilizing any and all enforcement mechanisms granted by law. (Ord. 346, 4-27-1999)

4-4-11: PENALTIES:

Any person who violates any provision of this Chapter shall be deemed guilty of an infraction and, upon judgment thereof, shall be subject to the penalties set forth in Idaho Infraction Rule 9(b) (Other Infractions). Failure to satisfy judgment as ordered by the court pursuant to this Chapter shall be deemed contempt of court punishable as a misdemeanor pursuant to Idaho Code 18-1801. (Ord. 346, 4-27-1999)

GARDEN CITY

CHAPTER 4

MOTOR VEHICLE EMISSIONS CONTROL

SECTION:

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5-4-1: **SHORT TITLE**: This Chapter may be cited as THE 1991 *VEHICLE EMISSIONS CONTROL CHAPTER.*

5-4-2: **LEGISLATIVE FINDINGS AND PURPOSE:**

It is found and declared that exhaust emissions from motor vehicles are a major source of air pollution in the County of Ada and such air pollution is a health hazard to all residents of the County and its five (5) incorporated cities;

It is further found and declared that an effective system of periodic motor vehicle inspection and maintenance will reduce the level of vehicular air pollution;

It is further found and declared that Ada County has been designated as a nonattainment area for carbon monoxide and as such is mandated under the Federal Clean Air Act to reduce automobile emissions so that the National Ambient Air Quality Standard for carbon monoxide will be attained and maintained;

It is further found and declared that fuel economy is a legitimate legislative purpose and that an efficient emissions control program will result in motor vehicle fuel savings for the residents of Ada County and its cities;

It is further found and declared that the City of Garden City is duly authorized under Idaho

Code section 50-302 to enact and enforce this Chapter.

The purposes of this Chapter, therefore, are to protect the health and welfare of the citizens of Ada County and its cities; to provide for the control of exhaust emissions from motor vehicles above certain levels as determined by the Air Quality Board and to require annual inspection of certain motor vehicles in order to comply with the Federal Clean Air Act, as amended.

5-4-3: **DEFINITIONS**:

AUTOMOTIVE INSPECTION AND READJUSTMENT (AIR) PROGRAM	That program established by the Board in accordance with this Chapter and whose purpose is to implement the requirements of this Chapter.
AUTOMOTIVE INSPECTION AND READJUSTMENT (AIR) STATION	A facility licensed in accordance with Board specifications and which is so equipped as to enable an exhaust emissions inspection to be performed.
BOARD	The Air Quality Board.
CARBON MONOXIDE (CO)	The chemical compound containing one atom of carbon and one atom of oxygen.
CERTIFICATE OF COMPLIANCE	A sticker that certifies that the motor vehicle described thereon is in compliance with the requirements of this Chapter and the rules and regulations adopted pursuant to this Chapter.
EMISSIONS INSPECTION MECHANIC	An individual licensed in accordance with Board specifications to inspect and adjust motor vehicles which are subject to the AIR program.
EXHAUST EMISSIONS	Substances emitted into the atmosphere from any opening downstream of the exhaust port(s) of any motor vehicle engine.
EXHAUST EMISSIONS CONTROL DEVICE	Equipment designed by the manufacturer for installation on a motor vehicle for the purpose of reducing pollutants emitted from the motor vehicle, or a system or engine modification of a vehicle which causes a reduction of pollutants emitted from the motor vehicle.

EXHAUST EMISSIONS INSPECTION	That test, performed at an AIR station by an emissions inspection mechanic, which determines whether a motor vehicle's exhaust emissions meet or do not meet applicable pass-adjust criteria.
EXHAUST GAS ANALYZER	A device for calculating the proportion of various gases present in the exhaust emissions of a motor vehicle, specifically including carbon monoxide and any other gases as required by the Board.
GROSS VEHICLE WEIGHT	The weight in pounds of a fully fueled empty motor vehicle plus any additional carrying capacity specified by the vehicle manufacturer.
INSPECTION PERIOD	The month during which a nonexempt motor vehicle is scheduled to be presented for an exhaust emissions inspection.
JOINT POWERS AGREEMENT	That agreement entered into pursuant to the joint powers provisions of Idaho Code chapter 23, title 67, among and between the incorporated cities of Ada County and the County of Ada, which creates the Board.
MODEL YEAR	The year of origin of a motor vehicle so designated by that vehicle's certificate of registration.
MOTOR VEHICLE	Any self-propelled gasoline fueled or gasoline mix fueled motor vehicle with four (4) or more wheels in contact with the ground.
MOTOR VEHICLE OWNER	An individual, partnership, firm, public, private, or municipal corporation, association, trust, estate, agency, lessee, political subdivision or the State of Idaho or the government of the United States or any other legal entity or their legal representatives, agents or assigns whose name appears as owner of a motor vehicle on its certificate of registration.
NONEXEMPT MOTOR VEHICLE	A motor vehicle which is subject to AIR program testing requirements of this Chapter.
PASS-ADJUST CRITERIA	Those standards set forth in the rules and regulations adopted by the Board pursuant to this Chapter which specify the maximum allowable components which may exist in exhaust emissions of a nonexempt motor vehicle.

PUBLIC NOTICE	A statement of the Board's intent to modify the rules and regulations, including a summary of the proposed modifications, published in at least one newspaper of general circulation within Ada County, posted at the offices of the Air Quality Board, and mailed to participants in the joint powers agreement and AIR stations.
RULES AND REGULATIONS	Specific written provisions governing the AIR program, as adopted and amended by the Board from time to time.
TAMPERING	Removal of or rendering wholly or partially inoperative an exhaust emissions control device, including but not limited to, the catalytic converter, air injection system and leaded fuel inlet restrictor.

5-4-4: **INSPECTION MAINTENANCE PROGRAM CREATED**:

A. An Air Quality Board is created pursuant to the joint powers provisions of Idaho Code chapter 23, title 67, in a joint powers agreement executed by the participating public agencies. The composition and organization of the Board shall be as set forth in the joint powers agreement.

B. The Board shall design and implement an automotive inspection and readjustment (AIR) program for the mandatory exhaust emissions analysis, inspection and maintenance of certain motor vehicles in accordance with the "idle test" requirements for "Motor Vehicles: Emissions Control System Performance Warranty Short Tests," listed in section 207(b) of the Clean Air Act, 42 U.S.C., 7541(b).

C. The owner of a nonexempt motor vehicle is required to present it annually at an AIR station for an exhaust emissions inspection during an inspection period determined by the Board. Failure to do so within the inspection period constitutes prima facie evidence of a violation of this Chapter. Criteria for determining the inspection period shall be adopted by the Board and incorporated in the rules and regulations.

D. The owner of a nonexempt motor vehicle which passes an exhaust emissions inspection as provided herein shall display any sticker, certification, or other evidence of a completed inspection in a place and manner specified by the Board in the rules and regulations. Failure to do so constitutes prima facie evidence of a violation of this Chapter.

E. A motor vehicle is classified as a nonexempt vehicle if all of the following are true:

1. The primary fuel is gasoline or a gasoline mix;

2. The certificate of registration has or is required to have "Ada County" entered upon

it as the County of residence pursuant to Idaho Code 49-441;

3. The gross vehicle weight equals or exceeds one thousand five hundred (1,500) pounds; and

4. The model year is 1965 or newer.

F. The following are hereby specifically exempted from compliance with the AIR program, subject to verification in a manner specified by the Board and included in the rules and regulations:

1. Motor cycles as defined in Idaho Code 40-114;

2. "Idaho Old Timers" as defined in Idaho Code 49-406;

3. Farm tractors as defined in Idaho Code 49-107;

4. Motor vehicles for which an alternate fuel type has been established;

5. Motor vehicles for which a gross vehicle weight of less than one thousand five hundred (1,500) pounds has been verified;

6. Motor vehicles registered under the prorated registration provisions of Idaho Code 49-437 for a period of less than six (6) months;

7. Such other motor vehicles as may be exempted by rules and regulations adopted by the Board.

G. An exhaust emissions inspection may only be performed by an exhaust emissions mechanic at an AIR station. An exhaust emissions inspection shall include all of the following:

1. A measurement of exhaust emissions using an approved exhaust gas analyzer or other device approved by the Board to sample the motor vehicle's exhaust emissions, specifically including the carbon monoxide content of the exhaust emissions and any other gases as adopted by the Board to comply with future regulations of the United States Environmental Protection Agency.

2. A determination as to whether exhaust emissions meet the pass-adjust criteria.

3. A visual inspection, for model years 1984 and newer, of the catalytic converter, air injection system and size of the fuel restrictor.

4. Where exhaust emissions do not meet the pass-adjust criteria, an indication to a motor vehicle owner of the probable cause(s) of any malfunction or misadjustment

responsible for the failure to comply with the pass-adjust criteria.

H. It is the responsibility of the owner of a nonexempt motor vehicle which was found not to comply with the pass-adjust criteria to have the motor vehicle repaired at the owner's expense and to have it reinspected within ten (10) calendar days of the failed exhaust emissions inspection. When repairs are necessary, the owner has the right to return said motor vehicle to the same AIR station for one reinspection without charge; provided, that not more than ten (10) calendar days have elapsed since the motor vehicle's initial exhaust emissions inspection. Repairs may be performed by the AIR station or by any other mechanic of the owner's choice.

1. Any person who presents a motor vehicle for an exhaust emissions inspection shall immediately pay the AIR station for the inspection, except as provided for re-inspections in subsection 5-4-4H of this Section.

In addition, any person whose motor vehicle successfully passes the exhaust emissions inspection shall immediately reimburse the AIR station for a certificate of compliance. The maximum allowable fee for an exhaust emissions inspection and the fee for a certificate of compliance shall be adopted by the Board as a portion of the rules and regulations and made known to the public in whatever manner the Board deems appropriate.

J. An exhaust emissions mechanic who performs an exhaust emissions inspection on a motor vehicle shall, when the motor vehicle Is found to comply with the pass-adjust criteria, immediately issue a certificate of compliance in accordance with procedures adopted by the Board in the rules and regulations. The certificate of compliance will expire on the last day of the next inspection period for that motor vehicle.

5-4-5: DUTIES AND POWERS OF THE BOARD:

A. The Board shall conduct regular monthly public meetings at such time as the Board shall determine.

B. The Board, in accordance with the criteria expressed herein, shall adopt rules and regulations for the implementation and operation of the AIR program and amend those rules and regulations, from time to time, as it deems necessary. Rules and regulations and amendments to same may only be adopted at an Air Quality Board meeting with a minimum of fourteen (14) days' public notice of the Board's intent to amend the rules and regulations.

C. Rules and regulations shall include, but not be limited to, the following:

1. Procedures for determining the exempt or nonexempt status of any motor vehicle and releasing exempt motor vehicles from further compliance with the AIR program;

2. Procedures for establishing the inspection period for a nonexempt motor vehicle:

3. Pass-adjust criteria for all nonexempt motor vehicles;

4. Display and placement of certificates of compliance on nonexempt motor vehicles which have passed an exhaust emissions inspection;

5. Specifications for approved exhaust gas analyzers;

6. The fee ceiling which may be required to be paid by a nonexempt motor vehicle owner to bring their nonexempt motor vehicle into compliance with the pass-adjust criteria (this fee shall be the minimum necessary to accommodate typical repair needs and may be different for different model years);

7. The cost of a certificate of compliance (this fee shall be the minimum necessary to provide for the on-going operation, administration, maintenance and enforcement of the AIR program and shall not exceed $3.75 without concurrence of all participating agencies);

8. Procedures for AIR stations to purchase certificates of compliance;

9. The maximum fee which may be charged by an AIR station for performing an exhaust emissions inspection (this fee shall be the minimum necessary to reimburse the AIR station for labor costs and reasonably amortize the cost of an exhaust gas analyzer plus a reasonable overhead and return on investment allowance);

10. The processing fee which may be assessed upon owners of nonexempt motor vehicles who fail to present their nonexempt motor vehicle for inspection within the inspection period (this fee shall be sufficient to recover costs of processing notices of violation for all nonexempt motor vehicles which do not comply with the provisions of this Chapter within the inspection period);

11. Procedures governing the licensing of AIR stations and emissions inspection mechanics and the suspension, revocation or termination of those licenses when appropriate;

12. Schedules and deadlines for the flow of data, paperwork and information pertaining to exhaust emissions inspections among AIR stations, exhaust emissions mechanics and the AIR program staff;

13. Fee schedules for licensing AIR stations and exhaust emission mechanics and for testing applicants for exhaust emissions mechanics' licenses; and

14. Audit procedures to insure that all certificates of compliance are adequately

protected against theft and counterfeiting.

D. The Board or its authorized representatives, upon notice and an opportunity for a hearing, may suspend, revoke and/or require the surrender and forfeiture of the AIR station license of any AIR station permittee if it finds that such station is not operated in accordance with this Chapter or the rules and regulations. The procedure and grounds for suspension or revocation shall be set forth in the rules and regulations.

E. The Board or its authorized representatives, upon notice and an opportunity for a hearing, may suspend, revoke and/or require the surrender and forfeiture of any emissions inspection mechanic's license if the Board finds that such emissions inspection mechanic does not perform tests in accordance with this Chapter or the rules and regulations. The procedure and grounds for suspension or revocation shall be set forth in the rules and regulations.

F. The Board shall conduct an on-going quality assurance program to determine that all AIR stations and exhaust emission mechanics perform AIR program tasks in conformance with the adopted rules and regulations.

G. The Board shall have the authority to undertake any additional actions reasonably necessary to the operation of the AIR program, including but not limited to:

1. Employing necessary staff;

2. Executing necessary contracts and documents;

3. Authorizing deposits into and expenditures from the Motor Vehicle Emissions Inspection Fund;

4. Acquiring and disposing of personal property;

5. Operating the AIR program in accordance with standard fiscal practice; and

6. Providing for an annual audit of both financial and management practices of the AIR program.

H. The Board shall conduct on-going evaluations of the AIR program sufficient to satisfy requirements of the United States Environmental Protection Agency and other applicable rules and statutes.

I. The Board may make known to owners of nonexempt motor vehicles, in whatever manner the Board deems appropriate, the following information about the AIR program:

1. Purpose of the AIR program;

2. Owners' responsibilities under the AIR program;

3. Most common adjustments and repairs likely to be required in order for a motor vehicle to successfully pass an exhaust emissions inspection; and

4. Locations of AIR stations at which an exhaust emissions inspection may be performed.

5-4-6: **FINANCING:**

A. There is hereby established a Motor Vehicle Emissions Inspection Fund which shall consist of the following:

1. Money appropriated thereto by the Board or any local entity;

2. Money remitted by the AIR stations which is collected as fees;

3. Money received by the Board from private grants or donations;

4. Money received by the Board from processing fees assessed to owners of nonexempt motor vehicles who do not present their vehicle for an exhaust emissions inspection during the inspection period;

5. Federal or State funds received by the Board for the AIR program; and

6. Any other funds received by the Board from any source.

B. Moneys in the Motor Vehicle Emissions Inspection Fund may be used to pay all costs incurred by the Board in administering any aspect of the AIR program.

C. The Board shall appropriate and budget on a fiscal year basis, indicating expenditures to be made in implementing and administering the AIR program and sources of income to be used for such expenditures.

5-4-7: **INSPECTION CRITERIA AND COSTS:**

A. The Board shall adopt and include in the rules and regulations pass-adjust criteria and may amend these criteria, from time to time, as it deems necessary to meet the purposes and intent of this Chapter. A nonexempt motor vehicle's exhaust emissions must be less than or equal to the approved pass-adjust criteria in order for a certificate of compliance to be issued without further adjustment or testing.

B. Nonexempt motor vehicles of the model year 1984 and newer must have a fully operational catalytic converter, air injection system, leaded fuel restrictor and any other component(s) specified by the Board in the rules and regulations. The owner of a nonexempt motor vehicle is required to see that these systems are fully operational. An exhaust emissions inspection will not be performed on any vehicle on which one or more of these components have been subject to tampering. The owner of any nonexempt motor vehicle which has been subject to tampering must bring all components into compliance and have the vehicle inspected within the inspection period.

C. A certificate of compliance will be issued to each nonexempt motor vehicle which complies with the AIR program. The certificate will be displayed in a manner consistent with rules and regulations adopted by the Board.

D. 1. Blank certificates of compliance will be distributed to each participating AIR station upon payment to the AIR program of a fee adopted and set by the Board; this fee is recovered by the AIR station when it is transferred to a nonexempt motor vehicle which has successfully passed an exhaust emissions inspection. The AIR station may also charge a fee, adopted and set by the Board, to perform the exhaust emissions inspection on a nonexempt motor vehicle. The maximum total cost to a motor vehicle owner for an exhaust emissions inspection is therefor the sum of the fee for the certificate of compliance and the exhaust emissions inspection.

2. If a nonexempt motor vehicle exceeds the model year pass-adjust criteria during the Initial test and the owner elects to utilize the ten (10) day period for independent correction provided for by subsection 5-4-4H of this Chapter, the charge for the initial test without the issuance of a certificate of compliance shall be limited to the fee for the exhaust emissions inspection. When the motor vehicle is returned within the ten (10) day period and meets pass-adjust criteria or has met the current repair limits, a certificate of compliance will be issued and the owner will pay only the fee for the certificate.

E. If model year pass-adjust criteria are exceeded upon the initial test of a nonexempt motor vehicle, the AIR station may perform the adjustments and/or repairs required by the rules and regulations in order for a certificate of compliance to be issued. If, however, repair costs exceed or are reasonably expected to exceed the Board's currently adopted repair limits, a certificate of compliance may be issued without further testing.

F. A certificate of compliance shall be issued to a nonexempt motor vehicle only by an emissions inspection mechanic at an AIR station and may only be issued to motor vehicles which have been tested with equipment and procedures specified and approved by the Board. No person shall represent himself or herself as an emissions inspection mechanic unless he or she has a current license issued by the Board.

G. No person shall demand or collect a fee for the exhaust emissions inspection of a nonexempt motor vehicle unless authorized by this Chapter.

H. As of January 1, 1991, the following pass-adjust criteria will be in place, subject to modification as provided in subsection 5-4-7A:

MODEL YEAR	% CARBON MONOXIDE
1965 - 1974	5.5
1975 - 1979	3.5
1980	1.5
1981 and newer	1.2

5-4-8: **ACQUISITION OF PROPERTY; CERTIFICATES PROPERTY OF BOARD:**

A. The Board may acquire by purchase, donation, dedication, or other lawful means any special equipment, tools, materials or facilities needed to adequately administer, investigate or enforce the provisions of this Chapter or the rules and regulations adopted pursuant hereto provided; however, any acquisition made by the Board shall comply with all statutory requirements imposed upon the County of Ada for the purchase or receipt of property.

B. All certificates of compliance are the property of the Board until such time as they are issued to properly inspected motor vehicles.

5-4-9: **FALSIFICATION OF CERTIFICATES**:

A. No person shall wilfully make, issue, display, sell or possess any imitation, counterfeit, or alteration of a certificate of compliance.

B. No person shall display upon any nonexempt motor vehicle a certificate of compliance knowing it to be issued without compliance with this Chapter.

5-4-10: **ENFORCEMENT**: Any owner who fails to present a nonexempt motor vehicle for an exhaust emissions inspection during the inspection period is in violation of this Chapter and will be subject to a Board processing fee and any and all other enforcement mechanisms available through Idaho Code, this Chapter, and other applicable Municipal or County ordinances. Nothing in this Chapter shall be construed to prevent the Board from requesting or utilizing any and all enforcement mechanisms granted by law.

5-4-11: **PENALTIES**: Any person who violates any provision of this Chapter shall be deemed guilty of an infraction and, upon judgment thereof, shall be subject to the penalties set forth In Idaho Infraction Rule 9(b) (Other Infractions). Failure to satisfy judgment as ordered by the court pursuant to this Chapter shall be deemed contempt of court punishable as a misdemeanor pursuant to Idaho Code 18-1801.

5-4-12: **EFFECTIVE DATES**: This Chapter shall be effective beginning on January 1, 1991. (Ord. 674, 8-13-96)

5-4-13: **SEVERABILITY**: If any section, sentence, clause, word or phrase of this Chapter is for any reason held to be unconstitutional or otherwise invalid or unenforceable by any court of competent jurisdiction, such shall not affect the validity and enforceability of the remaining portions of this Chapter, all of which shall remain in full force and effect. (Ord. 558, 11-13-90)

CITY OF MERIDIAN

CHAPTER 3
MOTOR VEHICLE EMISSIONS CONTROL

7-3-1: SHORT TITLE

This Chapter may be cited as the *1999 MOTOR VEHICLE EMISSIONS CONTROL ORDINANCE*. (Ord. 814, 6-1-1999)

7-3-2: LEGISLATIVE FINDINGS AND PURPOSE:

A. It is found and declared that exhaust emissions from motor vehicles are a major source of air pollution throughout Ada County and such air pollution is a health hazard to all residents of the County and its incorporated cities.

B. It is further found and declared that an effective system of periodic motor vehicle inspection and maintenance will reduce the level of vehicular-based air pollution.

C. It is further found and declared that the Federal Government has mandated to the several states and local entities the ultimate responsibility for periodic motor vehicle inspection and maintenance.

D. It is further found and declared that Ada County has been designated as a nonattainment area for both carbon monoxide and small particulate matter (PM_{10}) and as such is mandated under the Federal Clean Air Act to reduce emissions so that the National Ambient Air Quality Standards will be attained and maintained.

E. It is further found and declared that Ada County and its incorporated cities will be monitored for $PM_{2.5}$ and ozone in the immediate future, and that the primary source of both of these pollutants in Ada County is exhaust emissions from motor vehicles.

F. It is further found and declared that fuel economy is a legitimate legislative purpose and that an efficient emissions control program will result in motor vehicle fuel savings for the residents of Ada County and its incorporated cities.

G. It is further found and declared that The City and its incorporated cities are duly authorized to enact and enforce this Chapter under Idaho Code 31-714 and 50-302, respectively.

H. The purposes of this Chapter, therefore, are to protect the health and welfare of the inhabitants of the City, to provide for the continued control and management of exhaust emissions above certain levels as determined by the Federal Clean Air Act, as amended, as well as Rules for the Control of Air Pollution in the State of Idaho (IDAPA 16.01.01 et seq.), and to empower the Air Quality Board to design and implement required periodic inspection of certain motor vehicles. (Ord. 814, 6-1-1999)

7-3-3: DEFINITIONS:

AUTOMOTIVE INSPECTION PROGRAM: That program established by the Board in accordance with this Chapter and whose purpose is to implement the requirements of this Chapter.

AUTOMOTIVE INSPECTION STATION: A facility licensed in accordance with Board specifications or operating under a contract with the Board for the purpose of performing exhaust emissions inspections.

BOARD: The Air Quality Board, chartered under the automotive inspection and readjustment program, joint powers agreement and this Chapter.

CARBON MONOXIDE (CO): An inorganic chemical compound containing one atom of carbon and one atom of oxygen.

CERTIFICATE OF COMPLIANCE: A Board-approved certificate verifying that the motor vehicle described thereon is in compliance with the requirements of this Chapter and the rules and regulations adopted pursuant to this Chapter.

EMISSIONS INSPECTION MECHANIC: An individual who performs exhaust emissions inspections on behalf of the Board in compliance with a formal written agreement with the Board.

EMISSIONS REPAIR MECHANIC: An individual who performs exhaust emissions repairs to motor vehicles on behalf of the Board in compliance with a formal written agreement with the Board.

EXHAUST ANALYZER: A device for calculating the proportion of various gases, vapors and particles present in the exhaust emissions of a motor vehicle, specifically including carbon monoxide, hydrocarbon, oxides of nitrogen, sulfur dioxide, volatile organic compounds and any other gases, vapors and particles as required by the Board.

EXHAUST EMISSIONS: Substances emitted into the atmosphere from any opening downstream of the exhaust port(s) of any motor vehicle engine.

EXHAUST EMISSIONS CONTROL DEVICE: Equipment designed by the manufacturer for installation on a motor vehicle for the purpose of reducing pollutants emitted from the motor vehicle, or a system or engine modification of a vehicle which causes a reduction of pollutants emitted from the motor vehicle, as required by Federal law.

EXHAUST EMISSIONS INSPECTION AND EXHAUST EMISSIONS REINSPECTION: That test, performed at an automotive inspection station or a repair and reinspection station by an emissions inspection mechanic, which determines whether a motor vehicle's exhaust emissions meet or do not meet applicable pass-adjust criteria.

FINE PARTICULATE MATTER ($PM_{2.5}$): All particulate matter, including condensable particulates, with an aerodynamic diameter of less than or equal to a nominal two and one-half (2.5) micrometers.

GROSS VEHICLE WEIGHT: The weight in pounds of a fully fueled empty motor vehicle plus any additional carrying capacity specified by the vehicle manufacturer.

HYDROCARBON (HC): An organic compound consisting exclusively of the elements carbon and hydrogen.

INSPECTION PERIOD: That period, determined according to applicable rules and regulations, during which a nonexempt motor vehicle is scheduled to be presented for an exhaust emissions inspection.

JOINT POWERS AGREEMENT: That agreement entered into pursuant to the joint powers provisions of Idaho Code chapter 23 title 67, among and between the incorporated cities of Ada County, the County of Ada, and the Ada County Highway District, which creates the Board.

MODEL YEAR: The year of origin of a motor vehicle so designated by that vehicle's certificate of registration filed with the Idaho Department of Transportation.

MOTOR VEHICLE: Any self-propelled motor vehicle with four (4) or more wheels in contact with the ground.

MOTOR VEHICLE OWNER: An individual, partnership, firm, public, private, or municipal corporation, association, trust, estate, agency, lessee, political subdivision of the State of Idaho or the Government of the United States or any other legal entity or their legal representatives, agents or assigns whose name appears as owner of a motor vehicle on its certificate of registration.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS): Standards developed by the U.S. Environmental Protection Agency in accordance with its responsibilities under the Federal Clean Air Act, as amended, and its implementing regulations.

NONEXEMPT MOTOR VEHICLE: A motor vehicle which is subject to the automotive inspection program and its exhaust emissions inspections.

OXIDES OF NITROGEN (NO_x): A group of chemical compounds formed by the combination of oxygen and nitrogen.

OZONE (O_3): A molecule composed of three (3) atoms of oxygen.

PARTICULATE MATTER (PM_{10}): All particulate matter, including condensable particulates, with an aerodynamic diameter of less than or equal to a nominal ten (10) micrometers.

PASS-ADJUST CRITERIA: Those standards set forth in the rules and regulations adopted by the Board pursuant to this Chapter which specify the maximum allowable components which may exist in exhaust emissions of a nonexempt motor vehicle.

PUBLIC NOTICE: A statement of the Board's intent to modify the rules and regulations, including a summary of the proposed modifications, published in at least one newspaper of general circulation within Ada County, posted at the offices of the Air Quality Board, and mailed to all participants in the joint powers agreement and all automotive inspection stations.

REPAIR AND REINSPECTION STATION: A facility licensed in accordance with Board specifications or operating under a contract with the Board for the purpose of repairing nonexempt

motor vehicles which have failed an exhaust emissions inspection and to perform a reinspection of exhaust emissions in a manner specified by the Board.

RULES AND REGULATIONS: Specific written provisions governing the automotive inspection program, as adopted and amended by the Board from time to time.

SULFUR DIOXIDE (SO_2): A chemical compound consisting exclusively of the elements sulfur and oxygen.

TAMPERING: Removal of or rendering wholly or partially inoperative an exhaust emissions control device, including, but not limited to, the catalytic converter, air injection system, fuel inlet restrictor or other subsequent systems and devices designed and installed to reduce exhaust emissions.

VOLATILE ORGANIC COMPOUND (VOC): Any organic compound which readily evaporates in the atmosphere and, through its participation in atmospheric photochemical reactions, contributes to the formation of ozone. (Ord. 814, 6-1-1999)

7-3-4: INSPECTION-MAINTENANCE PROGRAM; AIR QUALITY BOARD

A. Board Created: An Air Quality Board is hereby created pursuant to the joint powers provisions of Idaho Code title 67, chapter 23 in a joint powers agreement executed by the participating public agencies. The composition and organization of the Board shall be as set forth in the joint powers agreement.

B. Implement Automotive Inspection Program: The Board shall design and implement an automotive inspection program for the mandatory exhaust emissions analysis, inspection, maintenance and repair of nonexempt motor vehicles to ensure continued compliance with national ambient air quality standards and in accordance with applicable rules and regulations of the U.S. Environmental Protection Agency, the State Division of Environmental Quality and the Ada Planning Association Board.

C. Inspection Required: The exhaust emissions of each nonexempt motor vehicle will be measured and evaluated periodically and the owner of any such vehicle is required to present the vehicle at an automotive inspection station for an exhaust emissions inspection unless specifically exempted from this requirement by the Board or by this Chapter. Failure to do so within the inspection period constitutes prima facie evidence of a violation of this Chapter. The frequency and timing of the inspection period will be determined by the Board.

D. Certificate of Compliance: The owner of a nonexempt motor vehicle which passes an exhaust emissions inspection as provided herein shall be presented with a certificate of compliance. The owner shall maintain the certificate in a place and manner specified by the Board in the rules and regulations and present it to the Board or other authority upon demand. Failure to do so constitutes prima facie evidence of a violation of this Chapter.

E. Nonexempt Classification: A motor vehicle is classified as a nonexempt motor vehicle if all of the following are true:

1. The certificate of registration has "Ada County" entered upon it as the county of residence or would be required to have "Ada County" entered upon it as the county of residence pursuant to Idaho Code 49-401B.

2. The gross vehicle weight equals or exceeds one thousand five hundred (1,500) pounds.

3. The model year is 1965 or newer.

F. Exemptions: The following are hereby specifically exempted from compliance with the automotive inspection program, subject to verification in a manner specified by the Board and included in the rules and regulations:

1. Motorcycles as defined in Idaho Code 40-114.

2. "Idaho Old Timers" as defined in Idaho Code 49-406.

3. Farm tractors as defined in Idaho Code 49-107.

4. Motor vehicles registered under the prorated registration provisions of Idaho Code 49-437 for a period of less than six (6) months.

5. Idaho classic vehicles as defined in Idaho Code 49-406A.

6. Motor vehicles for which an alternate fuel type has been established according to rules and regulations adopted by the Board.

7. Such other motor vehicles as may be exempted by rules and regulations adopted by the Board.

G. Inspection Requirements: An exhaust emissions inspection may only be performed by and in a manner consistent with rules and regulations adopted by the Board. An exhaust emissions inspection shall include all of the following:

1. A measurement of exhaust emissions using an approved exhaust analyzer or other procedure or device approved by the Board to sample the motor vehicle's exhaust emissions, specifically including carbon monoxide and hydrocarbon content of the exhaust emissions and any other gases, vapors and particles as adopted by the Board to comply with the purposes of this Chapter as expressed in Section 7-3-2 of this Chapter.

2. A determination as to whether exhaust emissions meet the pass-adjust criteria.

3. A visual inspection, for model years 1984 and newer, to verify presence of the catalytic converter, air injection system, size of the fuel restrictor and any other visual inspection component(s) specified by the Board in the rules and regulations.

4. Any other inspection adopted by the Board in the rules and regulations. (Ord. 814, 6-1-1999)

H. Notify Vehicle Owner of Noncompliance: Where exhaust emissions do not meet the pass-adjust criteria, an indication to a motor vehicle owner of the repair and reinspection provisions of the automotive inspection program. (Ord. 814, 6-1-1999; amd. 1999 code)

I. Remedy of Noncompliance; Reinspection: It is the responsibility of the owner of a nonexempt motor vehicle which was found not to comply with the pass-adjust criteria to have the motor vehicle brought into compliance at the owner's expense and to have it reinspected within ten (10) calendar days of the failed exhaust emissions inspection according to procedures and criteria established by the Board and included in the rules and regulations.

J. Payment of Inspection Fee: Each nonexempt motor vehicle shall bear a share of the cost of the automotive inspection program regardless of whether the Board elects to waive one or more exhaust emissions inspections for that vehicle. The motor vehicle owner for each nonexempt motor vehicle is required to submit payment to the Board or other authorized representative under terms and conditions specified in the rules and regulations.

K. Issuance of Certificate of Compliance: An emissions inspection mechanic who performs an exhaust emissions inspection on a motor vehicle shall, when the motor vehicle is found to comply with the pass-adjust criteria, immediately issue a certificate of compliance in accordance with procedures adopted by the Board in the rules and regulations. The certificate of compliance will expire on the last day of the next inspection period for that motor vehicle. (Ord. 814, 6-1-1999)

7-3-5: DUTIES AND POWERS OF THE BOARD:

A. Meetings: The Board shall conduct regular monthly meetings at such time and place as the Board shall determine. Meetings are open to the public.

B. Adoption of Amendments of Rules and Regulations: The Board, in accordance with the criteria expressed herein, shall adopt rules and regulations for the implementation and operation of the automotive inspection program and amend those rules and regulations from time to time as it deems necessary. Rules and regulations and amendments to same may only be adopted at an Air Quality Board meeting with a minimum of fourteen (14) days' public notice of the Board's intent to amend the rules and regulations.

C. Requirements for Rules and Regulations: Rules and regulations shall include, but not be limited to, the following:

1. Procedures for determining the exempt or nonexempt status of any motor vehicle and releasing exempt motor vehicles from further compliance with the automotive inspection program.

2. Procedures for establishing the inspection period for a nonexempt motor vehicle.

3. Structure of the automotive inspection program, specifically including whether repairs and adjustments to motor vehicles failing to comply with the pass-adjust criteria may or may not be made by emissions inspection mechanics who perform the original exhaust emissions inspection.

4. Procedures for licensing or contracting for automotive inspection stations, repair and reinspection stations, emissions inspection mechanics and emissions repair mechanics and for the potential termination thereof.

5. Pass-adjust criteria for all nonexempt motor vehicles.

6. Nature and display of certificates of compliance on nonexempt motor vehicles which successfully comply with the pass-adjust criteria.

7. Specifications for approved exhaust analyzers or other emissions measurement devices or systems.

8. Procedures by which the fee to be charged each motor vehicle owner for each nonexempt motor vehicle is determined, or, alternatively, the fee itself.

9. Circumstances under which a waiver may be granted to exempt a nonexempt motor vehicle from the provisions of this Chapter, either temporarily or permanently.

10. Minimum effort(s) which will be required of the owner of a nonexempt motor vehicle owner which fails to comply with the pass-adjust criteria in order to bring the failing vehicle into compliance with the pass-adjust criteria, as well as procedures by which such minimum effort provisions may be amended from time to time. This effort shall generally be the minimum necessary to accommodate typical repair and reinspection needs and may be different for different model years.

11. Cost of a certificate of compliance. This shall be the minimum necessary to provide for the ongoing operation, administration, maintenance and enforcement of the automotive inspection program and shall not exceed four dollars ($4.00) without concurrence of all parties to the joint powers agreement.

12. The processing fee which may be assessed upon owners of nonexempt motor vehicles who fail to present their nonexempt motor vehicle for inspection within the inspection period and the procedure by which this fee is established. This fee shall be sufficient to recover costs of processing notices of violation for all nonexempt motor vehicles which do not comply with the provisions of this Chapter within the inspection period.

13. Procedures governing the contracting for or licensing of automotive inspection stations, repair and reinspection stations and emissions inspection mechanics and the suspension, revocation, or termination of those contracts or licenses when appropriate.

14. Schedules and deadlines for the flow of data, paperwork and information pertaining to exhaust emissions inspections among automotive inspection stations, repair and reinspection stations, exhaust emissions mechanics and the automotive inspection program staff.

15. Any other matters deemed to be within the authority of the Board.

D. Compliance with Idaho Code: The Board may, at its discretion, employ the full power and authority of law to ensure that motor vehicle owners comply fully and completely with Idaho

Code 49-401B, specifically including correct designation of the county of residence as provided therein.

E. Quality Assurance Program: The Board shall conduct an ongoing quality assurance program to determine that all automotive inspection stations, repair and reinspection stations and exhaust emission mechanics perform automotive inspection program tasks in conformance with the adopted rules and regulations.

F. Suspension or Revocation of License: The Board or its authorized representative, upon written notice and an opportunity for a hearing, may suspend, revoke and/or require the surrender and forfeiture of any license granted by the Board which is not utilized in accordance with this Chapter or the rules and regulations. The procedure and grounds for suspension or revocation shall be set forth in the rules and regulations and shall comply with current Idaho law.

G. Additional Actions: The Board shall have the authority to undertake any additional actions reasonably necessary to the operation of the automotive inspection program, including, but not limited to:

1. Employing necessary staff.

2. Executing necessary contracts and documents.

3. Authorizing deposits into and expenditures from the motor vehicle emissions inspection fund.

4. Acquiring and disposing of personal property.

5. Establishing an annual budget for the air inspection program.

6. Operating the automotive inspection program in accordance with standard fiscal practice.

7. Providing for an annual audit of both financial and management practices of the automotive inspection program.

H. Evaluation of Program: The Board shall conduct ongoing evaluations of the automotive inspection program sufficient to satisfy requirements of the U.S. Environmental Protection Agency, the Ada Planning Association Board and other applicable rules and statutes. (Ord. 814, 6-1-1999)

7-3-6: FINANCING:

A. Fund Established: There is hereby established a motor vehicle emissions inspection fund which shall consist of the following:

1. Money appropriated thereto by the Board or any local entity.

2. Money remitted by automotive inspection stations and repair and reinspection stations which is collected as fees.

3. Money received by the Board from private grants or donations.

4. Money received by the Board from processing fees assessed to owners of nonexempt motor vehicles who do not present their vehicle for an exhaust emissions inspection during the inspection period.

5. Federal or State funds received by the Board for the automotive inspection program.

6. Any other funds received by the Board from any source.

B. Deposition of Funds: Monies in the motor vehicle emissions inspection fund may be used to pay all costs incurred by the Board in administering any aspect of the automotive inspection program.

C. Appropriation and Budget: The Board shall appropriate and budget on a fiscal year basis, indicating expenditures to be made in implementing and administering the automotive inspection program and sources of income to be used for such expenditures. (Ord. 814, 6-1-1999)

7-3-7: INSPECTION CRITERIA AND COSTS:

A. Approved Criteria: A nonexempt motor vehicle's exhaust emissions must be less than or equal to the approved pass-adjust criteria in order for a certificate of compliance to be issued without further repair, adjustment or testing.

B. Vehicle Requirements: Nonexempt motor vehicles of the model year 1984 and newer must have a fully operational catalytic converter, air injection system, fuel restrictor and any other component(s), devices or systems specified by the Board in the rules and regulations. The owner of a nonexempt motor vehicle is required to see that these systems are fully operational. An exhaust emissions inspection will not be performed on any vehicle on which one or more of these components have been subject to tampering. The owner of any nonexempt motor vehicle which has been subject to tampering must bring all components into compliance and have the vehicle inspected within the inspection period.

C. Issuance of Certificate of Compliance: A certificate of compliance may be issued by an emissions inspection mechanic who personally has performed an exhaust emissions inspection and found the nonexempt motor vehicle to be in full compliance with the automotive inspection program or by an emissions repair mechanic who has personally performed repairs and adjustments to a motor vehicle which bring such vehicle into full compliance with the automotive inspection program or by the Board.

D. License or Contract Required by Inspection Mechanic: No person shall represent himself or herself as an emissions inspection mechanic unless he or she has a current license issued by the Board or is operating under a current contract with the Board.

E. Authorization Required: No person shall demand or collect a fee for the exhaust emissions inspection of a nonexempt motor vehicle unless authorized by this Chapter. (Ord. 814, 6-1-1999)

7-3-8: PROPERTY ACQUISITION; CERTIFICATES PROPERTY OF BOARD:

A. Authority to Acquire Property: The Board may acquire by purchase, donation, dedication, or other lawful means any special equipment, tools, materials or facilities needed to adequately administer, investigate or enforce the provisions of this Chapter or the rules and regulations adopted pursuant hereto, provided, however, any acquisition made by the Board shall comply with all statutory requirements imposed upon the County for the purpose of receipt of property.

B. Certificate or Property of Board: All certificates of compliance are the property of the Board until such time as they are issued to properly inspected motor vehicles. (Ord. 814, 6-1-1999)

7-3-9: FALSIFICATION OF CERTIFICATES:

A. Issuance: It shall be unlawful for any person to wilfully make, issue, display, sell or possess any imitation, counterfeit, or alteration of a certificate of compliance. Such activities so constitute prima facie evidence of a violation of this Chapter.

B. Display: It shall be unlawful for any person to display upon nor carry within any nonexempt motor vehicle a certificate of compliance knowing it to be issued without compliance with this Chapter. Such activities so constitute prima facie evidence of a violation of this Chapter. (Ord. 814, 6-1-1999)

7-3-10: ENFORCEMENT:

Any owner who fails to present a nonexempt motor vehicle for an exhaust emissions inspection during the inspection period is in violation of this Chapter and will be subject to a Board processing fee and any and all other enforcement mechanisms available through Idaho Code, this Chapter, and other applicable Municipal or County ordinances. Nothing in this Chapter shall be construed to prevent the Board from requesting or utilizing any and all enforcement mechanisms granted by law. (Ord. 814, 6-1-1999)

7-3-11: PENALTIES:

Any person who violates any provision of this Chapter shall be deemed guilty of an infraction and, upon judgment thereof, shall be subject to the penalties set forth in Idaho Infraction Rule 9(b) (Other Infractions). Failure to satisfy judgment as ordered by the court pursuant to this Chapter shall be deemed contempt of court punishable as a misdemeanor pursuant to Idaho Code 18-1801. (Ord. 814, 6-1-1999)

Appendix C.
Carbon Monoxide Monitoring Data

C-1 Ambient Carbon Monoxide Monitoring Data

C-2 Boise Carbon Monoxide Saturation Study 1991-1992

C-3 Boise Carbon Monoxide Saturation Study 1995-1996

Appendix C-1.
Ambient Carbon Monoxide Monitoring Data

Air Quality Monitoring Data
Boise 1-hour Maximum

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1977		FEB 1977		MAR 1977		APR 1977		MAY 1977		JUN 1977		JUL 1977		AUG 1977		SEP 1977		OCT 1977		NOV 1977		DEC 1977	
	1	6.8	S	18.5	T	11.7	T	7.2	F		S	8.1	W	11.7	F		M	6.0	T	7.6	S	2.5	T	5.8	T
	2	6.5	S	9.1	W	7.9	W	6.7	S		M	4.8	T	6.8	S		T	9.8	F	11.1	S	11.0	W	15.4	F
	3	17.5	M	19.0	T	10.1	T	3.4	S	3.9	T	6.1	F	3.5	S		W	3.3	S	14.2	M	24.0	T	14.4	S
	4	19.3	T	15.0	F	10.1	F	7.2	M	5.8	W	5.7	S	2.1	M		T	2.7	S	11.7	T	16.0	F	6.3	S
D	5	14.2	W	9.1	S	5.3	S	4.2	T	7.6	T	8.4	S	5.5	T		F	4.3	M	26.3	W	12.0	S	14.5	M
	6	24.6	T		S	4.5	S	5.4	W	7.0	F	11.0	M	6.0	W		S	11.4	T	10.1	T	3.0	S	8.2	T
A	7	20.8	F	17.4	M	4.0	M	4.5	T	6.0	S	5.1	T	15.8	T		S	14.6	W	12.3	F	15.0	M	10.0	W
	8	11.7	S	16.8	T	4.8	T	7.7	F	2.9	S	5.4	W	11.7	F		M	3.0	T	7.9	S	13.1	T	12.7	T
Y	9	6.5	S	19.2	W	5.6	W	5.7	S	4.8	M	2.3	T	5.8	S		T	10.4	F	5.9	S	8.5	W	14.3	F
	10	18.5	M	19.2	T	4.3	T	3.3	S	2.3	T	10.7	F	11.1	S		W	6.9	S	5.9	M	16.0	T	19.5	S
	11	22.7	T	20.3	F	7.6	F	3.6	M	3.9	W	6.1	S	8.1	M		T	.0	S	8.4	T	16.2	F	5.2	S
O	12	14.2	W	8.4	S	7.7	S	8.2	T	3.3	T	3.8	S	9.6	T	10.3	F	4.4	M	8.1	W	11.1	S	23.0	M
	13	21.0	T	7.9	S	6.1	S	8.2	W	5.9	F	4.2	M	6.7	W	7.9	S	13.2	T	31.4	T	7.4	S	2.2	T
F	14	25.3	F	16.4	M	6.7	M	6.5	T	4.9	S	6.5	T	8.9	T	3.2	S	11.4	W	28.8	F	9.0	M	8.1	W
	15	15.6	S	14.4	T	6.1	T	6.9	F	4.0	S	5.5	W	15.2	F	10.1	M	8.3	T	8.2	S	16.1	T	17.1	T
	16	8.4	S	6.7	W	7.2	W	7.1	S		M	4.4	T	7.2	S	11.6	T	14.9	F	9.3	S	8.9	W	8.1	F
M	17	21.5	M	11.4	T	6.7	T	2.6	S	7.0	T	4.0	F	8.0	S	13.5	W	4.8	S	20.6	M	15.1	T	9.0	S
	18	21.7	T	15.3	F	7.7	F	5.0	M	7.5	W	2.1	S	12.0	M	9.7	T	5.6	S	40.9 *	T	17.8	F	5.8	S
O	19	15.1	W	12.6	S	7.7	S	4.8	T	6.3	T	3.1	S		T	14.2	F	5.6	M	9.9	W	9.1	S	19.3	M
	20	15.5	T	12.9	S	5.0	S	6.0	W	7.6	F	1.9	M		W	6.9	S	12.6	T	9.4	T	1.4	S	12.6	T
N	21	17.2	F	5.7	M	5.0	M	6.1	T	2.6	S	.0	T		T	4.3	S	11.1	W	14.0	F	5.0	M	19.8	W
	22	7.3	S	9.0	T	7.4	T	4.9	F	1.8	S		W		F	12.3	M	5.6	T	7.3	S	39.5 *	T	22.9	T
T	23	9.8	S	5.1	W	7.5	W	3.7	S	2.4	M		T		S	12.6	T	1.0	F	2.1	S	22.5	W	25.6	F
	24	10.1	M	11.7	T	9.3	T	1.2	S	5.0	T		F		S	5.3	W	4.0	S	8.3	M	3.1	T	11.4	S
H	25	18.0	T	13.0	F	9.3	F	2.7	M	3.7	W		S		M	7.5	T	2.5	S	6.6	T	14.4	F	5.9	S
	26	20.0	W	5.1	S	5.0	S	.0	T	6.1	T		S		T	5.9	F	7.1	M	10.1	W	7.7	S	5.5	M
	27	16.5	T	3.2	S	1.7	S	5.0	W	4.7	F		M		W	3.7	S	12.1	T	15.2	T	2.7	S	14.1	T
	28	17.5	F	5.4	M	6.1	M	5.0	T	2.3	S	7.0	T		T	1.1	S	8.1	W	21.2	F	17.2	M	13.2	W
	29	10.1	S			6.7	T	7.9	F	1.4	S	3.5	W		F	9.6	M	10.6	T	10.6	S	15.4	T	16.3	T
	30	4.5	S			6.7	W		S	2.0	M	6.4	T		S	3.7	T	12.1	F	3.0	S	22.9	W	18.0	F
	31	19.0	M			11.7	T			4.7	T				S	9.6	W			12.1	M			6.3	S
NUMBER		698		569		724		630		606		496		405		449		657		697		683		727	
MAXIMUM		25.3		20.3		11.7		8.2		7.6		11.0		15.8		14.2		14.9		40.9		39.5		25.6	
ARITH-MEAN		5.8		4.1		1.9		1.7		1.3		1.4		2.7		3.2		2.5		3.3		4.2		4.7	

TOTAL SAMPLES = 7341
% OF POSSIBLE OBSERVATIONS = 83.8
ARITHMETIC MEAN = 3.2
ARITHMETIC STANDARD DEVIATION = 3.7

2 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
2 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
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SITE-ID: 16-001-0007 POC: 1
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CITY (08700): BOISE CITY
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SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
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MONITOR TYPE (0): UNKNOWN
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AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

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UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1978		FEB 1978		MAR 1978		APR 1978		MAY 1978		JUN 1978		JUL 1978		AUG 1978		SEP 1978		OCT 1978		NOV 1978		DEC 1978	
	1	4.0	S	18.3	W	11.7	W	2.9	S	4.8	M	7.9	T	.9	S		T	8.8	F	4.0	S	17.6	W	18.5	F
	2	3.6	M	13.7	T	5.6	T	.5	S	4.3	T	5.1	F	.9	S	7.7	W	9.7	S	8.4	M	21.4	T	12.0	S
	3	19.4	T	8.8	F	2.8	F	5.3	M	3.8	W	3.7	S	3.2	M	7.3	T	3.1	S	13.5	T	14.3	F	5.8	S
	4	23.8	W	9.9	S	8.4	S	5.7	T	3.8	T	5.1	S	2.8	T	8.6	F	2.2	M	16.8	W	12.0	S	18.9	M
D	5	9.7	T	3.0	S	6.1	S	1.9	W	2.4	F	7.4	M	6.5	W	4.3	S	1.8	T	24.4	T	7.9	S	17.3	T
	6	18.5	F	7.7	M	11.2	M	7.2	T	1.4	S	7.4	T	2.8	T		S	13.2	W	21.0	F	17.6	M	14.4	W
A	7	9.7	S	1.8	T	3.7	T	17.2	F	.0	S	7.4	W	5.6	F		M	12.3	T	11.7	S	19.9	T	22.3	T
	8	6.2	S	5.5	W	10.3	W	4.8	S	5.3	M	6.5	T	1.4	S		T	4.8	F	4.5	S	18.1	W	19.6	F
Y	9	22.0	M	6.1	T	9.2	T	.5	S	4.8	T	6.5	F	.4	S		W	3.1	S	9.0	M	16.0	T	6.8	S
	10	22.0	T	15.9	F	11.7	F	6.7	M	4.8	W	5.1	S	5.6	M		T	2.2	S	11.7	T	14.4	F	2.4	S
	11	19.4	W	1.4	S	4.7	S	3.4	T	5.7	T	1.8	S	3.9	T		F	7.9	M	7.2	W	12.0	S	23.2	M
O	12	14.1	T	3.4	S	2.3	S	5.4	W	7.2	F	6.5	M	4.2	W		S	7.9	T	7.2	T	5.6	S	23.2	T
	13	12.3	F	18.1	M	9.6	M	6.7	T	1.9	S	7.4	T	3.5	T		S	4.4	W	16.2	F	15.7	M	11.4	W
F	14	16.7	S	14.7	T	6.2	T	4.8	F	1.4	S	5.5	W	5.6	F	6.0	M	7.9	T	11.7	S	12.3	T	26.4	T
	15	5.7	S	10.8	W	12.1	W	5.7	S	5.8	M	3.7	T	2.1	S	3.9	T	9.7	F	9.9	S	12.8	W	23.0	F
	16	1.8	M	10.8	T	8.6	T	2.9	S	4.3	T	8.3	F	1.8	S	3.4	W	7.0	S	7.7	M	15.8	T	7.1	S
M	17	13.4	T	14.0	F	12.8	F	5.7	M	1.9	W	2.8	S	3.5	M		T	3.1	S	8.1	T	13.2	F	6.1	S
	18	12.5	W	7.0	S	10.0	S	.5	T	1.9	T	1.8	S	3.9	T		F	5.7	M	17.6	W	13.8	S	17.9	M
O	19	16.0	T		S	11.6	S	4.8	W	3.4	F	2.8	M	3.9	W		S	9.3	T	8.3	T	7.0	S	13.4	T
	20	16.8	F		M	8.8	M	6.7	T	2.4	S	7.9	T	2.1	T		S	9.3	W	26.8	F	22.7	M	15.5	W
N	21	3.9	S	15.2	T	10.3	T	8.6	F	1.0	S	2.3	W	2.1	F		M	2.6	T	6.5	S	20.9	T	16.3	T
	22	2.6	S	1.6	W	1.4	W	4.8	S	5.3	M	.9	T	3.2	S		T	14.1	F	3.7	S	14.4	W	15.7	F
T	23	11.7	M	6.1	T	7.5	T	.5	S	11.6	T	4.6	F	3.9	S		W	8.8	S	15.7	M	6.6	T	11.8	S
	24	16.0	T	9.8	F	8.4	F	3.8	M	4.3	W	7.4	S	3.5	M	4.7	T	5.7	S	11.6	T	6.3	F	5.1	S
H	25	22.0	W	8.1	S	4.7	S	1.4	T	7.5	T	1.4	S	1.1	T	7.7	F	15.9	M	12.3	W	7.1	S	8.2	M
	26	9.8	T	1.9	S	1.9	S	1.9	W	4.1	F	8.3	M	3.8	W	5.2	S	10.1	T	17.1	T	6.5	S	13.2	T
	27	16.4	F	9.9	M	11.3	M	10.5	T	3.2	S	5.5	T	5.8	T	2.6	S	7.9	W	17.6	F	29.1	M	10.9	W
	28	10.2	S	.9	T	11.2	T	7.6	F	2.7	S	2.8	W	5.3	F	6.5	M	12.3	T	11.4	S	17.4	T	13.5	T
	29	4.0	S			8.6	W	7.6	S	1.8	M	6.5	T	1.4	S	7.7	T	7.9	F	8.5	S	30.8	W	20.0	F
	30	6.2	M			5.8	T	2.4	S	5.3	T	2.3	F	3.4	S	6.9	W	9.7	S	16.1	M	15.1	T	8.6	S
	31	16.4	T			13.3	F			8.9	W			5.3	M	6.9	T			14.2	T			8.0	S
NUMBER		701		565		709		705		724		568		659		306		686		711		670		705	
MAXIMUM		23.8		18.3		13.3		17.2		11.6		8.3		6.5		8.6		15.9		26.8		30.8		26.4	
ARITH-MEAN		4.3		2.7		2.5		1.3		1.1		1.6		1.0		2.6		2.8		3.9		6.3		5.1	

TOTAL SAMPLES = 7709
% OF POSSIBLE OBSERVATIONS = 88.0
ARITHMETIC MEAN = 3.0
ARITHMETIC STANDARD DEVIATION = 3.6

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
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08/25/99
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	JAN 1979		FEB 1979		MAR 1979		APR 1979		MAY 1979		JUN 1979		JUL 1979		AUG 1979		SEP 1979		OCT 1979		NOV 1979		DEC 1979	
1	2.5	M	13.8	T	6.8	T	4.5	S	7.3	T	6.7	F	5.3	S	6.4	W	6.9	S		M	12.9	T	7.9	S
2	15.9	T	19.4	F	9.0	F	6.8	M	5.6	W	5.6	S	5.7	M	7.2	T	4.6	S		T	4.9	F	6.3	S
3	15.2	W	7.5	S	5.1	S	9.0	T	5.6	T	7.1	S	6.7	T	6.7	F		M		W	8.3	S	22.2	M
4	12.1	T	2.9	S	3.4	S	7.9	W	7.3	F	13.5	M	1.3	W	8.5	S		T	16.8	T	5.7	S	15.2	T
D 5	16.5	F	13.2	M	8.5	M	10.7	T	6.2	S	6.8	T	5.5	T	3.5	S	6.9	W		F	6.9	M	16.2	W
6	8.9	S	15.5	T	10.7	T	9.6	F	3.9	S	5.3	W	7.8	F	6.9	M	9.0	T		S	8.4	T	12.6	T
A 7	6.4	S	20.1	W	5.7	W	7.9	S	9.0	M	7.5	T	4.0	S	6.9	T	13.9	F		S	14.7	W	13.5	F
8	8.9	M	8.6	T	6.8	T	2.3	S	10.6	T	8.5	F	9.0	S	6.0	W		S	5.5	M	15.5	T	19.4	S
Y 9	19.1	T	21.8	F	11.9	F	7.3	M	8.4	W	3.9	S	7.3	M	8.2	T	3.8	S	12.4	T	12.9	F	6.3	S
10	19.1	W	12.0	S	6.8	S	6.2	T	8.0	T	1.7	S	7.0	T	9.6	F		M	19.4	W	11.3	S	15.3	M
11	28.6	T	1.7	S	7.3	S	9.0	W	8.6	F	5.6	M	7.0	W	9.8	S		T	12.2	T	5.5	S	10.2	T
O 12	15.2	F	5.7	M	9.0	M	5.7	T	6.9	S	6.2	T	6.4	T	7.9	S		W	12.2	F	11.4	M	11.8	W
13	12.7	S	5.2	T	11.9	T	8.5	F	5.9	S	8.6	W	5.9	F	12.6	M		T	9.2	S	20.2	T	10.9	T
F 14	4.7	S	14.3	W	9.6	W	6.2	S	10.4	M	6.8	T	5.0	S	8.1	T		F	6.8	S	23.7	W	22.9	F
15	19.2	M	4.0	T	8.5	T	3.4	S	6.7	T	6.2	F	3.7	S	7.1	W		S	7.2	M	17.8	T	17.7	S
16	16.9	T	10.3	F	11.3	F	11.3	M	6.4	W	7.1	S	8.1	M	10.0	T	6.7	S	10.8	T	14.3	F	8.1	S
M 17	16.5	W	1.7	S	7.9	S	6.8	T	4.4	T	5.4	S	8.7	T	8.2	F		M	9.7	W	14.7	S	18.0	M
18	18.5	T	1.7	S	4.5	S	6.8	W	10.0	F	9.5	M	8.1	W	2.4	S		T	3.8	T	7.3	S	30.0	T
O 19	15.9	F	7.5	M	6.2	M	6.2	T	6.2	S	7.2	T	6.2	T	5.7	S		W	9.0	F	12.4	M	24.2	W
20	8.3	S	10.9	T	7.9	T	7.3	F	3.8	S	6.6	W	10.5	F	7.5	M		T	7.4	S	11.0	T	5.8	T
N 21	9.5	S	12.6	W	11.3	W	5.0	S	5.8	M	6.6	T	6.2	S	6.9	T		F	3.8	S	15.1	W	12.9	F
22	19.9	M	3.4	T	12.4	T	3.4	S	7.8	T	10.4	F	5.1	S	8.6	W		S	9.7	M	5.7	T	10.6	S
T 23	17.0	T	6.9	F	11.3	F	7.3	M	8.5	W	7.7	S	6.5	M	8.9	T		S	16.6	T	10.8	F	4.0	S
24	14.0	W	6.3	S	6.2	S	5.0	T	3.8	T	11.7	S	7.5	T	8.6	F		M	10.6	W	9.5	S	3.3	M
H 25	15.0	T	2.3	S	1.7	S	5.6	W	4.8	F	6.5	M	7.9	W	5.1	S		T	9.2	T	3.4	S	5.2	T
26	11.3	F	10.3	M	4.0	M	6.7	T	6.0	S	7.0	T	7.7	T	3.6	S		W	9.9	F	11.4	M	11.3	W
27	9.9	S	6.9	T	5.1	T	7.8	F	3.8	S	7.0	W	10.5	F	7.2	M		T	7.6	S	6.7	T	12.9	T
28	2.7	S	5.7	W	7.9	W	5.6	S	1.7	M	6.6	T	8.7	S	9.4	T		F	3.3	S	9.2	W	13.5	F
29	18.6	M			7.9	T	2.8	S	4.5	T	8.6	F	3.7	S	7.1	W		S	9.0	M	14.2	T	8.6	S
30	13.9	T			7.9	F	7.3	M	5.0	W	5.8	S	8.6	M	6.7	T		S	10.4	T	16.9	F	9.6	S
31	16.5	W			6.8	S			9.1	T			8.7	T	8.6	F			10.5	W			12.2	M
NUMBER	698		672		695		596		710		672		699		712		147		584		660		678	
MAXIMUM	28.6		21.8		12.4		11.3		10.6		13.5		10.5		12.6		13.9		19.4		23.7		30.0	
ARITH-MEAN	5.2		3.0		2.9		3.0		2.4		3.0		2.8		3.1		2.9		3.9		5.0		5.3	

TOTAL SAMPLES = 7523
% OF POSSIBLE OBSERVATIONS = 85.9
ARITHMETIC MEAN = 3.6
ARITHMETIC STANDARD DEVIATION = 3.3

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1980		FEB 1980		MAR 1980		APR 1980		MAY 1980		JUN 1980		JUL 1980		AUG 1980		SEP 1980		OCT 1980		NOV 1980		DEC 1980	
	1	5.5	T	17.1	F	4.7	S	8.2	T	8.0	T	4.1	S	3.4	T	7.6	F	2.2	M	6.1	W	13.7	S	7.1	M
	2	12.0	W	7.1	S	2.7	S	9.2	W	7.0	F	6.4	M	4.6	W	7.4	S	11.5	T	14.6	T	7.5	S	2.8	T
	3	15.5	T	5.9	S	9.8	M	3.8	T	7.0	S	6.4	T	3.8	T	3.6	S	6.4	W	20.3	F	8.0	M	3.5	W
	4	13.1	F	13.4	M	9.5	T	7.8	F	3.4	S	4.9	W	4.9	F	6.2	M	14.8	T	10.0	S	13.5	T	16.5	T
D	5	9.9	S	9.0	T	7.9	W	4.6	S	9.2	M	5.1	T	4.3	S	6.3	T	13.4	F	8.0	S	11.6	W	3.0	F
	6	5.3	S	13.4	W	11.2	T	3.1	S	6.0	T	15.0	F	3.5	S	5.7	W	4.9	S	10.1	M	9.3	T	10.3	S
A	7	11.9	M	12.0	T	8.2	F	5.4	M	5.5	W	5.5	S	6.4	M	5.0	T	1.8	S	18.9	T	12.0	F	5.5	S
	8	16.4	T	12.0	F	5.3	S	3.3	T	6.3	T	2.3	S	7.0	T	8.0	F	5.9	M	15.5	W	8.1	S	15.9	M
Y	9	6.4	W	11.3	S	6.5	S	5.8	W	10.2	F	4.9	M	6.5	W	4.2	S	7.0	T	6.9	T	5.5	S	10.0	T
	10	13.5	T	7.4	S	10.6	M	6.0	T	6.7	S	6.6	T	4.5	T	4.9	S	7.4	W	11.5	F	13.9	M	16.3	W
	11	1.3	F	18.0	M	10.9	T	6.6	F	3.9	S	4.6	W	7.8	F	8.4	M	7.0	T	9.7	S	10.2	T	18.5	T
O	12	8.6	S	14.0	T	6.4	W	5.8	S	6.3	M	4.7	T	5.1	S	5.2	T	12.5	F	6.3	S	10.3	W	16.8	F
	13	5.5	S	14.8	W	2.4	T	3.5	S	3.4	T	7.8	F	6.9	S	5.0	W	5.0	S	3.5	M	14.1	T	8.5	S
F	14	4.7	M	15.0	T	9.6	F	4.9	M	5.2	W	6.3	S	6.5	M	6.1	T	6.0	S	9.5	T	12.8	F	5.0	S
	15	16.1	T	14.7	F	6.6	S	6.2	T	6.5	T	3.6	S	4.4	T	6.8	F	7.1	M	7.1	W	5.6	S	15.7	M
	16	10.4	W	6.8	S	5.8	S	6.3	W	8.7	F	2.7	M	6.8	W	5.6	S	6.1	T	11.7	T	9.4	S	15.5	T
M	17	13.8	T	2.2	S	4.0	M	6.3	T	7.0	S	5.7	T	4.6	T	3.5	S	16.4	W	10.1	F	16.5	M	16.1	W
	18	9.2	F	10.7	M	9.2	T	10.3	F	4.5	S	5.3	W	7.2	F	6.3	M	7.8	T		S	16.1	T	11.5	T
O	19	7.9	S	3.0	T	12.0	W	10.5	S	4.8	M	4.7	T	6.0	S	4.1	T	6.7	F		S	14.5	W	15.0	F
	20	3.1	S	7.2	W	8.0	T	4.0	S	4.4	T	5.3	F	2.5	S	6.4	W	7.8	S		M	10.9	T	10.5	S
N	21	8.4	M	16.0	T	7.3	F	8.3	M	5.5	W	3.5	S	6.6	M	6.3	T	5.3	S	9.1	T	13.5	F	4.0	S
	22	17.4	T	8.0	F	8.3	S	7.8	T		T	4.7	S	8.4	T	6.0	F	16.0	M	5.6	W	9.9	S	18.9	M
T	23	4.6	W	9.3	S	5.3	S	5.3	W	6.3	F	4.5	M	5.2	W	3.5	S	12.3	T	12.2	T	8.0	S	9.0	T
	24	15.2	T	5.7	S	6.5	M	4.8	T	3.2	S	4.2	T	5.2	T	4.1	S	8.6	W	14.7	F	10.6	M	13.1	W
H	25	17.4	F	7.9	M	7.5	T	8.5	F	4.0	S	4.8	W	10.0	F	5.3	M	15.0	T	9.0	S	16.4	T	1.5	T
	26	1.3	S	7.5	T	7.0	W	5.7	S	3.3	M	3.6	T	6.9	S	6.2	T	10.3	F	5.2	S	9.5	W	12.5	F
	27	3.0	S	14.5	W	6.5	T		S	7.5	T	7.2	F	3.9	S	4.0	W	10.6	S	10.9	M	4.1	T	10.0	S
	28	6.1	M	10.5	T	9.2	F	4.8	M	5.9	W	4.5	S	7.1	M	5.1	T	7.1	S	13.7	T	11.0	F	5.2	S
	29	14.2	T	9.0	F	5.2	S	5.3	T	5.3	T	8.8	S	7.6	T	6.2	F	10.5	M	14.5	W	10.0	S	13.6	M
	30	13.0	W			2.4	S	6.3	W	6.1	F	3.5	M	4.6	W	6.2	S	6.4	T	13.6	T	7.5	S	13.5	T
	31	11.4	T			8.8	M			5.5	S			6.6	T	3.5	S			16.5	F			10.5	W
NUMBER		684		648		703		647		697		694		719		715		681		660		720		715	
MAXIMUM		17.4		18.0		12.0		10.5		10.2		15.0		10.0		8.4		16.4		20.3		16.5		18.9	
ARITH-MEAN		3.6		3.9		2.8		2.3		2.5		2.2		2.4		2.6		3.1		4.1		4.2		4.6	

TOTAL SAMPLES = 8283
% OF POSSIBLE OBSERVATIONS = 94.3
ARITHMETIC MEAN = 3.2
ARITHMETIC STANDARD DEVIATION = 2.7

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

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SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT

MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1981		FEB 1981		MAR 1981		APR 1981		MAY 1981		JUN 1981		JUL 1981		AUG 1981		SEP 1981		OCT 1981		NOV 1981		DEC 1981	
	1	3.7	T	4.5	S	8.2	S	8.0	W	F		6.0	M	5.3	W	11.3	S	T		T		9.5	S	11.5	T
	2	11.7	F	13.6	M	12.6	M	5.5	T	S		8.0	T	8.5	T	7.0	S	W		F		20.5	M	10.0	W
	3	6.7	S	11.0	T	9.0	T	7.4	F	S		5.5	W		F	8.6	M	T		S		19.0	T	10.0	T
	4	4.5	S	16.5	W	8.1	W	6.5	S	M		6.3	T	2.5	S	9.7	T	F		S		15.0	W	12.5	F
D	5	7.5	M	13.3	T	8.2	T	3.6	S	T		6.0	F	2.5	S	14.0	W	S		M		15.0	T	7.0	S
	6	3.8	T	12.6	F	10.0	F	6.1	M	W		4.5	S	2.5	M	11.0	T	S		T		15.0	F	4.8	S
A	7	8.2	W	6.9	S	7.5	S	7.1	T	T		4.3	S	5.5	T	15.5	F	M		W		9.0	S	20.0	M
	8	12.1	T	7.0	S	4.0	S	3.1	W	F		12.5	M	5.5	W	14.0	S	T		T		7.5	S	15.5	T
Y	9	12.1	F	10.5	M	7.5	M	6.0	T	S		5.5	T	7.0	T	6.5	S	W		F		20.0	M	11.0	W
	10	8.0	S	6.7	T	8.2	T	6.1	F	S		6.5	W	7.3	F	5.0	M	T		S		11.5	T	4.5	T
	11	5.5	S	12.1	W	15.5	W	6.9	S	M		4.5	T	7.0	S	7.0	T	F		S		11.0	W	17.5	F
O	12	12.4	M	13.6	T	13.5	T	7.5	S	T		6.5	F	6.0	S		W	S		M		9.0	T	10.0	S
	13	13.5	T	13.0	F	10.0	F	8.7	M	W		6.3	S	6.0	M		T	S		T		3.0	F	6.5	S
F	14	11.5	W	6.9	S	5.9	S	8.7	T	T		3.0	S	6.8	T		F	M		W		6.0	S	11.0	M
	15	13.0	T	4.0	S	3.4	S	8.6	W	F		6.0	M	7.0	W		S	T		T		3.3	S	11.5	T
	16	13.7	F	3.5	M	6.0	M	6.5	T	S		7.5	T	6.0	T		S	W		F		7.5	M	15.0	W
M	17	10.5	S	15.2	T	6.0	T	9.0	F	S		5.0	W	9.3	F		M	T		S		11.5	T	18.0	T
	18	7.6	S	7.8	W	3.3	W	4.9	S	M		4.5	T	8.5	S		T	F		S		12.5	W	8.5	F
O	19	13.6	M	7.3	T	3.3	T	4.0	S	T		7.5	F	5.5	S		W	S		M		6.8	T	5.5	S
	20	22.2	T	10.5	F	11.2	F	7.5	M	W		4.3	S	7.0	M		T	S		T		5.5	F	7.5	S
N	21	16.5	W	7.1	S	3.5	S	4.5	T	T		1.5	S	5.0	T		F	M	9.0	W		5.0	S	11.0	M
	22	10.1	T	6.7	S	1.3	S	5.6	W	F		7.5	M	6.5	W		S	T	14.0	T		3.8	S	11.5	T
T	23	10.6	F	10.2	M	5.4	M	3.1	T	S		5.1	T	8.5	T		S	W	14.0	F		4.8	M	10.0	W
	24	8.6	S	6.8	T	5.3	T	7.1	F	S		3.0	W	10.0	F		M	T	9.5	S		12.5	T	3.5	T
H	25	4.6	S	11.5	W	6.6	W	6.1	S	M		7.5	T	6.0	S		T	F	6.0	S		12.5	W	4.8	F
	26	3.4	M	9.0	T	7.0	T	3.5	S	T		7.0	F	6.5	S		W	S	12.5	M		1.0	T	4.5	S
	27	11.3	T	10.4	F	6.0	F	6.0	M	W		5.8	S	5.0	M		T	S	8.0	T		9.0	F	3.0	S
	28	1.4	W	11.0	S	5.0	S	7.5	T	T		4.6	S	11.0	T		F	M	7.0	W		3.0	S	5.5	M
	29	9.5	T			4.1	S	7.0	W	F		5.5	M	7.0	W		S	T	10.0	T		3.0	S	12.0	T
	30	17.7	F			8.5	M		T	S		5.8	T	6.0	T		S	W	10.0	F		12.5	M	15.0	W
	31	8.8	S			2.6	T			S				5.5	F		M		10.0	S				16.0	T
NUMBER		744		665		722		671				644		687		245			225			683		686	
MAXIMUM		22.2		16.5		15.5		9.0				12.5		11.0		15.5			14.0			20.5		20.0	
ARITH-MEAN		3.8		3.9		2.9		2.6				2.3		2.7		3.5			4.3			3.3		3.9	

TOTAL SAMPLES = 5972
% OF POSSIBLE OBSERVATIONS = 68.2
ARITHMETIC MEAN = 3.2
ARITHMETIC STANDARD DEVIATION = 2.7

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
DOES NOT MEET SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

DAY OF MONTH	JAN 1982		FEB 1982		MAR 1982		APR 1982		MAY 1982		JUN 1982		JUL 1982		AUG 1982		SEP 1982		OCT 1982		NOV 1982		DEC 1982	
1	4.0	F	10.0	M	3.0	M	10.0	T	7.5	S	5.0	T	9.0	T	3.5	S	7.8	W	14.7	F	9.3	M	9.9	W
2	5.0	S	20.0	T	10.0	T	4.0	F	2.5	S	5.5	W	8.0	F	4.5	M	7.2	T	8.7	S	7.6	T	8.7	T
3	4.5	S	10.0	W	6.0	W	3.8	S	6.0	M	6.5	T	3.0	S	5.0	T	12.3	F	12.6	S	15.5	W	2.9	F
4	17.5	M	3.5	T	13.0	T	3.3	S	5.0	T	7.0	F	2.5	S	7.0	W	4.3	S	8.3	M	12.9	T	8.1	S
5	17.5	T	5.0	F	12.5	F	4.0	M	5.0	W	4.0	S	2.8	M	6.0	T	2.9	S	7.3	T	15.5	F	4.3	S
6	17.5	W	6.5	S	5.5	S	7.5	T	7.5	T	4.0	S	6.0	T	7.5	F	2.9	M	1.7	W	8.7	S	13.1	M
7	15.0	T	4.5	S	7.5	S	12.5	W	6.0	F	6.0	M	10.5	W	6.0	S	7.4	T	6.5	T	5.4	S	13.1	T
8	22.5	F	9.5	M	9.0	M	6.0	T	5.0	S	6.0	T	5.0	T	2.5	S	9.1	W	7.6	F	17.4	M	12.4	W
9	7.5	S	19.5	T	9.0	T	7.0	F	2.0	S	5.5	W	6.0	F	6.5	M	10.7	T	7.1	S	9.8	T	14.5	T
10	5.0	S	10.0	W	9.5	W	2.0	S	5.5	M	7.5	T	7.0	S	2.0	T	5.2	F	4.1	S	18.0	W	16.0	F
11	15.0	M	15.0	T	12.5	T	.8	S	5.0	T	7.0	F	3.5	S		W	7.8	S	13.4	M	7.9	T	10.7	S
12	26.0	T	10.0	F	6.5	F	4.0	M	5.0	W	6.0	S	6.5	M	5.8	T	2.9	S	17.9	T	11.6	F	6.4	S
13	26.0	W	5.0	S	7.0	S	4.5	T	6.0	T	4.0	S	6.0	T	10.0	F	4.9	M	14.1	W	9.0	S	19.5	M
14	22.5	T	3.5	S	2.0	S	9.5	W	5.5	F	5.0	M	4.0	W	6.0	S	7.0	T	18.4	T	5.3	S	7.9	T
15	20.0	F	1.8	M	11.0	M	8.0	T	6.5	S	5.0	T	5.0	T	5.0	S	8.2	W	13.7	F	16.0	M	3.5	W
16	5.5	S	15.0	T	11.5	T	5.0	F	2.5	S	6.0	W	5.0	F	6.0	M	8.9	T	6.2	S	12.5	T	14.1	T
17	7.5	S	10.0	W	12.5	W	6.0	S	6.0	M	5.0	T	7.5	S	7.0	T	11.2	F	4.5	S	2.0	W	12.8	F
18	7.5	M	11.0	T	5.0	T	3.5	S	6.5	T	6.0	F	2.5	S	7.5	W	5.4	S	6.8	M	6.7	T	4.2	S
19	6.0	T	3.0	F	10.5	F	6.5	M	5.0	W	4.0	S	4.5	M	10.0	T	2.6	S	9.7	T	8.2	F	5.2	S
20	19.0	W	1.8	S	6.5	S	6.0	T	5.0	T	5.5	S	8.0	T	7.0	F	7.5	M	8.3	W	5.4	S	12.0	M
21	17.5	T	4.0	S	2.8	S	6.5	W	10.0	F	6.0	M	6.5	W	9.0	S	10.6	T	6.5	T	2.5	S	2.9	T
22	10.0	F	9.0	M	13.5	M	7.5	T	7.5	S	6.5	T	5.0	T	5.0	S	13.7	W	3.2	F	9.9	M	8.9	W
23	7.5	S	7.5	T	11.5	T	6.0	F	5.0	S	5.0	W	5.0	F	5.5	M	11.8	T	9.0	S	9.5	T	10.8	T
24	5.0	S	3.0	W	7.0	W	9.5	S	4.5	M	6.0	T	7.0	S	5.5	T	9.7	F	4.0	S	12.5	W	6.6	F
25	14.5	M	12.0	T	5.0	T	2.0	S	6.5	T	5.5	F	2.5	S	6.5	W	3.7	S	6.5	M	4.1	T	2.8	S
26	12.5	T	9.5	F	9.0	F	6.5	M	5.0	W	5.5	S	8.5	M	6.0	T	2.1	S	10.2	T	10.6	F	4.3	S
27	17.5	W	12.5	S	5.0	S	6.0	T	4.0	T	2.5	S	6.5	T	14.0	F	5.8	M	13.2	W	10.1	S	10.7	M
28	12.5	T	4.5	S	3.5	S	7.0	W	6.5	F	5.5	M	6.5	W	4.5	S	6.2	T	13.7	T	9.3	S	14.0	T
29	15.0	F			5.0	M	7.0	T	5.0	S	6.5	T	5.0	T	1.5	S	5.5	W	6.4	F	8.4	M	12.7	W
30	7.5	S			5.5	T	9.0	F	1.5	S	6.5	W	7.5	F	5.0	M	5.7	T	9.5	S	14.0	T	9.8	T
31	7.5	S			10.0	W			1.5	M			11.0	S	5.0	T			5.6	S			4.4	F
NUMBER	693		648		726		694		717		702		917		671		717		724		703		729	
MAXIMUM	26.0		20.0		13.5		12.5		10.0		7.5		11.0		14.0		13.7		18.4		18.0		19.5	
ARITH-MEAN	4.3		2.8		2.7		2.1		2.2		2.2		2.2		2.6		2.7		3.2		3.8		3.4	

TOTAL SAMPLES = 8641
% OF POSSIBLE OBSERVATIONS = 98.6
ARITHMETIC MEAN = 2.8
ARITHMETIC STANDARD DEVIATION = 2.6

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

DAY OF MONTH	JAN 1983		FEB 1983		MAR 1983		APR 1983		MAY 1983		JUN 1983		JUL 1983		AUG 1983		SEP 1983		OCT 1983		NOV 1983		DEC 1983	
1	6.4	S	7.7	T		T	7.8	F	4.5	S	5.7	W		F		M		T	4.4	S	7.6	T	13.3	T
2	4.8	S	17.7	W		W	5.8	S	7.1	M	5.4	T		S		T		F	4.6	S	5.0	W	14.3	F
3	13.3	M	18.3	T		T	2.9	S	6.5	T	7.8	F		S		W		S	6.0	M	1.5	T	9.1	S
4	26.9	T	11.9	F		F	7.1	M	8.3	W	5.2	S		M		T		S	11.5	T	11.2	F	3.6	S
5	22.2	W	8.1	S		S	8.4	T	5.9	T	2.2	S		T		F		M	15.1	W	3.6	S	2.6	M
6	23.7	T	8.4	S		S	9.3	W	7.3	F	5.1	M		W		S		T	15.1	T	2.0	S	13.5	T
7	11.1	F	11.8	M		M	7.1	T	4.1	S	6.5	T		T		S		W	7.7	F	7.4	M	8.7	W
8	7.3	S	6.7	T		T	8.0	F	3.7	S	5.1	W		F		M		T	5.7	S	5.9	T	17.0	T
9	4.3	S	6.1	W		W	7.8	S	5.0	M	4.9	T		S		T		F	3.2	S	6.4	W	2.7	F
10	11.8	M	10.7	T		T	4.6	S	7.3	T	7.5	F		S		W		S	5.2	M	1.9	T	6.1	S
11	31.8	T		F		F	6.6	M	5.7	W	6.0	S		M		T		S	7.7	T	9.6	F	2.1	S
12	19.8	W		S		S	5.9	T	5.9	T	5.3	S		T		F		M	12.7	W	5.0	S	5.9	M
13	18.7	T		S		S	.8	W	5.1	F	4.0	M		W		S	8.5	T	12.1	T	3.7	S	8.5	T
14	16.1	F		M		M		T	3.5	S	1.4	T		T		S	6.8	W	7.8	F	6.9	M	8.2	W
15	10.3	S		T		T		F	1.8	S	5.2	W		F		M	10.2	T	7.2	S		T	10.2	T
16	6.1	S		W		W		S	4.7	M	5.9	T		S		T	10.4	F	7.0	S	7.0	W	12.3	F
17	10.2	M		T		T		S	5.0	T	4.0	F		S		W	6.0	S	7.1	M	8.2	T	5.0	S
18	11.0	T		F		F		M	5.3	W	4.7	S		M		T	3.0	S	7.3	T	13.6	F	3.4	S
19	15.9	W		S		S		T	4.5	T	5.0	S		T		F	5.1	M	8.9	W	2.2	S	10.6	M
20	7.0	T		S		S		W	6.4	F	4.8	M		W		S	8.7	T	11.4	T	4.9	S	6.8	T
21	2.0	F		M		M		T	8.4	S	4.7	T		T		S	11.9	W	12.0	F	7.5	M	12.3	W
22	.8	S		T		T	6.0	F	2.3	S	2.5	W		F		M	17.2	T	7.1	S	9.2	T	11.7	T
23	1.0	S		W	5.1	W	4.6	S	7.4	M	4.0	T		S		T	9.6	F	2.2	S	3.7	W	7.8	F
24	11.6	M		T	10.4	T	2.0	S	5.9	T	7.5	F		S		W	10.2	S	4.8	M	1.2	T	9.9	S
25	6.9	T		F	10.5	F	7.0	M	6.7	W	5.3	S		M		T	6.5	S	10.3	T	6.6	F	2.4	S
26	4.3	W		S	7.6	S	6.2	T	8.5	T	6.3	S		T		F	9.1	M		W	5.8	S	5.5	M
27	9.8	T		S	3.3	S	8.6	W	9.1	F	4.9	M		W		S	7.1	T	8.1	T	3.5	S	14.9	T
28	5.9	F		M	12.8	M	5.6	T	4.7	S	6.3	T		T		S	7.8	W	14.2	F	16.7	M	11.9	W
29	4.6	S			7.3	T	6.7	F	3.6	S	4.5	W		F		M	4.9	T	12.8	S	3.4	T	12.2	T
30	3.7	S			15.6	W	6.9	S	1.4	M	5.8	T		S		T	9.5	F	5.7	S	2.4	W	11.5	F
31	13.0	M			8.0	T			5.3	T				S		W			9.3	M			5.7	S
NUMBER	727		226		198		495		743		705						428		692		659		736	
MAXIMUM	31.8		18.3		15.6		9.3		9.1		7.8						17.2		15.1		16.7		17.0	
ARITH-MEAN	4.1		3.6		2.7		2.4		2.2		2.0						3.3		3.3		2.1		2.9	

TOTAL SAMPLES = 5609
% OF POSSIBLE OBSERVATIONS = 64.0
ARITHMETIC MEAN = 2.8
ARITHMETIC STANDARD DEVIATION = 2.7

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
DOES NOT MEET SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
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SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1984		FEB 1984		MAR 1984		APR 1984		MAY 1984		JUN 1984		JUL 1984		AUG 1984		SEP 1984		OCT 1984		NOV 1984		DEC 1984	
	1	2.4	S	10.4	W	7.0	T	4.5	S	2.7	T	4.4	F		S	3.2	W	5.8	S	4.8	M	5.7	T	6.8	S
	2	2.5	M	3.2	T	8.0	F	5.7	M	3.9	W	5.6	S		M	5.5	T	4.4	S		T	8.9	F	2.3	S
	3	7.5	T	9.0	F	5.8	S	2.5	T	4.1	T	2.4	S		T	2.3	F	3.5	M		W	7.2	S	12.6	M
	4	9.3	W	1.7	S	3.4	S		W	6.2	F	6.0	M		W		S	8.4	T		T	4.5	S	14.2	T
D	5	16.8	T	2.3	S	6.9	M		T	5.4	S	6.0	T		T		S	4.9	W	7.9	F	13.0	M	16.8	W
	6	7.5	F	10.1	M	.5	T	6.0	F	4.1	S	5.3	W	3.2	F		M	3.7	T	6.2	S	8.7	T	15.2	T
A	7	6.6	S	8.4	T		W	4.1	S	5.8	M	6.4	T	4.7	S		T	5.3	F	5.1	S	7.0	W	14.8	F
	8	2.6	S	4.8	W		T		S	5.1	T	5.0	F	1.7	S		W	6.1	S		M	7.5	T	8.7	S
Y	9		M	11.7	T	5.7	F		M	5.4	W	4.2	S	2.9	M		T	2.6	S	6.6	T	5.3	F		S
	10	15.0	T	8.0	F	1.5	S	6.4	T	4.7	T	1.7	S	3.4	T	5.5	F	4.7	M	7.6	W	1.3	S	2.7	M
	11	16.2	W	7.9	S		S	4.5	W	4.9	F	5.0	M	3.7	W	3.0	S	5.9	T	5.0	T	1.2	S	15.8	T
O	12	5.3	T	4.3	S		M	4.9	T	6.3	S	5.8	T	4.5	T	1.3	S	4.5	W	4.9	F	2.7	M	9.4	W
	13	13.3	F	11.6	M	5.4	T	5.6	F	7.8	S	4.9	W	6.7	F	3.6	M		T	4.7	S	19.0	T	12.4	T
F	14	5.5	S	11.2	T	5.4	W	2.2	S	5.2	M	4.4	T	5.5	S	6.0	T	6.8	F	3.0	S	8.8	W	4.3	F
	15	3.9	S	1.4	W	4.7	T	3.5	S	8.7	T	5.8	F	3.1	S	5.3	W	7.6	S	11.2	M	13.6	T		S
	16	11.7	M	9.6	T	2.5	F	2.8	M	4.4	W	5.4	S	4.5	M	5.1	T	2.7	S	6.8	T	14.7	F		S
M	17	4.9	T	7.3	F	9.8	S	4.6	T	5.7	T	2.0	S	6.6	T	5.2	F	10.6	M	5.6	W	9.5	S		M
	18	12.7	W	6.0	S	5.3	S	2.6	W	6.0	F	4.0	M	6.0	W	5.5	S	6.8	T	8.2	T	5.5	S	15.7	T
O	19	13.6	T	5.4	S	6.8	M	5.0	T	3.9	S	5.2	T	4.8	T	3.1	S	11.6	W	4.7	F	6.0	M	15.2	W
	20	13.4	F	4.5	M	4.7	T	6.3	F	1.7	S	3.8	W		F	3.8	M	3.8	T	7.5	S	10.2	T	15.9	T
N	21	6.0	S	11.4	T	6.6	W	6.8	S		M	5.1	T	2.0	S	8.5	T	6.1	F	2.4	S	11.6	W	13.2	F
	22	2.7	S	12.0	W	7.0	T	5.4	S	1.2	T	5.0	F	.9	S	4.6	W	5.2	S	9.1	M	3.7	T	13.7	S
T	23	12.0	M	3.9	T	5.3	F	2.0	M	3.7	W	1.9	S	4.3	M	4.2	T	1.8	S	16.7	T	8.2	F	5.2	S
	24	10.7	T	5.8	F	5.7	S		T		T		S	2.7	T	5.6	F	4.5	M	5.9	W	6.1	S	8.4	M
H	25	14.4	W	7.9	S	2.9	S	3.3	W		F		M	4.1	W	2.5	S	12.1	T	8.5	T	5.5	S	4.0	T
	26	13.0	T	4.5	S	6.3	M	4.1	T		S	6.2	T	4.9	T	2.7	S	6.7	W	6.7	F	11.4	M	16.6	W
	27	14.1	F	4.3	M	7.1	T	3.9	F		S	4.1	W	5.8	F	4.2	M	4.2	T	7.5	S	1.6	T	12.6	T
	28	8.0	S	4.1	T	2.9	W	5.3	S		M		T	5.2	S	4.9	T	6.9	F	1.6	S	7.4	W	9.4	F
	29	3.8	S	10.8	W	5.0	T	4.0	S		T	3.3	F	4.9	S	5.0	W	9.1	S	8.3	M	5.7	T	2.8	S
	30	10.9	M			5.3	F	5.8	M		W		S	5.1	M	4.8	T	4.6	S	11.5	T	9.8	F	3.5	S
	31	11.0	T			6.8	S				T			6.8	T	7.7	F			11.1	W				M
UMBER		677		689		571		516		493		573		581		572		663		612		718		601	
AXIMUM		16.8		12.0		9.8		6.8		8.7		6.4		6.8		8.5		12.1		16.7		19.0		16.8	
RITH-MEAN		3.5		2.3		1.9		1.6		1.8		1.9		1.6		1.7		2.1		2.4		2.5		3.6	

OTAL SAMPLES = 7266
OF POSSIBLE OBSERVATIONS = 82.7
RITHMET[illegible]MEAN = 2.3
RITHMET[illegible]STANDARD DEVIATION = 2.2

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

	JAN 1985		FEB 1985		MAR 1985		APR 1985		MAY 1985		JUN 1985		JUL 1985		AUG 1985		SEP 1985		OCT 1985		NOV 1985		DEC 1985	
1		T	7.5	F	13.2	F	8.6	M	7.0	W	3.4	S	5.5	M	3.2	T		S	15.8	T		F	3.6	S
2		W	4.8	S	4.9	S	5.0	T	6.5	T	1.4	S	4.8	T	5.9	F		M	5.4	W		S	10.3	M
3	14.0	T	2.3	S	3.0	S	4.4	W	4.7	F	4.4	M	6.9	W	4.1	S		T	7.5	T		S	18.3	T
4		F	12.0	M	1.8	M	4.0	T	5.9	S	3.6	T	2.0	T	2.9	S		W	7.0	F	12.6	M	14.8	W
D 5		S	12.2	T	3.3	T	5.1	F	3.7	S	4.7	W	5.9	F	4.0	M		T	7.1	S	10.1	T	10.4	T
6		S	4.6	W	7.3	W	4.0	S	5.4	M	3.1	T	2.0	S	4.8	T	4.3	F	5.8	S	8.6	W	14.4	F
A 7		M	.9	T	7.8	T	2.8	S	5.3	T	5.8	F	1.2	S	3.8	W	3.2	S	4.3	M	6.1	T	6.5	S
8	21.8	T	7.4	F	7.7	F	5.4	M	4.3	W	4.6	S	5.5	M	3.4	T	1.1	S	5.8	T	6.8	F	3.6	S
Y 9	14.0	W	1.5	S	5.4	S	5.5	T	3.8	T	1.8	S	4.4	T	4.1	F	5.5	M	6.3	W	5.8	S	4.7	M
10	12.3	T	1.3	S	7.3	S	4.2	W	5.0	F	3.6	M	6.2	W	5.5	S	5.8	T	10.9	T	1.1	S	9.6	T
11		F	1.7	M	4.8	M	5.2	T	5.1	S	3.7	T	5.4	T	3.9	S	5.8	W	6.1	F	5.5	M	10.5	W
O 12		S	12.1	T	6.3	T	6.9	F	1.7	S	4.5	W	6.3	F	3.6	M	4.2	T	6.2	S	8.4	T	10.6	T
13		S	6.0	W	3.9	W	3.7	S	5.7	M	3.1	T	5.6	S	2.9	T	5.3	F	4.3	S	13.3	W	6.7	F
F 14		M	7.3	T	6.4	T	2.8	S	4.5	T	5.6	F	1.5	S	3.9	W	5.2	S	12.0	M	9.0	T	7.7	S
15	10.4	T	10.0	F	6.9	F	3.5	M	5.1	W	5.0	S	5.1	M	5.4	T	2.8	S	16.6	T	6.8	F	4.4	S
16	5.8	W	5.9	S	9.2	S	6.0	T	5.1	T	3.8	S	6.3	T	7.2	F	5.6	M	7.7	W	6.4	S	12.6	M
M 17	8.1	T	2.2	S	7.8	S	4.7	W	6.0	F	4.9	M	3.6	W	4.3	S	2.9	T	13.6	T	3.7	S	13.2	T
18	13.1	F	3.1	M	6.3	M	4.2	T	6.1	S	5.8	T	4.3	T	4.6	S	9.3	W	12.9	F	7.4	M	12.4	W
O 19	8.5	S	8.8	T	5.2	T	5.0	F	2.1	S	4.9	W	6.2	F	5.2	M	4.4	T	2.2	S	2.2	T	12.9	T
20	9.1	S	6.7	W	9.0	W	5.0	S	5.6	M	3.6	T	4.0	S	3.8	T	10.0	F		S	3.3	W	12.4	F
N 21	14.3	M	9.0	T	4.3	T	2.7	S	3.8	T	5.0	F	1.6	S	3.2	W	6.6	S		M	5.4	T	7.7	S
22	14.0	T	8.3	F	5.2	F	4.2	M	4.9	W	8.2	S	3.7	M	3.8	T	3.3	S		T	10.6	F	4.5	S
T 23	5.3	W	4.8	S	7.0	S	3.9	T	4.0	T	3.1	S	3.6	T	6.9	F	4.7	M	9.5	W	5.8	S	11.6	M
24	3.1	T	2.0	S	2.3	S	5.0	W	5.2	F	3.0	M	3.8	W	3.8	S	10.5	T	6.1	T	3.2	S	7.6	T
H 25	12.1	F	5.8	M	5.1	M	3.0	T	3.0	S	3.2	T	3.3	T	3.4	S	9.6	W	9.3	F	6.4	M	4.0	W
26	6.4	S	8.5	T	1.5	T	5.8	F	1.1	S	2.5	W	6.5	F	5.6	M	7.8	T	6.1	S	9.7	T	13.9	T
27	5.7	S	8.4	W	4.2	W	4.1	S	1.0	M	2.9	T	5.6	S	3.7	T	5.6	F	4.3	S	14.4	W	11.6	F
28	13.3	M	9.4	T	11.9	T	2.3	S	4.0	T	4.3	F	4.6	S	4.5	W	5.2	S	6.5	M	3.0	T	8.4	S
29	13.0	T			7.8	F	4.3	M	3.6	W	4.4	S	2.3	M	8.2	T	2.4	S	12.2	T	7.9	F	4.2	S
30	11.5	W			5.1	S	5.1	T	2.7	T	4.8	S	4.5	T	6.0	F	7.9	M	11.7	W	4.4	S	16.9	M
31	5.1	T			4.8	S			5.5	F			3.8	W		S			4.2	T			12.8	T
UMBER	482		643		713		688		707		712		712		684		576		590		597		710	
AXIMUM	21.8		12.2		13.2		8.6		7.0		8.2		6.9		8.2		10.5		16.6		14.4		18.3	
RITH-MEAN	3.9		2.3		2.1		1.9		1.8		1.5		1.9		1.9		2.1		2.9		2.5		4.2	

OTAL SAMPLES = 7814
OF POSSIBLE OBSERVATIONS = 89.2
RITHMETIC MEAN = 2.4
RITHMETIC STANDARD DEVIATION = 2.1

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1986		FEB 1986		MAR 1986		APR 1986		MAY 1986		JUN 1986		JUL 1986		AUG 1986		SEP 1986		OCT 1986		NOV 1986		DEC 1986	
	1	7.2	W	9.2	S	8.3	S	6.8	T	2.2	T	.7	S		T		F		M		W	7.1	S	12.5	M
	2	16.8	T	5.3	S	3.2	S	3.1	W	6.3	F	.5	M		W		S		T		T	4.6	S	13.1	T
	3	12.3	F	9.1	M	4.8	M	3.8	T	3.6	S	4.3	T		T		S		W		F	12.1	M	12.6	W
	4	5.4	S	9.4	T	7.1	T	5.2	F	1.2	S	4.9	W		F		M		T		S	10.6	T	10.0	T
D	5	3.1	S	8.8	W	15.3	W	8.0	S	2.4	M	3.6	T		S		T		F		S	17.8	W	12.5	F
	6	14.5	M	8.0	T	8.2	T	6.9	S	3.4	T	3.7	F		S		W		S		M	4.8	T	7.0	S
A	7	15.3	T	4.9	F	7.1	F	5.2	M	3.1	W	4.1	S		M		T		S		T	13.4	F	5.0	S
	8	12.0	W	4.3	S	5.0	S	8.3	T	2.6	T	1.4	S		T		F		M		W	5.6	S	8.8	M
Y	9	11.2	T	3.4	S	3.9	S	5.6	W	4.7	F	2.7	M		W		S		T		T	3.8	S	12.1	T
	10	16.7	F	8.7	M	1.6	M	7.1	T	2.8	S	4.0	T		T		S		W		F	3.3	M	12.5	W
	11	6.3	S	1.3	T	7.5	T	6.6	F	1.7	S	3.7	W		F		M		T	5.9	S	6.6	T	19.5	T
O	12	3.9	S	4.5	W	5.3	W	5.5	S	5.2	M	4.3	T		S		T		F	3.1	S	4.7	W	13.5	F
	13	14.3	M	9.7	T	5.1	T	5.3	S	2.6	T	5.3	F		S	2.0	W		S	12.6	M	13.1	T	9.5	S
F	14	13.4	T	11.7	F	9.0	F	1.2	M	2.5	W	4.9	S		M	3.7	T		S	17.9	T	10.5	F	6.1	S
	15	16.1	W	2.5	S	3.9	S	4.0	T	2.5	T	4.7	S		T	9.5	F		M	11.0	W	5.7	S	10.1	M
	16	3.9	T	2.9	S	2.1	S	4.9	W	4.5	F	3.3	M		W	6.2	S		T	6.7	T	4.9	S	10.0	T
M	17	12.3	F	3.0	M	4.2	M	3.9	T	6.0	S	3.8	T		T	3.5	S		W	12.6	F	8.8	M	12.2	W
	18	8.4	S	7.2	T	5.7	T	5.5	F	1.9	S	3.0	W		F	5.0	M		T	5.8	S	5.3	T	11.3	T
O	19	7.8	S	9.6	W	5.9	W	5.8	S	4.9	M	3.2	T		S	5.2	T		F	3.8	S	7.9	W	11.7	F
	20	12.2	M	7.2	T	7.4	T	4.7	S	4.2	T	4.4	F		S	4.9	W		S	15.6	M	1.4	T	4.9	S
N	21	11.1	T	9.3	F	9.0	F	5.6	M	3.3	W	4.1	S		M	4.8	T		S	6.4	T	8.9	F	2.5	S
	22	10.0	W	8.8	S	4.8	S	4.8	T	2.9	T	2.8	S		T	4.9	F		M	17.2	W	9.8	S	16.5	M
T	23	11.6	T	4.4	S	3.6	S	4.4	W	5.7	F	4.1	M		W	4.0	S		T	8.9	T	3.1	S	18.9	T
	24	10.1	F	17.8	M	6.2	M	3.0	T	5.0	S	5.7	T		T	3.8	S		W	9.4	F	3.6	M	9.8	W
H	25	6.6	S	8.9	T	4.3	T	4.9	F	1.9	S	5.5	W		F	3.0	M		T	9.9	S	10.4	T	3.0	T
	26	4.7	S	7.8	W	4.7	W	3.5	S	1.8	M	5.1	T		S		T		F	7.8	S	10.9	W	7.3	F
	27	9.6	M	9.1	T	5.0	T	1.2	S	6.7	T	7.0	F		S		W		S	7.6	M	.6	T	10.3	S
	28	8.5	T	10.2	F	4.9	F	3.8	M	5.4	W	6.6	S		M	5.9	T		S	9.2	T	6.9	F	5.3	S
	29	10.1	W			4.8	S	3.4	T	6.2	T	2.0	S		T		F		M	10.0	W	5.6	S	7.1	M
	30	13.2	T			9.0	S	8.4	W	3.4	F	3.6	M		W		S		T	7.8	T	4.4	S	14.3	T
	31	10.6	F			2.2	M			2.0	S				T		S			8.0	F			8.8	W
UMBER		729		669		738		712		742		716				305				502		710		740	
AXIMUM		16.8		17.8		15.3		8.4		6.7		7.0				9.5				17.9		17.8		19.5	
RITH-MEAN		3.9		2.4		2.2		1.8		1.4		1.3				1.7				3.0		2.6		4.1	

OTAL SAMPLES = 6563
OF POSSIBLE OBSERVATIONS = 74.9
RITHMETIC MEAN = 2.5
RITHME STANDARD DEVIATION = 2.4

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
DOES NOT MEET SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
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SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT

MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1987		FEB 1987		MAR 1987		APR 1987		MAY 1987		JUN 1987	JUL 1987	AUG 1987	SEP 1987	OCT 1987		NOV 1987		DEC 1987	
	1	5.2	T	3.2	S	2.3	S	8.1	W	4.8	F	M	W	S	T	6.2	T	3.4	S	1.1	T
	2	4.4	F	5.4	M	7.8	M	3.3	T	4.7	S	T	T	S	W	7.9	F	8.8	M	5.1	W
	3	2.0	S		T	1.8	T	6.2	F	1.7	S	W	F	M	T	9.0	S	7.4	T	1.6	T
	4	3.8	S		W	1.9	W	6.2	S	11.3	M	T	S	T	F	2.4	S	6.4	W	10.9	F
D	5	10.6	M		T	1.1	T	5.4	S	8.8	T	F	S	W	S	4.7	M	7.9	T	6.2	S
	6	10.8	T	4.8	F	6.1	F	4.6	M	5.9	W	S	M	T	S	11.1	T	8.5	F	.9	S
A	7	11.4	W	10.2	S	7.2	S	6.5	T	7.0	T	S	T	F	M	14.0	W	6.0	S	12.3	M
	8	8.5	T	6.4	S	5.0	S	2.7	W	9.8	F	M	W	S	T	10.5	T	6.8	S	2.1	T
Y	9	8.4	F	6.4	M	5.5	M	4.6	T	7.0	S	T	T	S	W	7.5	F	8.4	M	2.8	W
	10	6.0	S	14.9	T	7.0	T	7.0	F	4.6	S	W	F	M	T	5.7	S	10.4	T	9.5	T
	11		S	12.9	W	3.9	W	5.1	S	6.4	M	T	S	T	F	4.2	S	8.6	W	11.5	F
O	12	11.4	M	14.3	T	2.7	T	2.7	S		T	F	S	W	S	6.0	M	6.5	T	6.3	S
	13	12.3	T	10.6	F	10.2	F	3.3	M		W	S	M	T	S	4.0	T	8.2	F	3.5	S
F	14	8.2	W	4.6	S	6.7	S	5.4	T		T	S	T	F	M	4.5	W	6.7	S	7.6	M
	15	9.3	T	4.2	S	4.5	S	5.1	W		F	M	W	S	T	2.9	T	5.6	S	5.5	T
	16	10.0	F	5.0	M	6.0	M	6.0	T		S	T	T	S	W	4.8	F	8.0	M	3.0	W
M	17	5.0	S	6.0	T	6.5	T	3.7	F		S	W	F	M	T	7.8	S	13.4	T	13.6	T
	18	5.0	S	4.7	W	5.8	W	3.4	S		M	T	S	T	F	4.0	S	11.3	W	11.8	F
O	19	9.9	M	4.2	T	5.1	T	2.2	S		T	F	S	W	S	5.4	M	16.2	T	4.9	S
	20	11.5	T	8.2	F	5.6	F	6.6	M		W	S	M	T	S	14.8	T	15.6	F	4.2	S
N	21	5.2	W	5.4	S	7.2	S	4.5	T		T	S	T	F	M	15.0	W	6.4	S	16.4	M
	22	8.2	T	3.0	S	3.1	S	4.8	W		F	M	W	S	T	15.7	T	6.7	S	11.2	T
T	23	9.6	F	8.2	M	5.4	M	3.5	T		S	T	T	S	W	13.5	F	14.8	M	8.4	W
	24	10.7	S	10.2	T	4.4	T	7.4	F		S	W	F	M	T	8.1	S	5.9	T	5.9	T
H	25	9.1	S	4.0	W	5.3	W	5.2	S		M	T	S	T	F	4.6	S	6.0	W	2.9	F
	26	19.5	M	6.4	T	4.7	T	2.6	S		T	F	S	W	S	7.0	M	1.7	T	6.5	S
	27	12.5	T	10.6	F	7.7	F	5.7	M		W	S	M	T	S	10.1	T	7.1	F	5.3	S
	28	7.8	W	4.4	S	5.5	S	5.1	T		T	S	T	F	M	8.2	W	7.6	S	9.7	M
	29	6.4	T			1.7	S	2.7	W		F	M	W	S	T	5.2	T	7.1	S	15.4	T
	30	3.7	F			6.5	M	4.2	T		S	T	T	S	W	8.4	F	7.0	M	8.9	W
	31	4.6	S			8.0	T				S		F	M		15.8	S			7.8	T
UMBER		683		573		740		705		257						701		716		735	
AXIMUM		19.5		14.9		10.2		8.1		11.3						15.8		16.2		16.4	
RITH-MEAN		3.1		2.8		2.0		1.9		2.6						2.7		2.7		2.5	

OTAL SAMPLES = 5110
OF POSSIBLE OBSERVATIONS = 58.3
RITHMETIC MEAN = 2.5
RITHMETIC STANDARD DEVIATION = 2.2
HIS PAGE CONTAINS EXCEPTIONAL EVENT DATA

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
DOES NOT MEET SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1988		FEB 1988		MAR 1988		APR 1988		MAY 1988		JUN 1988		JUL 1988		AUG 1988		SEP 1988		OCT 1988		NOV 1988		DEC 1988	
	1	2.6	F	12.9	M	6.4	T	6.0	F	2.3	S	1.2	W	4.2	F	2.9	M	4.0	T		S	8.9	T	1.6	T
	2	5.1	S	11.9	T	8.0	W	3.1	S	6.1	M	.5	T	3.1	S	2.7	T	7.0	F		S	4.4	W		F
	3	4.3	S	10.9	W	10.0	T	1.8	S	5.9	T	1.3	F	1.6	S	3.1	W	4.7	S		M	5.1	T		S
	4	10.2	M	11.8	T	8.5	F	4.5	M	7.4	W	.5	S	2.3	M	5.2	T	4.8	S		T	4.8	F		S
D	5	12.9	T	7.5	F	4.1	S	5.2	T	6.7	T	.1	S	2.9	T	3.6	F	6.1	M		W	3.9	S	7.0	M
	6	13.8	W	4.9	S	4.1	S	6.8	W	8.1	F	.7	M	2.7	W	2.1	S	6.8	T		T	1.4	S	6.5	T
A	7	14.2	T	3.3	S	7.0	M	8.7	T	6.9	S	1.2	T	5.5	T	2.6	S	6.4	W		F	3.3	M	5.0	W
	8	10.6	F	6.9	M	10.2	T	6.2	F	2.7	S	.9	W	4.6	F	5.9	M	6.4	T		S	8.6	T	2.6	T
Y	9	7.2	S	11.3	T	6.8	W	3.2	S	6.2	M	1.3	T	4.0	S	4.0	T	7.9	F		S	1.9	W	10.5	F
	10	1.2	S	8.2	W	8.8	T	9.0	S	11.8	T	1.3	F	2.2	S	4.0	W		S		M	1.9	T	3.7	S
	11	10.5	M	13.8	T	6.0	F	6.9	M		W	1.4	S	4.1	M	3.2	T		S		T	5.8	F	2.6	S
O	12	6.5	T	10.7	F	5.2	S	7.8	T		T	.4	S	3.1	T	2.4	F		M		W	3.5	S	1.7	M
	13	7.3	W	9.8	S	4.5	S	4.0	W	3.5	F	.9	M	3.6	W	1.9	S		T		T	1.8	S	7.1	T
F	14	1.6	T	7.3	S	5.7	M	6.9	T	3.0	S	1.6	T	2.2	T	1.5	S		W		F	5.3	M	6.9	W
	15	9.7	F	4.4	M	7.4	T	4.1	F	1.5	S	2.1	W	2.6	F	3.2	M		T		S	8.8	T	6.3	T
	16	3.1	S	9.3	T	4.7	W	8.2	S	4.6	M	1.2	T	2.9	S	3.7	T		F		S	1.6	W	9.3	F
M	17	3.7	S	6.9	W	3.2	T	1.5	S	5.3	T		F	2.2	S	3.5	W		S		M	5.8	T	4.6	S
	18	12.7	M	5.3	T	7.9	F	5.0	M	4.1	W		S	2.6	M	2.6	T		S	3.4	T	11.8	F	3.9	S
O	19	14.7	T	7.2	F	7.1	S	4.6	T	3.7	T		S	2.9	T	3.8	F		M	3.8	W	7.1	S		M
	20	13.4	W	6.7	S	4.9	S	7.1	W	7.5	F	3.2	M	4.8	W	2.2	S		T	5.0	T	1.8	S		T
N	21	13.9	T	6.4	S	5.0	M	5.6	T	3.4	S	1.7	T	5.1	T	2.1	S		W	10.2	F	2.0	M		W
	22	14.5	F	6.1	M	3.8	T	6.7	F	1.5	S	1.7	W	3.9	F	4.2	M		T	4.5	S	1.1	T		T
T	23	5.7	S	6.0	T	4.5	W	4.6	S	1.8	M	1.6	T	1.6	S	7.5	T		F	3.2	S	5.8	W		F
	24	3.9	S	10.5	W	4.1	T	1.9	S	4.8	T	1.5	F	1.9	S	8.8	W		S	12.8	M	3.9	T		S
H	25	12.9	M	9.1	T	4.6	F	6.2	M	2.5	W	.4	S	3.3	M	6.3	T		S	8.6	T	2.5	F		S
	26	8.6	T	10.8	F	4.3	S	3.1	T	2.6	T	.2	S	2.7	T	5.2	F		M	7.1	W	4.1	S		M
	27	12.5	W	7.9	S	2.5	S	6.0	W	3.1	F	1.4	M	2.6	W	5.5	S		T	4.5	T	1.2	S		T
	28	11.4	T	5.6	S	6.5	M	5.7	T	1.6	S	1.8	T	2.3	T	6.5	S		W	8.1	F	9.4	M		W
	29	12.1	F	10.0	M	8.0	T	3.4	F	1.7	S	2.9	W	2.4	F	7.2	M		T	5.0	S	9.7	T		T
	30	4.4	S			5.4	W	5.0	S	2.4	M	2.7	T	3.9	S	2.1	T		F	5.6	S	7.2	W		F
	31	2.0	S			5.8	T			3.4	T			1.4	S	3.9	W			9.5	M				S
UMBER		729		689		728		716		678		621		738		719		209		323		693		273	
AXIMUM		14.7		13.8		10.2		9.0		11.8		3.2		5.5		8.8		7.9		12.8		11.8		10.5	
RITH-MEAN		3.2		3.1		2.0		1.9		1.9		.6		1.8		1.7		2.5		3.2		1.7		2.3	

OTAL SAMPLES = 7116
OF POSSIBLE OBSERVATIONS = 81.0
RITHMETIC MEAN = 2.1
RITHMETIC STANDARD DEVIATION = 1.8

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
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SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1989	FEB 1989	MAR 1989	APR 1989	MAY 1989	JUN 1989	JUL 1989	AUG 1989	SEP 1989	OCT 1989	NOV 1989	DEC 1989
	1	S	7.6 W	W	2.9 S	5.3 M	3.7 T	5.3 S	4.3 T	4.6 F	2.1 S	6.8 W	8.5 F
	2	M	7.3 T	T	1.8 S	4.7 T	5.7 F	3.4 S	4.2 W	3.2 S	6.8 M	10.2 T	5.7 S
	3	T	7.8 F	F	5.4 M	7.5 W	5.2 S	4.0 M	4.0 T	3.2 S	5.7 T	9.0 F	3.1 S
	4	W	2.4 S	S	6.9 T	4.5 T	2.7 S	2.6 T	5.4 F	2.3 M	5.7 W	10.4 S	9.5 M
D	5	T	2.0 S	S	8.4 W	5.7 F	5.4 M	4.6 W	3.3 S	6.7 T	7.3 T	2.9 S	10.1 T
	6	F	8.8 M	4.2 M	5.9 T	5.1 S	5.1 T	5.4 T	3.1 S	3.5 W	8.5 F	8.6 M	8.5 W
A	7	S	8.5 T	7.5 T	6.6 F	1.6 S	5.1 W	4.8 F	6.6 M	5.6 T	4.7 S	8.4 T	11.0 T
	8	S	9.1 W	5.7 W	6.0 S	5.5 M	5.2 T	3.9 S	5.7 T	7.3 F	4.2 S	11.1 W	5.7 F
Y	9	M	12.2 T	9.4 T	1.3 S	7.6 T	6.9 F	2.2 S	5.6 W	5.1 S	11.7 M	11.9 T	4.5 S
	10	T	6.3 F	8.6 F	4.2 M	6.4 W	5.1 S	4.2 M	6.3 T	2.9 S	6.7 T	9.7 F	3.2 S
	11	W	3.8 S	2.2 S	4.4 T	5.2 T	3.2 S	5.0 T	5.3 F	5.5 M	6.7 W	10.2 S	8.6 M
O	12	T	2.5 S	2.7 S	3.6 W	5.2 F	5.2 M	5.6 W	2.7 S	5.2 T	11.0 T	7.1 S	9.8 T
	13	F	M	4.1 M	6.2 T	4.9 S	1.3 T	5.7 T	2.0 S	9.4 W	6.0 F	7.5 M	10.9 W
F	14	S	T	4.3 T	10.8 F	3.6 S	6.4 W	5.6 F	6.0 M	13.6 T	6.1 S	9.7 T	13.4 T
	15	S	W	1.0 W	3.8 S	4.7 M	6.2 T	3.2 S	4.8 T	13.8 F	2.5 S	9.9 W	9.4 F
	16	M	T	5.3 T	1.9 S	4.7 T	4.3 F	1.9 S	6.4 W	7.9 S	9.3 M	15.1 T	9.4 S
M	17	T	F	4.8 F	5.9 M	2.8 W	7.0 S	4.6 M	4.5 T	1.8 S	8.8 T	9.6 F	4.2 S
	18	W	S	2.2 S	3.0 T	5.0 T	3.2 S	5.3 T	4.8 F	3.9 M	9.2 W	5.8 S	10.5 M
O	19	T	S	1.9 S	7.0 W	4.5 F	4.8 M	9.7 W	3.8 S	4.4 T	.0 T	2.9 S	15.8 T
	20	F	M	5.7 M	8.1 T	4.1 S	3.6 T	6.4 T	3.0 S	7.6 W	5.8 F	10.1 M	11.0 W
N	21	S	T	9.1 T	5.5 F	5.4 S	5.2 W	4.6 F	4.9 M	9.1 T	3.6 S	19.0 T	17.0 T
	22	S	W	6.5 W	3.2 S	5.2 M	3.6 T	2.6 S	5.0 T	10.9 F	1.6 S	10.1 W	13.5 F
T	23	M	T	7.7 T	2.5 S	2.9 T	4.5 F	5.4 S	4.9 W	6.8 S	6.3 M	3.8 T	6.2 S
	24	T	F	2.8 F	6.1 M	4.0 W	2.2 S	5.2 M	4.5 T	6.4 S	.9 T	3.3 F	5.2 S
H	25	W	S	3.9 S	2.7 T	3.5 T	2.5 S	5.0 T	4.7 F	8.9 M	7.0 W	2.5 S	2.9 M
	26	T	S	1.9 S	5.3 W	5.0 F	5.3 M	6.1 W	4.5 S	.0 T	5.4 T	1.0 S	6.2 T
	27	F	M	5.4 M	4.7 T	1.9 S	6.2 T	4.5 T	2.0 S	.0 W	5.1 F	5.9 M	2.4 W
	28	S	T	5.0 T	4.5 F	1.6 S	5.6 W	4.8 F	5.7 M	6.0 T	2.9 S	8.0 T	.0 T
	29	S		4.3 W	4.6 S	1.2 M	3.1 T	3.7 S	7.7 T	8.8 F	2.4 S	6.1 W	11.2 F
	30	M		3.7 T	2.8 S	4.3 T	5.4 F	3.7 S	5.3 W	3.3 S	8.9 M	7.2 T	5.9 S
	31	T		6.5 F		4.2 W		4.3 M	5.0 T		7.4 T		4.3 S
UMBER			287	572	720	744	720	744	744	720	744	720	744
AXIMUM			12.2	9.4	10.8	7.6	7.0	9.7	7.7	13.8	11.7	19.0	17.0
RITH-MEAN			2.8	1.5	1.9	1.8	1.9	2.0	2.0	2.2	2.1	3.1	3.2

OTAL SAMPLES = 7459
OF POSSIBLE OBSERVATIONS = 85.1
RITHMETIC MEAN = 2.2
RITHMETIC STANDARD DEVIATION = 1.9

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
MEETS SUMMARY CRITERIA

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AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
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UTM ZONE: 11
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ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1990		FEB 1990		MAR 1990		APR 1990	MAY 1990	JUN 1990	JUL 1990	AUG 1990	SEP 1990	OCT 1990		NOV 1990		DEC 1990	
	1	5.8	M	6.3	T	6.2	T	S	T	F	S	W	S	M		7.0	T	5.7	S
	2	12.9	T	4.3	F	11.3	F	M	W	S	M	T	S	T		7.0	F	3.7	S
	3	9.6	W	1.0	S	3.1	S	T	T	S	T	F	M	W		7.8	S	7.5	M
D	5	7.9	F	3.1	M	3.6	M	W	F	M	W	S	T	T		3.8	S	8.8	T
	6	6.7	S	9.3	T	4.1	T	T	S	T	T	S	W	F		6.8	M	9.7	W
A	7	2.1	S	4.3	W	1.7	W	F	S	W	F	M	T	S		8.7	T	9.8	T
	8	7.7	M	7.3	T	5.3	T	S	M	T	S	T	F	S		7.4	W	14.4	F
Y	9	1.7	T	3.7	F	7.5	F	S	T	F	S	W	S	M		10.3	T	7.4	S
	10	7.2	W	4.2	S	2.1	S	M	W	S	M	T	S	T		15.2	F	6.5	S
	11	6.5	T	2.4	S	1.5	S	T	T	S	T	F	M	W		8.8	S	12.2	M
O	12	11.1	F	5.2	M	5.4	M	W	F	M	W	S	T	T		4.9	S	12.8	T
	13	5.9	S	10.3	T	5.5	T	T	S	T	T	S	W	F		9.6	M	9.8	W
F	14	2.3	S	5.8	W	5.4	W	F	S	W	F	M	T	S		8.0	T	8.6	T
	15	8.1	M	3.7	T	7.0	T	S	M	T	S	T	F	S		10.4	W	3.7	F
	16	6.2	T	4.2	F	8.3	F	M	T	F	S	W	S	M		10.8	T	5.2	S
M	17	10.1	W	4.5	S	5.5	S	T	W	S	M	T	S	T		15.3	F	7.2	S
	18	7.3	T	3.3	S	4.7	S	W	T	S	T	F	M	W		5.9	S	10.1	M
O	19	8.5	F	4.4	M	6.3	M	T	F	M	W	S	T	T		4.2	S	10.6	T
	20	5.5	S	10.9	T	5.7	T	F	S	T	T	S	W	F		12.7	M	8.6	W
N	21	5.7	S	11.1	W	4.9	W	S	S	W	F	M	T	S		8.5	T	8.4	T
	22	13.9	M	8.3	T	6.5	T	S	M	T	S	T	F	S		4.6	W	9.2	F
T	23	7.5	T	9.4	F	4.1	F	M	T	F	S	W	S	M		2.7	T	3.4	S
	24	10.8	W	3.1	S	2.1	S	T	W	S	M	T	S	T		7.0	F	3.7	S
H	25	3.4	T	3.3	S	1.2	S	T	T	S	T	F	M	W		2.0	S	7.4	M
	26	7.7	F	11.7	M	4.3	M	W	F	M	W	S	T	T		2.5	S	1.8	T
	27	2.3	S	9.0	T	2.6	T	T	S	T	T	S	W	6.6	F	8.8	M	4.9	W
	28	1.8	S	8.9	W	3.4	W	F	S	W	F	M	T	6.4	S	14.0	T	6.6	T
	29	6.8	M			4.5	T	S	M	T	S	T	F	4.0	S	4.4	W	7.4	F
	30	4.0	T			5.2	F	S	T	F	S	W	S	5.3	M	8.1	T	4.4	S
	31	3.9	W				S	M	W	S	M	T	S	4.4	T	6.3	F	2.5	S
									T		T	F		7.0	W			3.0	M
UMBER		734		667		704								127		682		694	
AXIMUM		13.9		11.7		11.3								7.0		15.3		14.4	
RITH-MEAN		2.7		2.1		1.5								2.5		3.1		3.0	

OTAL SAMPLES = 3608
OF POSSIBLE OBSERVATIONS = 41.2
RITHMETIC MEAN = 2.5
RITHMET[illegible]TANDARD DEVIATION = 2.0

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
DOES NOT MEET SUMMARY CRITERIA

08/25/99
AMP355RP

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AIR QUALITY SUBSYSTEM
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MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT

MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1991		FEB 1991		MAR 1991		APR 1991		MAY 1991		JUN 1991		JUL 1991		AUG 1991		SEP 1991		OCT 1991		NOV 1991		DEC 1991	
	1	3.1	T	14.9	F	1.9	F	5.4	M	4.5	W	4.8	S	4.3	M	3.4	T		S	11.5	T	10.0	F	2.5	S
	2	14.7	W	3.7	S	4.3	S	5.4	T	5.8	T	1.5	S	5.0	T	4.8	F		M	5.0	W	1.2	S	6.5	M
	3	13.1	T	3.7	S	2.3	S	2.5	W	4.0	F	4.5	M	5.5	W	2.0	S		T	3.7	T	2.5	S	6.8	T
	4	12.1	F	7.6	M	6.8	M	2.5	T	2.7	S	3.0	T	4.0	T	1.2	S		W	6.8	F	10.6	M	7.6	W
D	5	5.3	S	5.9	T	5.1	T	5.0	F	1.2	S	4.0	W	4.3	F	4.4	M		T	4.6	S	12.6	T	8.8	T
	6	3.6	S	8.5	W	8.5	W	2.4	S	5.1	M	4.8	T	3.9	S	4.3	T		F	2.5	S	9.0	W	6.9	F
A	7	9.4	M	8.5	T	6.2	T	.8	S	2.9	T	5.1	F	1.7	S	4.4	W		S	9.0	M	8.1	T	4.0	S
	8	13.4	T	8.3	F	4.6	F	3.2	M	4.3	W	4.0	S	4.0	M	4.8	T		S	8.0	T	10.0	F	3.5	S
Y	9	10.7	W	3.5	S	2.6	S	4.1	T	3.5	T	2.2	S	5.9	T	4.6	F		M	8.9	W	4.4	S	9.8	M
	10	15.0	T	3.1	S	1.8	S	3.7	W	3.9	F	4.8	M	4.5	W	4.8	S		T	10.2	T	3.0	S	6.8	T
	11	13.9	F	11.2	M	4.2	M	2.5	T	4.0	S	3.9	T	5.0	T	1.8	S	4.0	W	13.5	F	3.7	M	5.6	W
O	12	2.2	S	8.7	T	1.8	T	2.7	F	1.0	S	3.4	W	5.3	F	4.0	M	6.7	T	6.0	S	9.3	T	3.2	T
	13	5.7	S	10.7	W	8.9	W	4.0	S	4.0	M	3.7	T	4.5	S	4.0	T	5.3	F	2.6	S	9.3	W	8.3	F
F	14	12.8	M	10.7	T	5.6	T	1.0	S	2.9	T	3.7	F	2.0	S	5.0	W	3.7	S	6.0	M	6.1	T	6.9	S
	15	9.1	T	7.9	F	5.8	F	4.4	M	4.1	W	3.2	S	5.3	M	4.5	T	2.5	S	9.5	T	11.1	F	6.0	S
	16	12.0	W	4.6	S	2.8	S	5.0	T	5.0	T	1.7	S	4.5	T	5.5	F	5.1	M	6.0	W	3.7	S	9.5	M
M	17	12.4	T	3.2	S	1.5	S	5.0	W	5.6	F	4.3	M	4.4	W	2.7	S	5.7	T	4.0	T	1.2	S	14.6	T
	18	9.0	F	4.8	M	5.3	M	3.9	T	3.0	S	4.3	T	4.3	T	1.8	S	5.0	W	4.7	F	9.8	M	12.3	W
O	19	3.0	S	9.7	T	4.7	T	6.9	F	1.2	S	3.5	W	5.4	F	5.0	M	8.2	T	4.5	S	2.7	T	9.3	T
	20	3.1	S	7.3	W	6.0	W	2.4	S	4.5	M	3.4	T	4.0	S	4.5	T	6.3	F	3.3	S	7.0	W	11.8	F
N	21	8.2	M	9.6	T	5.1	T	1.2	S	5.3	T	4.5	F	1.7	S	4.5	W	4.8	S	9.2	M	7.0	T	4.6	S
	22	11.4	T	6.9	F	5.6	F	3.5	M	3.7	W	3.2	S	4.6	M	4.5	T	1.5	S	8.5	T	10.0	F	4.5	S
T	23	8.6	W	3.3	S	1.8	S	3.7	T	3.5	T	1.8	S	2.9	T	4.5	F	4.6	M	6.5	W	4.5	S	10.8	M
	24	9.7	T	2.7	S	1.9	S	5.0	W	3.5	F	3.2	M	4.6	W	5.5	S	5.5	T	3.0	T	3.0	S	7.5	T
H	25	12.9	F	10.7	M	5.5	M	4.1	T	2.4	S	4.9	T	3.7	T	1.8	S	8.8	W	4.0	F	14.0	M	3.9	W
	26	6.1	S	6.8	T	4.0	T	4.5	F	1.2	S	4.0	W	5.0	F	4.5	M	6.7	T	3.0	S	9.6	T	9.3	T
	27	4.2	S	9.8	W	4.7	W	3.5	S	1.2	M	4.9	T	4.5	S	5.0	T	5.0	F	.8	S	4.0	W	12.3	F
	28	7.7	M	8.5	T	5.7	T	1.2	S	5.5	T	3.0	F	2.4	S	2.5	W	3.0	S	7.0	M	1.3	T	7.0	S
	29	15.6	T			6.0	F	3.0	M	3.2	W	4.0	S	3.9	M	5.5	T	1.8	S	9.1	T	3.5	F	5.0	S
	30	15.2	W			2.5	S	2.0	T	4.8	T	1.7	S	3.7	T		F	4.8	M	8.8	W	4.5	S	10.3	M
	31	11.5	T			1.6	S			4.3	F			4.1	W		S			9.0	T			6.5	T
UMBER		683		639		707		687		703		686		708		666		447		709		653		708	
AXIMUM		15.6		14.9		8.9		6.9		5.8		5.1		5.9		5.5		8.8		13.5		14.0		14.6	
RITH-MEAN		3.7		2.7		1.6		1.3		1.5		1.7		2.0		1.8		2.0		2.4		2.5		3.0	

OTAL SAMPLES = 7996
OF POSSIBLE OBSERVATIONS = 91.3
RITHMETIC MEAN = 2.2
RITHMETIC STANDARD DEVIATION = 1.9

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1992		FEB 1992		MAR 1992		APR 1992		MAY 1992		JUN 1992		JUL 1992		AUG 1992		SEP 1992		OCT 1992		NOV 1992		DEC 1992	
	1	3.0	W	5.3	S	4.1	S	7.7	W	4.1	F	3.9	M	5.4	W	3.6	S	2.3	T	4.3	T	2.4	S	10.6	T
	2	12.1	T	3.7	S	5.8	M	6.6	T	3.9	S	3.3	T	4.9	T	2.6	S	4.0	W	4.4	F	3.8	M	10.5	W
	3	14.5	F	10.2	M	7.5	T	5.4	F	2.2	S	3.7	W	4.0	F	4.2	M	4.7	T	3.4	S	4.9	T	10.1	T
	4	4.4	S	11.1	T	7.4	W	5.4	S	6.0	M	5.0	T	3.4	S	5.7	T	4.2	F	1.5	S	8.9	W	9.6	F
D	5	2.9	S	10.8	W	7.7	T	2.5	S	7.6	T	3.7	F	1.2	S	3.3	W	1.9	S	6.7	M	7.8	T	5.4	S
	6	8.1	M	10.8	T	5.4	F	5.8	M	6.2	W	4.2	S	4.2	M	4.5	T	1.6	S	4.2	T	7.1	F	3.7	S
A	7	10.6	T	9.4	F	5.6	S	4.2	T	5.2	T	1.2	S	4.1	T	4.7	F	.9	M	7.9	W	7.3	S	12.6	M
	8	11.6	W	5.7	S	3.1	S	5.5	W	4.0	F	5.2	M	5.7	W	4.8	S	3.5	T	5.3	T	4.4	S	6.0	T
Y	9	8.0	T	3.0	S	5.7	M	5.2	T	3.9	S	3.9	T	3.7	T	2.7	S	3.4	W	7.3	F	8.5	M	6.4	W
	10	12.5	F	7.3	M	6.3	T	4.8	F	1.4	S	6.2	W	4.7	F	3.7	M	8.3	T	5.5	S	9.2	T	4.8	T
	11	4.1	S	6.3	T	6.5	W	4.3	S	3.6	M	2.9	T	2.6	S	4.1	T	5.3	F	3.9	S	7.3	W	9.5	F
O	12	3.2	S	5.4	W	7.5	T	1.8	S	4.1	T	4.7	F	1.6	S	3.7	W	4.2	S	8.4	M	9.8	T	3.4	S
	13	12.6	M	7.6	T	6.9	F	4.9	M	3.9	W	3.1	S	5.1	M	2.8	T	1.6	S	5.4	T	8.4	F	3.7	S
F	14	12.3	T	2.8	F	4.5	S	5.4	T	4.5	T	1.5	S	3.5	T	3.4	F	3.6	M	4.0	W	8.7	S	5.8	M
	15	7.5	W	4.9	S	1.5	S	5.2	W	3.9	F	7.2	M	3.7	W	2.5	S	4.1	T	4.0	T	5.8	S	9.7	T
	16	10.6	T	3.7	S	5.6	M	3.5	T	2.9	S	6.8	T	4.3	T	1.2	S	4.5	W	5.9	F	7.5	M	2.7	W
M	17	8.6	F	2.4	M	4.1	T	3.7	F	2.1	S	4.8	W	5.3	F	1.7	M	5.6	T	6.0	S	8.3	T	4.9	T
	18	8.3	S	1.7	T	4.1	W	2.3	S	3.7	M	4.9	T	2.4	S	4.2	T	4.4	F	4.2	S	6.3	W	9.8	F
O	19	5.0	S	2.2	W	7.3	T	1.1	S	4.8	T	5.5	F	1.8	S	2.5	W	6.4	S	11.1	M	9.2	T	4.4	S
	20	6.4	M	7.7	T	4.7	F	4.9	M	4.1	W	4.2	S	3.2	M	3.5	T	2.5	S	10.7	T	5.6	F	2.4	S
N	21	12.6	T	2.1	F	3.4	S	5.8	T	3.6	T	1.8	S	3.9	T	1.6	F	3.7	M	6.2	W	2.8	S	7.4	M
	22	13.1	W	5.6	S	2.0	S	5.4	W	4.6	F	4.4	M	4.2	W	1.5	S	9.3	T	5.8	T	3.6	S	10.6	T
T	23	12.8	T	3.3	S	4.5	M	6.2	T	4.3	S	5.7	T	4.1	T	1.0	S	5.8	W	11.1	F	8.2	M	10.5	W
	24	18.0	F	6.6	M	4.9	T	5.6	F	1.7	S	4.1	W	3.9	F	2.7	M	3.7	T	6.6	S	5.2	T	5.3	T
H	25	7.8	S	8.2	T	5.1	W	4.4	S	2.0	M	5.6	T	3.7	S	3.7	T	3.7	F	3.7	S	5.4	W	2.5	F
	26	6.9	S	8.1	W	4.1	T	3.9	S	3.2	T	5.5	F	2.9	S	6.6	W	6.0	S	13.3	M	3.7	T	3.9	S
	27	13.3	M	8.6	T	4.9	F	4.0	M	4.0	W	5.2	S	5.3	M	4.1	T	3.4	S	9.1	T	4.1	F	2.1	S
	28	5.3	T	10.3	F	3.1	S	3.8	T	4.4	T	2.5	S	4.1	T	3.5	F	8.2	M	7.6	W	3.4	S	2.1	M
	29	10.8	W	6.0	S	1.8	S	4.6	W	3.9	F	4.7	M	3.2	W	2.5	S	8.6	T	2.9	T	2.2	S	1.8	T
	30	16.3	T			4.0	M	3.9	T	5.2	S	3.9	T	3.5	T	1.7	S	3.9	W	5.7	F	10.9	M	5.3	W
	31	9.3	F			4.7	T			1.6	S			5.3	F	3.1	M			3.2	S			1.0	T
UMBER		709		663		705		665		707		685		686		699		685		711		687		711	
AXIMUM		18.0		11.1		7.7		7.7		7.6		7.2		5.7		6.6		9.3		13.3		10.9		12.6	
RITH-MEAN		3.2		2.5		2.2		2.1		1.8		1.9		1.9		1.6		1.9		2.6		2.4		2.5	

OTAL SAMPLES = 8313
OF POSSIBLE OBSERVATIONS = 94.6
RITHMETIC MEAN = 2.2
RITHMETIC STANDARD DEVIATION = 1.7

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

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SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1993		FEB 1993		MAR 1993		APR 1993		MAY 1993		JUN 1993	JUL 1993	AUG 1993	SEP 1993	OCT 1993	NOV 1993	DEC 1993
	1	1.8	F	7.4	M	5.0	M	6.1	T	3.3	S	T	T	S	W	F	M	W
	2	3.5	S	5.0	T	7.3	T	3.9	F	1.5	S	W	F	M	T	S	T	T
	3	2.5	S	10.2	W	8.1	W	3.9	S	4.9	M	T	S	T	F	S	W	F
	4	2.5	M	6.1	T	7.5	T	1.5	S	5.2	T	F	S	W	S	M	T	S
D	5	8.5	T	9.5	F	7.5	F	4.2	M	4.6	W	S	M	T	S	T	F	S
	6	10.7	W		S	3.4	S		T	7.4	T	S	T	F	M	W	S	M
A	7	6.7	T		S	3.1	S		W	4.0	F	M	W	S	T	T	S	T
	8	9.2	F	10.7	M	6.1	M	2.1	T	3.5	S	T	T	S	W	F	M	W
Y	9	4.6	S	9.4	T	3.4	T	3.2	F	1.8	S	W	F	M	T	S	T	T
	10	3.0	S	6.8	W	8.6	W	3.0	S	4.0	M	T	S	T	F	S	W	F
	11	10.6	M	8.6	T	4.5	T	1.6	S	2.9	T	F	S	W	S	M	T	S
O	12	11.5	T	7.4	F	1.7	F	3.6	M	2.8	W	S	M	T	S	T	F	S
	13	13.1	W	3.8	S	2.0	S	6.5	T	3.7	T	S	T	F	M	W	S	M
F	14	14.4	T	2.4	S	4.3	S	3.7	W	3.6	F	M	W	S	T	T	S	T
	15	9.7	F	2.4	M	11.1	M	3.8	T	1.9	S	T	T	S	W	F	M	W
	16	5.0	S	3.1	T	5.0	T	4.0	F	1.2	S	W	F	M	T	S	T	T
M	17	3.4	S	4.6	W	3.5	W	2.5	S	3.7	M	T	S	T	F	S	W	F
	18	10.6	M	8.4	T		T	1.1	S	3.8	T	F	S	W	S	M	T	S
O	19	6.8	T	5.9	F		F	3.5	M	3.5	W	S	M	T	S	T	F	S
	20	4.0	W	2.2	S		S	5.8	T	3.2	T	S	T	F	M	W	S	M
N	21	8.0	T	1.6	S		S	3.3	W	3.5	F	M	W	S	T	T	S	T
	22	5.7	F	4.8	M		M	3.4	T	3.7	S	T	T	S	W	F	M	W
T	23	3.5	S	7.0	T		T	4.3	F	1.3	S	W	F	M	T	S	T	T
	24	2.6	S	5.8	W		W	2.6	S	3.6	M	T	S	T	F	S	W	F
H	25	8.0	M	5.2	T	8.3	T	.8	S	3.1	T	F	S	W	S	M	T	S
	26	6.2	T	7.7	F	7.2	F	3.6	M	2.8	W	S	M	T	S	T	F	S
	27	5.7	W	2.7	S	5.4	S	3.5	T	3.4	T	S	T	F	M	W	S	M
	28	10.1	T	1.8	S	2.3	S	6.2	W	2.3	F	M	W	S	T	T	S	T
	29	3.6	F			5.5	M	4.9	T		S	T	T	S	W	F	M	W
	30	2.3	S			3.4	T	4.3	F		S	W	F	M	T	S	T	T
	31	1.8	S			6.2	W				M		S	T		S		F
NUMBER		710		587		528		611		624								
MAXIMUM		14.4		10.7		11.1		6.5		7.4								
ARITH-MEAN		2.7		2.4		2.1		1.5		1.5								

TOTAL SAMPLES = 3060
% OF POSSIBLE OBSERVATIONS = 34.9
ARITHMETIC MEAN = 2.0
ARITHMETIC STANDARD DEVIATION = 1.7

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
DOES NOT MEET SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
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SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1993	FEB 1993	MAR 1993	APR 1993	MAY 1993	JUN 1993	JUL 1993	AUG 1993	SEP 1993	OCT 1993	NOV 1993	DEC 1993
	1	F	M	M	T	S	3.0 T	2.8 T	1.6 S	5.6 W	5.2 F	4.6 M	6.3 W
	2	S	T	T	F	S	3.0 W	2.0 F	2.6 M	3.3 T	4.3 S	7.4 T	4.1 T
	3	S	W	W	S	M	2.8 T	1.8 S	3.0 T	5.9 F	3.1 S	3.6 W	6.3 F
	4	M	T	T	S	T	3.6 F	1.7 S	3.5 W	5.8 S	8.0 M	4.4 T	3.5 S
D	5	T	F	F	M	W	2.4 S	1.5 M	2.7 T	2.5 S	5.9 T	5.2 F	3.1 S
	6	W	S	S	T	T	1.7 S	2.5 T	3.0 F	2.5 M	4.8 W	4.9 S	6.3 M
A	7	T	S	S	W	F	2.0 M	1.9 W	1.8 S	3.4 T	2.3 T	3.9 S	4.1 T
	8	F	M	M	T	S	1.7 T	2.2 T	1.0 S	4.9 W	3.2 F	9.1 M	2.5 W
Y	9	S	T	T	F	S	3.0 W	3.4 F	2.8 M	4.6 T	3.5 S	9.2 T	6.0 T
	10	S	W	W	S	M	2.7 T	2.8 S	3.1 T	4.8 F	2.8 S	8.1 W	4.1 F
	11	M	T	T	S	T	2.1 F	1.7 S	3.1 W	3.7 S	4.9 M	8.3 T	1.7 S
O	12	T	F	F	M	W	2.9 S	1.6 M	2.1 T	.7 S	4.2 T	5.3 F	2.7 S
	13	W	S	S	T	T	1.5 S	2.1 T	3.4 F	3.1 M	3.2 W	2.2 S	3.7 M
F	14	T	S	S	W	F	2.8 M	1.9 W	1.9 S	3.7 T	4.0 T	2.4 S	5.4 T
	15	F	M	M	T	S	2.4 T	2.0 T	1.0 S	3.8 W	3.9 F	8.4 M	4.0 W
	16	S	T	T	F	S	2.0 W	2.3 F	2.7 M	4.4 T	2.8 S	7.1 T	5.9 T
M	17	S	W	W	S	M	2.3 T	2.7 S	3.3 T	6.2 F	1.4 S	9.9 W	6.0 F
	18	M	T	T	S	T	3.4 F	1.9 S	3.5 W	4.3 S	3.9 M	5.4 T	4.0 S
O	19	T	F	F	M	W	2.2 S	4.3 M	3.8 T	3.4 S	6.2 T	10.6 F	3.6 S
	20	W	S	S	T	T	1.7 S	T	2.8 F	3.0 M	7.0 W	6.5 S	5.6 M
N	21	T	S	S	W	F	2.3 M	W	2.0 S	3.8 T	4.9 T	6.3 S	6.1 T
	22	F	M	M	T	S	1.8 T	T	1.5 S	3.5 W	9.4 F	4.5 M	3.7 W
T	23	S	T	T	F	S	2.2 W	3.4 F	3.0 M	4.8 T	6.3 S	5.0 T	5.4 T
	24	S	W	W	S	M	2.4 T	3.3 S	1.6 T	6.8 F	3.2 S	5.7 W	5.1 F
H	25	M	T	T	S	T	4.6 F	.9 S	2.7 W	4.5 S	5.8 M	2.8 T	4.0 S
	26	T	F	F	M	W	4.3 S	2.3 M	3.1 T	2.8 S	5.4 T	3.9 F	3.5 S
	27	W	S	S	T	T	2.3 S	3.5 T	7.2 F	6.5 M	6.8 W	3.6 S	6.3 M
	28	T	S	S	W	3.8 F	1.5 M	2.7 W	3.4 S	7.7 T	5.0 T	3.1 S	8.1 T
	29	F		M	T	3.0 S	2.2 T	4.9 T	1.2 S	10.0 W	4.0 F	14.8 M	5.7 W
	30	S		T	F	1.9 S	2.3 W	3.5 F	3.5 M	9.9 T	5.9 S	6.6 T	5.0 T
	31	S		W		1.0 M		2.0 S	4.6 T		3.1 S		6.1 F
NUMBER						82	684	629	711	698	738	714	725
MAXIMUM						3.8	4.6	4.9	7.2	10.0	9.4	14.8	8.1
ARITH-MEAN						1.2	1.2	1.0	1.3	1.9	2.0	2.6	2.2

TOTAL SAMPLES = 4981
% OF POSSIBLE OBSERVATIONS = 56.9
ARITHMETIC MEAN = 1.7
ARITHMETIC STANDARD DEVIATION = 1.3

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5-PPM
DOES NOT MEET SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1994		FEB 1994		MAR 1994		APR 1994		MAY 1994		JUN 1994		JUL 1994		AUG 1994		SEP 1994		OCT 1994		NOV 1994		DEC 1994	
	1	6.7	S	5.4	T	5.4	T	3.5	F	2.0	S		W		F		M		T		S		T	7.1	T
	2	3.8	S	6.0	W	4.6	W	3.0	S	2.9	M		T		S		T		F		S	4.3	W	5.5	F
	3	5.6	M	7.1	T	3.3	T	2.9	S	5.5	T		F		S		W		S		M	4.3	T	2.2	S
	4	9.0	T	7.4	F	5.8	F	2.0	M	3.9	W		S		M		T		S		T	3.5	F	1.6	S
D	5	3.9	W	6.1	S	3.4	S	3.9	T	3.3	T		S		T		F		M		W	2.8	S	4.0	M
	6	5.9	T	3.8	S	2.2	S	2.8	W	3.4	F		M		W		S		T		T	1.7	S	5.2	T
A	7	5.4	F	7.0	M	3.7	M	3.9	T	2.3	S		T		T		S		W		F	4.5	M	4.6	W
	8	3.6	S	4.0	T	3.4	T	3.0	F	2.2	S		W		F		M		T		S	6.0	T	6.3	T
Y	9	3.5	S	9.4	W	6.3	W	1.7	S	5.1	M		T		S		T		F		S	7.6	W	4.7	F
	10	10.6	M	5.6	T	4.9	T	.9	S	3.9	T		F		S		W		S		M	6.0	T	3.2	S
	11	5.3	T	5.5	F	3.5	F	3.8	M	3.1	W		S		M		T		S		T	4.3	F	3.3	S
O	12	4.8	W	3.2	S	5.1	S	3.0	T	2.5	T		S		T		F		M		W	2.2	S	5.3	M
	13	5.1	T	2.0	S	2.6	S	3.5	W	2.9	F		M		W		S		T		T	1.9	S	5.1	T
F	14	5.0	F	4.3	M	6.7	M	2.2	T	2.1	S		T		T		S		W		F	5.6	M	3.7	W
	15	1.6	S	5.7	T	3.9	T	5.6	F	1.4	S		W		F		M		T		S	5.1	T	4.7	T
	16	1.4	S	4.1	W	4.5	W	4.2	S	2.6	M		T		S		T		F		S	3.9	W	5.9	F
M	17	3.2	M	5.2	T	3.3	T	3.1	S	2.7	T		F		S		W		S		M	3.2	T	4.2	S
	18	4.2	T	4.1	F	4.2	F	6.1	M	2.9	W		S		M		T		S		T	5.6	F	3.3	S
O	19	4.0	W	3.8	S	4.0	S	3.7	T	3.2	T		S		T		F		M		W	2.1	S	6.6	M
	20	4.1	T	1.4	S	1.9	S	4.4	W	3.6	F		M		W		S		T		T	1.8	S	6.5	T
N	21	5.2	F	1.9	M	4.8	M	4.1	T	2.6	S		T		T		S		W		F	4.7	M	7.0	W
	22	2.4	S	3.1	T	2.3	T	2.4	F	.9	S		W		F		M		T		S	4.9	T	7.5	T
T	23	2.8	S	6.2	W	5.1	W	2.6	S	3.2	M		T		S		T		F		S	4.9	W	4.5	F
	24	5.9	M	6.1	T	4.5	T	1.1	S	4.3	T		F		S		W		S		M	2.1	T	3.1	S
H	25	5.3	T	4.2	F	4.3	F	2.3	M	3.3	W		S		M		T		S		T	3.7	F	4.3	S
	26	6.3	W	2.8	S	2.5	S	2.2	T	2.4	T		S		T		F		M		W	2.0	S	2.4	M
	27	5.6	T	2.6	S	2.0	S	4.2	W	.8	F		M		W		S		T		T	1.5	S	6.1	T
	28	7.6	F	5.6	M	3.6	M	4.1	T		S		T		T		S		W		F	4.3	M	3.0	W
	29	3.6	S			2.3	T	3.6	F		S		W		F		M		T		S	7.5	T	3.4	T
	30	1.6	S			3.6	W	3.4	S		M		T		S		T		F		S	6.8	W	5.8	F
	31	6.4	M			1.7	T				T				S		W				M			3.7	S
NUMBER		724		660		734		699		627												681		744	
MAXIMUM		10.6		9.4		6.7		6.1		5.5												7.6		7.5	
ARITH-MEAN		2.1		2.0		1.5		1.4		1.4												1.7		2.1	

TOTAL SAMPLES = 4869
% OF POSSIBLE OBSERVATIONS = 55.6
ARITHMETIC MEAN = 1.7
ARITHMETIC STANDARD DEVIATION = 1.2

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
DOES NOT MEET SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
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SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
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LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

DAY	JAN 1995	FEB 1995	MAR 1995	APR 1995	MAY 1995	JUN 1995	JUL 1995	AUG 1995	SEP 1995	OCT 1995	NOV 1995	DEC 1995
1	3.3 S	6.9 W	5.8 W	2.3 S	7.1 M	7.5 T	2.6 S	5.9 T	5.6 F	2.1 S	12.1 W	5.5 F
2	2.9 M	4.7 T	4.0 T	1.0 S	5.7 T	4.5 F	1.3 S	3.5 W	3.3 S	5.5 M	16.3 T	2.8 S
3	7.3 T	6.3 F	5.4 F	4.0 M	6.6 W	2.7 S	2.0 M	5.2 T	1.5 S	4.4 T	11.5 F	1.4 S
4	7.2 W	7.4 S	2.1 S	4.2 T	8.7 T	1.1 S	1.3 T	5.2 F	1.0 M	2.4 W	3.6 S	3.9 M
5	5.6 T	3.3 S	1.6 S	2.6 W	10.7 F	4.5 M	3.7 W	6.8 S	2.9 T	3.4 T	2.1 S	3.3 T
6	10.1 F	5.8 M	3.4 M	2.8 T	4.3 S	5.5 T	2.5 T	1.9 S	4.5 W	5.0 F	8.3 M	6.4 W
7	2.5 S	4.1 T	4.6 T	2.9 F	1.5 S	7.2 W	3.3 F	3.4 M	3.1 T	3.4 S	12.0 T	5.5 T
8	2.0 S	4.8 W	4.1 W	2.1 S	7.9 M	3.2 T	1.7 S	7.2 T	3.7 F	1.6 S	6.7 W	4.0 F
9	2.6 M	3.7 T	2.4 T	1.1 S	3.6 T	4.0 F	1.1 S	8.3 W	3.4 S	5.0 M	8.3 T	2.9 S
10	2.5 T	3.8 F	1.6 F	4.3 M	6.4 W	2.2 S	2.5 M	6.2 T	2.3 S	6.4 T	6.0 F	2.4 S
11	4.8 W	1.4 S	3.4 S	3.1 T	8.9 T	2.1 S	2.7 T	2.9 F	6.0 M	3.8 W	2.6 S	2.4 M
12	4.6 T	1.2 S	2.7 S	3.9 W	7.5 F	6.4 M	2.4 W	2.0 S	5.8 T	2.4 T	3.1 S	2.3 T
13	4.1 F	6.9 M	4.7 M	3.1 T	2.7 S	4.7 T	3.1 T	.9 S	3.9 W	5.9 F	10.9 M	5.0 W
14	2.4 S	4.8 T	3.6 T	1.7 F	2.9 S	4.6 W	3.1 F	5.0 M	6.1 T	5.1 S	6.9 T	3.8 T
15	2.4 S	6.3 W	2.4 W	1.6 S	3.4 M	4.5 T	2.5 S	5.8 T	7.6 F	2.4 S	12.1 W	3.6 F
16	3.6 M	7.5 T	2.7 T	1.1 S	6.6 T	6.0 F	1.8 S	2.3 W	2.5 S	2.7 M	7.3 T	3.0 S
17	5.8 T	5.3 F	4.6 F	2.1 M	5.0 W	2.0 S	2.9 M	3.7 T	1.8 S	4.2 T	21.5 F	1.9 S
18	6.4 W	2.4 S	2.9 S	1.9 T	3.9 T	1.0 S	4.6 T	3.8 F	8.2 M	2.9 W	3.9 S	5.4 M
19	6.7 T	1.4 S	1.0 S	1.7 W	6.8 F	3.1 M	3.1 W	2.4 S	2.9 T	5.3 T	2.5 S	5.3 T
20	5.3 F	6.9 M	3.7 M	2.7 T	2.8 S	3.5 T	2.7 T	14.7 S	2.9 W	8.2 F	21.4 M	4.5 W
21	3.9 S	6.6 T	2.5 T	2.8 F	1.3 S	5.3 W	2.9 F	4.4 M	2.5 T	1.7 S	8.2 T	4.1 T
22	2.7 S	7.7 W	2.3 W	S	5.4 M	3.0 T	2.2 S	5.4 T	4.3 F	1.5 S	5.7 W	4.3 F
23	6.1 M	7.6 T	3.0 T	S	4.0 T	6.6 F	1.0 S	4.5 W	3.3 S	5.9 M	2.5 T	2.9 S
24	4.7 T	7.3 F	2.3 F	M	4.4 W	5.5 S	4.3 M	4.7 T	1.4 S	4.3 T	4.4 F	2.1 S
25	4.6 W	4.1 S	3.0 S	5.0 T	3.6 T	3.0 S	5.5 T	3.9 F	3.3 M	5.9 W	2.3 S	.9 M
26	5.8 T	2.7 S	2.0 S	5.2 W	4.4 F	4.2 M	4.1 W	2.8 S	3.3 T	3.4 T	1.2 S	2.5 T
27	4.6 F	3.1 M	3.7 M	6.6 T	1.7 S	2.3 T	4.5 T	2.1 S	4.5 W	5.4 F	4.0 M	3.2 W
28	3.1 S	2.9 T	3.1 T	5.2 F	1.0 S	2.8 W	5.5 F	5.5 M	3.0 T	5.1 S	4.6 T	3.5 T
29	1.9 S		3.4 W	2.4 S	.8 M	3.2 T	2.3 S	6.2 T	3.7 F	3.2 S	3.2 W	5.2 F
30	6.9 M		4.1 T	1.4 S	5.8 T	3.6 F	1.3 S	3.6 W	6.2 S	14.3 M	4.8 T	7.8 S
31	7.1 T		6.4 F		5.3 W		5.8 M	3.9 T		10.2 T		3.5 S
NUMBER	743	663	743	636	744	717	740	740	713	739	715	735
MAXIMUM	10.1	7.7	6.4	6.6	10.7	7.5	5.8	14.7	8.2	14.3	21.5	7.8
ARITH-MEAN	1.9	1.8	1.3	1.2	1.6	1.4	1.2	1.5	1.5	1.7	2.1	1.6

TOTAL SAMPLES = 8628
% OF POSSIBLE OBSERVATIONS = 98.5
ARITHMETIC MEAN = 1.6
ARITHMETIC STANDARD DEVIATION = 1.3

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

PAGE 129
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
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DAY	JAN 1996		FEB 1996		MAR 1996		APR 1996		MAY 1996		JUN 1996		JUL 1996		AUG 1996		SEP 1996		OCT 1996		NOV 1996		DEC 1996	
1	2.9	M	4.9	T	3.9	F	2.5	M	2.3	W	2.1	S	2.0	M	3.1	T	1.6	S	5.2	T	5.0	F	.8	S
2	5.1	T	3.1	F	2.3	S	1.7	T	2.3	T	1.2	S	1.5	T	2.7	F	1.8	M	5.2	W	5.6	S	3.3	M
3	5.2	W	3.0	S	1.5	S	2.4	W	2.2	F	2.0	M	4.2	W	1.5	S	3.2	T	8.7	T	2.5	S	2.6	T
4	4.5	T	2.0	S	3.4	M	2.3	T	2.5	S	1.6	T	1.0	T	1.2	S	2.4	W	4.4	F	5.4	M	3.0	W
5	5.2	F	5.0	M	3.5	T	4.4	F	1.2	S	1.6	W	2.8	F	2.7	M	1.2	T	3.7	S	4.1	T	6.1	T
6	3.3	S	8.0	T	4.7	W	3.1	S	2.1	M	2.0	T	2.1	S	2.0	T	5.3	F	2.5	S	6.1	W	5.1	F
7	2.8	S	8.8	W	3.8	T	2.2	S	1.5	T	3.0	F	1.6	S	3.1	W	4.0	S	4.7	M	4.7	T	1.4	S
8	6.2	M	4.7	T	4.4	F	3.3	M	1.6	W	2.7	S	2.9	M	3.9	T	1.6	S	9.5	T	4.3	F	.9	S
9	8.9	T	7.0	F	4.0	S	2.5	T	1.6	T	1.4	S	2.4	T	3.7	F	4.0	M	11.5	W	9.8	S	3.9	M
10	4.9	W	2.8	S	2.3	S	2.1	W	3.0	F	1.4	M	2.4	W	2.4	S	4.6	T	4.9	T	5.9	S	1.8	T
11	7.5	T	2.3	S	3.3	M	2.3	T	2.6	S	1.7	T	1.9	T	1.2	S	3.1	W	5.9	F	3.7	M	3.7	W
12	7.3	F	9.0	M	2.0	T	2.0	F	1.7	S	1.5	W	2.9	F	3.1	M	2.8	T	3.1	S	8.8	T	4.0	T
13	3.4	S	4.9	T	2.4	W	2.6	S	2.0	M	2.2	T	3.7	S	2.4	T	4.2	F	2.3	S	9.3	W	3.4	F
14	3.7	S	5.7	W	3.1	T	1.3	S	1.7	T	2.2	F	1.4	S	2.2	W	2.9	S	3.0	M	3.5	T	2.9	S
15	6.3	M	3.3	T	3.0	F	3.2	M	2.4	W	1.7	S	2.3	M	2.7	T	1.2	S	2.5	T	4.2	F	2.3	S
16	5.7	T	5.7	F	2.6	S	3.0	T	2.1	T	1.5	S	2.9	T	4.2	F	1.4	M	3.2	W	2.0	S	3.3	M
17	3.5	W	2.7	S	1.5	S	1.9	W	2.1	F	1.0	M	2.2	W	1.4	S	2.5	T	5.6	T	1.4	S	3.7	T
18	2.6	T	1.7	S	3.5	M	1.4	T	1.5	S	1.2	T	1.5	T	1.1	S	3.1	W	2.4	F	4.1	M	4.0	W
19	4.1	F	2.0	M	3.5	T	2.8	F	.8	S	2.1	W	3.2	F	3.0	M	2.6	T	2.5	S	3.2	T	6.9	T
20	1.9	S	3.3	T	2.7	W	2.6	S	1.9	M	1.7	T	2.6	S	2.1	T	4.3	F	1.8	S	3.7	W	4.5	F
21	1.2	S	2.9	W	4.0	T	1.4	S	2.4	T	2.6	F	1.4	S	2.0	W	2.2	S	4.5	M	4.4	T	4.4	S
22	5.0	M	2.5	T	4.3	F	4.7	M	1.4	W	2.4	S	1.8	M	2.2	T	1.3	S	4.2	T	6.8	F	2.4	S
23	6.5	T	3.1	F	1.8	S	3.0	T	1.3	T	1.1	S	2.3	T	3.9	F	4.0	M	3.2	W	3.6	S	5.9	M
24	3.0	W	1.5	S	1.0	S	2.0	W	2.3	F	2.7	M	3.7	W	3.1	S	3.3	T	4.0	T	2.8	S	4.6	T
25	4.3	T	1.5	S	2.9	M	3.1	T	2.2	S	1.9	T	2.3	T	1.9	S	2.6	W	1.5	F	3.5	M	1.8	W
26	4.5	F	2.2	M	3.2	T	2.4	F	1.0	S	2.0	W	3.4	F	4.8	M	2.5	T	2.7	S	4.9	T	4.5	T
27	1.5	S	4.6	T	3.2	W	1.6	S	1.4	M	1.3	T	1.5	S	2.2	T	3.4	F	1.7	S	3.7	W	4.5	F
28	1.2	S	3.7	W	2.8	T	1.0	S	1.0	T	2.6	F	1.1	S	2.7	W	4.6	S	6.8	M	1.2	T	2.2	S
29	4.0	M	5.4	T	2.5	F	2.4	M	1.2	W	3.2	S	1.9	M	3.3	T	3.4	S	3.3	T	3.5	F	.8	S
30	3.1	T			2.5	S	2.8	T	1.6	T	2.5	S	1.9	T	5.6	F	5.6	M	3.9	W	1.9	S	2.0	M
31	3.4	W			1.1	S			2.8	F			1.9	W	2.1	S			3.2	T			1.6	T
NUMBER	740		692		737		715		738		715		736		737		715		734		717		737	
MAXIMUM	8.9		9.0		4.7		4.7		3.0		3.2		4.2		5.6		5.6		11.5		9.8		6.9	
ARITH-MEAN	1.8		1.5		1.1		1.1		.8		.8		1.1		1.2		1.2		1.6		1.8		1.4	

TOTAL SAMPLES = 8713
% OF POSSIBLE OBSERVATIONS = 99.2
ARITHMETIC MEAN = 1.3
ARITHMETIC STANDARD DEVIATION = 1.0

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

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16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1997		FEB 1997		MAR 1997		APR 1997		MAY 1997		JUN 1997		JUL 1997		AUG 1997		SEP 1997		OCT 1997		NOV 1997		DEC 1997	
	1	1.4	W	3.3	S	1.5	S	1.9	T	1.3	T	1.1	S	4.7	T	5.2	F	1.5	M	2.6	W		S	3.8	M
	2	3.4	T	2.6	S	1.2	S	2.3	W	3.2	F	1.8	M	3.0	W	3.5	S	3.6	T		T		S	5.8	T
	3	3.1	F	4.2	M	3.2	M	2.6	T	2.1	S	1.8	T	3.2	T	2.1	S	3.9	W		F		M	5.5	W
	4	4.2	S	4.8	T	3.5	T	1.1	F	1.3	S	3.6	W	1.0	F	3.1	M	8.5	T		S		T	7.1	T
D	5	3.4	S	4.5	W	2.9	W	2.3	S	3.8	M	2.1	T	2.6	S	3.8	T	6.2	F		S		W	5.6	F
	6	5.7	M	3.8	T	2.7	T	1.9	S	2.4	T	4.0	F	.9	S	2.8	W	3.3	S		M		T	3.4	S
A	7	5.2	T	4.1	F	3.9	F	2.9	M	2.0	W	2.6	S	2.8	M		T	2.8	S	4.5	T	5.1	F	3.8	S
	8	6.7	W	2.5	S	2.6	S	2.2	T	3.3	T	.8	S	8.0	T		F	5.4	M	6.5	W	3.1	S	2.6	M
Y	9	5.4	T	2.1	S	1.5	S	2.2	W	4.1	F	3.3	M	8.6	W		S	4.3	T	5.9	T	3.2	S	3.6	T
	10	7.0	F	3.2	M	2.9	M	2.3	T	3.7	S	4.4	T	1.8	T		S	6.8	W	4.1	F	5.6	M	5.8	W
	11	1.5	S	4.2	T	3.3	T	2.4	F	1.5	S	9.7	W	2.4	F		M	4.7	T	2.0	S	4.4	T	4.7	T
O	12	1.5	S	2.3	W	4.7	W	2.9	S	3.0	M	4.0	T	4.4	S		T	5.5	F	2.2	S	7.2	W	5.2	F
	13	4.3	M	3.0	T	3.9	T	.9	S	2.3	T	5.1	F	1.0	S		W	3.7	S	8.4	M	7.3	T	2.2	S
F	14	7.1	T	6.0	F	2.4	F	2.7	M	2.5	W	3.5	S	4.9	M		T	2.0	S	11.2	T	4.9	F	2.6	S
	15	4.2	W	5.0	S	2.5	S	4.7	T	3.0	T	1.1	S	3.6	T		F	4.2	M	8.9	W	3.6	S	4.9	M
	16	5.6	T	3.8	S	2.6	S	2.3	W	2.2	F	3.7	M	5.9	W		S	3.7	T	7.7	T	3.3	S	7.2	T
M	17	4.5	F	2.0	M	4.0	M	2.6	T	2.0	S	4.9	T	6.1	T		S	3.4	W	8.9	F	3.5	M	3.7	W
	18	9.4	S	4.6	T	2.1	T	3.0	F	.7	S	4.1	W	2.2	F		M	5.0	T	7.0	S	5.5	T	3.1	T
O	19	3.6	S	2.0	W	3.9	W	2.3	S	2.7	M	2.7	T	3.4	S		T	5.2	F	2.4	S	5.0	W	5.2	F
	20	4.1	M	4.6	T	2.5	T	.9	S	1.9	T	2.4	F	3.6	S		W	4.2	S	6.9	M	7.3	T	2.7	S
N	21	5.2	T	6.2	F	3.3	F	2.0	M	1.8	W	1.3	S	8.8	M		T	3.0	S	10.4	T	3.9	F	1.9	S
	22	3.4	W	3.0	S	3.2	S	1.9	T	2.8	T	.8	S	2.5	T	4.1	F	5.1	M	10.6	W	2.9	S	5.6	M
T	23	6.1	T	1.7	S	2.4	S	1.2	W	2.1	F	2.4	M	2.8	W	2.5	S	6.0	T	2.8	T	1.7	S	3.8	T
	24	5.5	F	5.7	M	1.4	M	1.3	T	.9	S	3.7	T	4.4	T	3.4	S	7.1	W	15.6	F	3.4	M	3.1	W
H	25	3.1	S	7.6	T	3.4	T	2.5	F	1.4	S	7.7	W	3.3	F	6.2	M	3.2	T	3.5	S	3.7	T	2.0	T
	26	2.2	S	4.9	W	2.7	W	3.0	S	1.3	M	5.1	T	1.8	S	6.3	T	4.0	F	2.5	S	2.7	W	3.9	F
	27	5.6	M	2.3	T	1.3	T	1.4	S	2.2	T	12.7	F	1.5	S	5.3	W		S	12.5	M	2.1	T	4.3	S
	28	4.4	T	3.5	F	2.4	F	1.8	M	2.6	W	4.2	S	3.7	M	3.1	T		S	20.3	T	4.1	F	3.3	S
	29	4.0	W			1.9	S	1.5	T	2.5	T	2.7	S	4.1	T	4.1	F	3.3	M	10.5	W	3.7	S	4.0	M
	30	5.3	T			1.2	S	3.0	W	2.8	F	3.7	M	4.9	W	3.5	S	7.5	T	13.4	T	2.3	S	7.2	T
	31	10.3	F			1.2	M			1.7	S			4.9	T	2.4	S			5.6	F			5.5	W
NUMBER		738		666		740		715		741		717		739		356		650		603		571		742	
MAXIMUM		10.3		7.6		4.7		4.7		4.1		12.7		8.8		6.3		8.5		20.3		7.3		7.2	
ARITH-MEAN		1.9		1.6		1.1		1.0		1.1		1.2		1.2		1.5		1.8		2.3		1.8		2.0	

TOTAL SAMPLES = 7978
% OF POSSIBLE OBSERVATIONS = 91.1
ARITHMETIC MEAN = 1.5
ARITHMETIC STANDARD DEVIATION = 1.2

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
MEETS SUMMARY CRITERIA

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
1-HOUR MAXIMUM
STATE 16 IDAHO

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16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

	JAN 1998		FEB 1998		MAR 1998		APR 1998		MAY 1998		JUN 1998		JUL 1998		AUG 1998		SEP 1998		OCT 1998		NOV 1998		DEC 1998	
1	3.0	T	2.3	S	1.3	S	3.5	W	2.3	F	2.1	M	1.4	W	1.6	S	3.4	T	3.4	T	1.9	S	3.2	T
2	3.0	F	3.3	M	2.7	M	2.2	T	1.7	S	3.8	T	1.5	T	1.2	S	4.8	W	2.8	F	3.5	M	3.5	W
3	1.4	S	2.1	T	1.9	T	4.1	F	.8	S	1.3	W	1.5	F	1.6	M	4.4	T	2.1	S	9.6	T	2.4	T
4	1.9	S	5.5	W	2.3	W	1.9	S	2.2	M	2.4	T	1.0	S	3.9	T	5.5	F	1.2	S	2.7	W	3.7	F
D 5	5.5	M	7.7	T	3.5	T	.9	S	2.2	T	1.8	F	1.0	S	3.0	W	3.0	S	2.6	M	6.2	T	2.3	S
6	4.7	T	3.6	F	1.9	F	3.0	M	2.5	W	2.1	S	1.5	M	1.8	T	1.3	S	6.6	T	3.2	F	1.8	S
A 7	5.7	W	1.0	S	2.1	S	2.1	T	2.0	T	1.0	S	1.7	T	2.8	F	1.4	M	3.3	W	2.7	S	2.4	M
8	3.6	T	1.7	S	1.4	S	2.1	W	1.3	F	2.0	M	2.7	W	2.7	S	2.5	T	4.2	T	2.3	S	4.4	T
Y 9	4.8	F	3.0	M	3.5	M	2.1	T	2.2	S	2.0	T	2.3	T	2.7	S	2.4	W	4.3	F	2.8	M	3.4	W
10	4.1	S	4.1	T	4.2	T	2.4	F	1.1	S	6.5	W	2.1	F	2.0	M	3.1	T	4.2	S	3.2	T	4.4	T
11	3.9	S	3.6	W	3.6	W	2.6	S	1.9	M	1.9	T	3.3	S	2.7	T	2.4	F	2.3	S	3.1	W	3.6	F
O 12	5.3	M	2.7	T	3.4	T	.8	S	1.8	T	2.9	F	1.0	S	1.9	W	2.2	S	5.9	M	5.8	T	5.1	S
13	4.2	T	2.3	F	3.2	F	2.4	M	1.7	W	1.7	S	1.9	M	2.4	T	1.8	S	5.4	T	5.0	F	2.6	S
F 14	2.3	W	2.8	S	3.0	S	1.7	T	2.0	T	1.0	S	1.8	T	2.7	F	2.9	M	4.7	W	6.0	S	2.5	M
15	4.0	T	1.1	S	1.9	S	4.1	W	2.1	F	2.2	M	2.2	W	2.3	S	4.2	T	2.6	T	4.6	S	4.6	T
16	3.8	F	2.1	M	2.8	M	3.0	T	2.0	S	1.3	T	1.7	T	1.2	S	2.8	W	1.9	F	4.3	M	4.3	W
M 17	2.7	S	2.8	T	2.4	T	3.7	F	1.0	S	1.6	W	4.7	F	1.1	M	2.7	T	2.9	S	3.0	T	7.6	T
18	3.4	S	5.2	W	2.2	W	2.2	S	2.4	M	2.5	T	2.8	S	2.0	T	2.3	F	3.2	S	4.0	W	3.0	F
O 19	3.1	M	2.4	T	2.2	T	1.3	S	5.2	T	2.1	F	1.0	S	2.4	W	2.3	S	5.5	M	2.7	T	2.6	S
20	3.3	T	2.6	F	3.2	F	2.6	M	1.6	W	2.1	S	1.6	M	2.2	T	1.4	S	6.6	T	2.6	F	1.7	S
N 21	6.9	W	2.6	S	2.7	S	2.4	T	1.9	T	1.2	S	2.5	T	5.2	F	2.2	M	6.3	W	2.7	S	3.6	M
22	4.5	T	2.2	S	1.9	S	2.1	W	3.6	F	2.0	M	1.9	W	3.1	S	3.1	T	3.4	T	1.8	S	3.2	T
T 23	2.4	F	2.4	M	2.5	M	3.3	T	1.9	S	1.7	T	2.1	T	2.3	S	2.9	W	3.8	F	1.4	M	4.1	W
24	4.6	S	1.7	T	3.4	T	2.0	F	1.3	S	2.0	W	2.8	F	2.1	M	7.0	T	1.8	S	3.0	T	2.7	T
H 25	2.2	S	2.6	W	2.0	W	1.0	S	.8	M	2.7	T	3.4	S	2.7	T	2.6	F	.8	S	1.7	W	2.4	F
26	3.8	M	2.6	T	2.3	T	.8	S	3.3	T	1.7	F	1.0	S	2.4	W	3.5	S	4.6	M	.8	T	4.0	S
27	3.7	T	3.7	F	2.9	F	2.0	M	1.9	W	2.4	S	2.3	M	2.3	T	2.0	S	4.3	T	2.7	F	1.7	S
28	4.7	W	2.6	S	2.0	S	6.7	T	2.2	T	3.1	S	3.0	T	5.0	F	3.7	M	2.6	W	2.1	S	4.5	M
29	4.7	T			.9	S	4.9	W	1.6	F	2.3	M	2.6	W	3.6	S	3.8	T	2.9	T	2.1	S	4.5	T
30	4.4	F			2.5	M	2.9	T	2.2	S	1.8	T	2.2	T	1.8	S	3.7	W	5.1	F	2.1	M	6.1	W
31	3.2	S			2.3	T			1.2	S			1.8	F	3.3	M			2.9	S			3.0	T
NUMBER	739		668		739		716		741		716		741		739		716		742		717		742	
MAXIMUM	6.9		7.7		4.2		6.7		5.2		6.5		4.7		5.2		7.0		6.6		9.6		7.6	
ARITH-MEAN	1.6		1.2		1.2		1.1		1.0		1.0		.9		1.1		1.4		1.5		1.4		1.6	

TOTAL SAMPLES = 8716
% OF POSSIBLE OBSERVATIONS = 99.5
ARITHMETIC MEAN = 1.3
ARITHMETIC STANDARD DEVIATION = .8

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 35.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 35.5 PPM
MEETS SUMMARY CRITERIA

Air Quality Monitoring Data
Boise Maximum 8-hour Running Averages

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

	JAN 1977	FEB 1977	MAR 1977	APR 1977	MAY 1977	JUN 1977	JUL 1977	AUG 1977	SEP 1977	OCT 1977	NOV 1977	DEC 1977
1	3.7 S	8.9 T	5.2 T	3.3 F	S	5.2 W	7.4 F	M	3.3 T	6.9 S	2.6 T	7.9 T
2	4.9 S	5.8 W	4.5 W	3.0 S	M	2.8 T	3.2 S	T	7.3 F	6.8 S	7.5 W	10.5 * F
3	10.1 * M	12.4 * T	6.7 T	1.9 S	2.0 T	3.5 F	.9 S	W	7.1 S	10.9 * M	10.4 * T	10.9 * S
4	10.0 * T	11.3 * F	5.5 F	4.6 M	3.5 W	2.2 S	.9 M	T	1.4 S	6.4 T	9.5 * F	10.0 * S
D 5	8.3 W	7.6 S	5.2 S	2.8 T	4.0 T	3.1 S	4.6 T	F	2.1 M	10.9 * W	10.0 * S	9.9 * M
6	13.0 * T		3.0 S	4.3 W	3.1 F	5.3 M	4.9 W	S	6.4 T	5.5 T	8.4 S	6.2 T
A 7	12.8 * F	11.4 * M	1.2 M	2.2 T	1.3 S	3.2 T	7.1 T	S	8.3 W	6.7 F	6.1 M	7.4 W
8	9.4 S	10.7 * T	1.9 T	4.2 F	1.9 S	2.4 W	7.9 F	M	2.8 T	6.6 S	6.4 T	8.1 T
Y 9	5.9 S	11.2 * W	4.0 W	3.8 S	2.9 M	1.9 T	5.4 S	T	3.3 F	3.5 S	5.2 W	9.7 * F
10	14.9 * M	10.2 * T	3.2 T	2.5 S	.9 T	6.3 F	4.1 S	W	4.0 S	4.0 M	11.4 * T	11.9 * S
11	12.4 * T	11.9 * F	2.6 F	3.2 M	1.0 W	3.8 S	5.8 M	T	S	4.7 T	10.2 * F	12.3 * S
O 12	13.4 * W	11.5 * S	3.8 S	4.3 T	2.1 T	2.3 S	6.6 T	5.9 F	3.4 M	4.4 W	10.5 * S	8.4 M
13	12.9 * T	3.9 S	4.5 S	5.8 W	3.8 F	2.3 M	5.3 W	5.3 S	4.3 T	11.9 * T	6.5 S	2.8 T
F 14	18.0 * F	9.3 M	3.6 M	4.0 T	2.4 S	3.0 T	4.1 T	4.6 S	6.5 W	11.1 * F	4.6 M	4.0 W
15	13.5 * S	7.1 T	2.1 T	3.8 F	1.7 S	2.4 W	10.1 * F	7.4 M	5.7 T	5.6 S	10.1 * T	10.7 * T
16	7.5 S		3.3 W	3.3 S	M	2.0 T	8.5 S	8.0 T	10.7 * F	4.2 S	6.9 W	6.4 F
M 17	12.7 * M	6.1 T	4.7 T	2.9 S	3.8 T	3.0 F	5.0 S	11.2 * W	6.7 S	8.2 M	11.4 * T	4.9 S
18	12.4 * T	9.3 F	5.7 F	3.8 M	4.6 W	1.8 S	10.4 * M	6.0 T	2.2 S	15.9 * T	10.8 * F	4.9 S
O 19	8.9 W	7.7 S	3.6 S	2.8 T	3.5 T	1.0 S	T	10.7 * F	4.3 M	7.7 W	8.2 S	12.0 * M
20	7.9 T	8.1 S	4.1 S	2.7 W	3.6 F	.8 M	W	5.8 S	8.0 T	5.6 T	4.6 S	7.1 T
N 21	11.6 * F	3.1 M	2.9 M	2.9 T	2.9 S	.5 T	T	3.4 S	7.3 W	7.8 F	2.5 M	10.5 * W
22	6.4 S	5.5 T	3.4 T	3.1 F	.6 S	W	F	10.0 * M	3.2 T	8.2 S	16.5 * T	13.7 * T
T 23	5.1 S	2.0 W	2.7 W	1.5 S	1.7 M	T	S	8.4 T	2.8 F	2.1 S	9.3 W	18.4 * F
24	7.0 M	5.4 T	4.2 T	.8 S	4.0 T	F	S	3.0 W	1.8 S	2.5 M	2.5 T	10.2 * S
H 25	11.3 * T	7.1 F	4.3 F	1.0 M	3.0 W	S	M	4.8 T	1.8 S	1.5 T	9.3 F	4.4 S
26	11.3 * W	3.7 S	4.1 S	.3 T	2.4 T	S	T	4.7 F	5.3 M	6.5 W	7.1 S	4.8 M
27	10.2 * T	3.6 S	2.7 S	3.2 W	3.9 F	M	W	2.4 S	5.9 T	8.2 T	4.7 S	9.9 * T
28	10.4 * F	2.0 M	4.2 M	3.4 T	2.4 S	4.3 T	T	1.5 S	4.3 W	11.3 * F	10.7 * M	10.2 * W
29	7.8 S		3.6 T	5.1 F	.8 S	1.7 W	F	5.6 M	8.2 T	9.9 * S	8.3 T	8.5 T
30	4.3 S		2.7 W	3.6 S	.7 M	5.4 T	S	2.6 T	6.9 F	1.0 S	10.7 * W	15.4 * F
31	12.5 * M		4.6 T		2.5 T		S	3.5 W		5.9 M		8.7 S
NUMBER	692	560	744	655	622	511	423	466	685	722	720	738
MAXIMUM	18.0	12.4	6.7	5.8	4.6	6.3	10.4	11.2	10.7	15.9	16.5	18.4

TOTAL SAMPLES = 7538
% OF POSSIBLE OBSERVATIONS = 86.1

348 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
348 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
2 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
72 PRIMARY NON-OVERLAPPING VIOLATIONS
72 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1978	FEB 1978	MAR 1978	APR 1978	MAY 1978	JUN 1978	JUL 1978	AUG 1978	SEP 1978	OCT 1978	NOV 1978	DEC 1978
	1	2.2 S	7.4 W	5.4 W	2.4 S	2.9 M	4.0 T	.7 S	T	6.8 F	6.7 S	10.9 * W	12.7 * F
	2	3.0 M	4.8 T	2.2 T	1.0 S	2.6 T	2.0 F	.6 S	5.6 W	5.6 S	3.9 M	14.0 * T	10.6 * S
	3	13.5 * T	4.6 F	.7 F	2.1 M	1.8 W	1.6 S	2.5 M	5.5 T	3.3 S	7.8 T	11.9 * F	7.8 S
	4	15.1 * W	6.9 S	2.5 S	3.1 T	1.9 T	1.9 S	1.1 T	5.9 F	1.7 M	6.6 W	8.5 S	10.0 * M
D	5	5.3 T	7.0 S	3.0 S	2.0 W	1.3 F	3.9 M	3.1 W	5.2 S	1.4 T	9.2 T	8.5 S	9.1 T
	6	12.6 * F	2.6 M	6.2 M	5.8 T	.8 S	5.2 T	1.6 T	2.6 S	9.9 * W	10.2 * F	12.6 * M	8.2 W
A	7	8.4 S	.7 T	3.6 T	7.9 F	.7 S	5.5 W	4.1 F	M	9.6 * T	7.3 S	13.8 * T	10.8 * T
	8	5.6 S	3.0 W	6.8 W	5.7 S	1.6 M	4.8 T	1.3 S	T	3.9 F	7.6 S	14.2 * W	12.7 * F
Y	9	13.9 * M	2.0 T	5.6 T	2.3 S	1.0 T	4.7 F	.3 S	W	2.0 S	6.5 M	11.6 * T	9.8 * S
	10	15.9 * T	8.6 F	7.2 F	5.0 M	2.3 W	3.6 S	3.8 M	T	1.8 S	6.9 T	10.3 * F	1.6 S
	11	12.2 * W	6.6 S	4.0 S	2.2 T	2.6 T	1.0 S	2.7 T	F	5.7 M	4.5 W	9.6 * S	12.1 * M
O	12	7.9 T	1.4 S	2.1 S	3.4 W	1.5 F	5.0 M	2.8 W	S	6.0 T	5.0 T	4.2 S	10.9 * T
	13	10.3 * F	12.8 * M	4.9 M	2.6 T	1.7 S	3.8 T	3.0 T	S	3.3 W	5.8 F	9.4 M	7.4 W
F	14	9.7 * S	8.9 T	3.7 T	3.1 F	.9 S	3.6 W	4.4 F	4.5 M	5.0 T	5.9 S	5.7 T	13.1 * T
	15	7.5 S	7.1 W	5.3 W	1.8 S	2.3 M	2.9 T	1.6 S	2.3 T	6.9 F	7.5 S	7.6 W	16.0 * F
	16	1.4 M	6.8 T	5.0 T	1.0 S	1.8 T	4.5 F	.5 S	1.9 W	4.2 S	6.1 M	10.2 * T	13.6 * S
M	17	6.9 T	6.6 F	5.6 F	2.7 M	1.3 W	2.8 S	2.5 M	T	4.3 S	5.8 T	9.9 * F	3.9 S
	18	4.6 W	5.0 S	7.8 S	1.1 T	1.6 T	.7 S	2.6 T	F	4.0 M	6.8 W	8.8 S	13.7 * M
O	19	8.2 T	S	7.1 S	1.5 W	2.5 F	2.1 M	2.6 W	S	4.3 T	5.5 T	4.5 S	9.0 T
	20	9.9 * F	M	6.3 M	3.9 T	1.0 S	4.3 T	1.8 T	S	2.7 W	10.1 * F	8.6 M	10.0 * W
N	21	7.8 S	8.0 T	6.6 T	4.3 F	.8 S	.7 W	1.8 F	M	1.1 T	7.4 S	13.4 * T	10.9 * T
	22	2.1 S	3.8 W	4.1 W	2.9 S	2.1 M	.5 T	1.2 S	T	6.9 F	3.2 S	10.2 * W	12.1 * F
T	23	5.2 M	3.0 T	3.8 T	1.1 S	4.8 T	3.2 F	.8 S	W	6.9 S	7.5 M	3.7 T	10.2 * S
	24	8.2 T	7.1 F	6.3 F	1.7 M	3.6 W	2.0 S	2.1 M	3.4 T	4.1 S	8.8 T	3.4 F	3.4 S
H	25	12.1 * W	5.8 S	2.6 S	.5 T	5.1 T	1.0 S	.7 T	5.4 F	7.6 M	6.6 W	3.5 S	5.4 M
	26	6.2 T	4.6 S	2.4 S	.6 W	2.3 F	4.0 M	1.9 W	3.1 S	5.6 T	8.2 T	2.4 S	8.3 T
	27	8.5 F	6.2 M	8.9 M	6.1 T	2.5 S	1.5 T	3.1 T	2.7 S	6.2 W	11.1 * F	17.6 * M	8.6 W
	28	10.2 * S	2.4 T	5.8 T	4.1 F	1.6 S	1.5 W	2.6 F	5.4 M	8.2 T	8.8 S	15.4 * T	11.0 * T
	29	1.8 S		3.4 W	4.0 S	.9 M	2.2 T	1.2 S	3.4 T	5.6 F	7.9 S	20.4 * W	12.4 * F
	30	1.6 M		4.7 T	2.4 S	3.6 T	2.0 F	1.0 S	5.2 W	6.2 S	7.5 M	10.5 * T	9.7 * S
	31	8.7 T		7.2 F		3.6 W		3.8 M	5.8 T		7.6 T		4.3 S
NUMBER		692	585	738	720	737	557	672	307	720	744	688	729
MAXIMUM		15.9	12.8	8.9	7.9	5.1	5.5	4.4	5.9	9.9	11.1	20.4	16.0

TOTAL SAMPLES = 7889
% OF POSSIBLE OBSERVATIONS = 90.1

354 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
354 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
2 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
66 PRIMARY NON-OVERLAPPING VIOLATIONS
66 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

DAY OF MONTH	JAN 1979	FEB 1979	MAR 1979	APR 1979	MAY 1979	JUN 1979	JUL 1979	AUG 1979	SEP 1979	OCT 1979	NOV 1979	DEC 1979
1	1.3 M	8.3 T	5.2 T	3.7 S	4.4 T	4.7 F	3.7 S	5.2 W	5.5 S	M	8.5 T	7.7 S
2	10.1 * T	11.3 * F	6.1 F	5.2 M	4.3 W	4.5 S	4.3 M	5.7 T	4.0 S	T	6.3 F	5.8 S
3	8.3 W	8.6 S	4.7 S	6.4 T	3.1 T	3.6 S	5.5 T	5.5 F	2.3 M	W	6.1 S	13.9 * M
4	9.4 T	3.5 S	2.2 S	6.5 W	4.3 F	8.9 M	3.4 W	4.6 S	T	T	4.4 S	10.2 * T
5	10.0 * F	10.0 * M	6.4 M	5.6 T	4.2 S	5.0 T	2.8 T	3.9 S	4.5 W	9.1 F	3.4 M	8.6 W
6	6.0 S	7.8 T	6.6 T	5.7 F	3.0 S	3.7 W	5.8 F	5.3 M	6.1 T	4.9 S	5.9 T	8.7 T
7	4.1 S	11.8 * W	4.8 W	4.9 S	4.6 M	4.4 T	4.3 S	4.5 T	4.7 F	S	8.7 W	10.8 * F
8	6.4 M	8.5 T	5.0 T	1.2 S	6.7 T	5.5 F	4.2 S	4.7 W	3.4 S	3.9 M	10.8 * T	11.0 * S
9	11.9 * T	13.9 * F	3.8 F	4.9 M	5.7 W	4.4 S	4.6 M	6.1 T	1.9 S	5.0 T	10.1 * F	11.7 * S
10	10.9 * W	13.5 * S	3.6 S	4.9 T	5.8 T	2.2 S	4.8 T	6.4 F	1.4 M	9.4 W	8.1 S	7.2 M
11	12.6 * T	.9 S	5.2 S	6.6 W	6.4 F	3.9 M	5.1 W	6.0 S	T	7.6 T	8.1 S	6.4 T
12	9.8 * F	2.4 M	5.6 M	4.7 T	5.6 S	4.8 T	3.6 T	5.7 S	W	9.5 * F	8.7 M	4.9 W
13	9.4 S	2.2 T	4.4 T	6.8 F	3.0 S	6.2 W	2.8 F	7.8 M	T	9.3 S	11.3 * T	6.9 T
14	6.9 S	10.4 * W	6.3 W	5.4 S	4.9 M	5.5 T	2.9 S	4.9 T	F	6.1 S	10.5 * W	16.1 * F
15	13.4 * M	4.6 T	6.1 T	S	4.3 T	4.7 F	3.3 S	4.4 W	S	6.2 M	12.3 * T	18.3 * S
16	10.6 * T	2.9 F	8.1 F	4.0 M	4.9 W	4.1 S	4.6 M	5.1 T	3.6 S	6.3 T	11.7 * F	5.9 S
17	9.4 W	2.6 S	7.2 S	4.9 T	3.1 T	2.8 S	5.6 T	4.1 F	4.1 M	6.3 W	9.2 S	13.6 * M
18	11.4 * T	.7 S	5.1 S	5.1 W	5.0 F	7.0 M	6.4 W	1.4 S	T	4.6 T	5.8 S	16.8 * T
19	11.2 * F	5.5 M	5.1 M	5.2 T	5.8 S	4.5 T	3.9 T	2.3 S	W	7.9 F	6.8 M	17.4 * W
20	7.6 S	3.7 T	4.8 T	5.3 F	3.4 S	4.1 W	8.1 F	5.8 M	T	3.8 S	6.6 T	9.8 * T
21	6.5 S	8.0 W	4.8 W	4.6 S	5.0 M	4.8 T	6.0 S	4.9 T	F	3.0 S	9.6 * W	8.1 F
22	10.8 * M	6.2 T	5.7 T	3.0 S	3.4 T	5.5 F	3.2 S	4.8 W	S	6.2 M	6.6 T	7.1 S
23	8.2 T	5.5 F	6.3 F	4.6 M	5.3 W	5.9 S	4.8 M	7.4 T	S	11.4 * T	8.6 F	7.0 S
24	9.9 * W	4.5 S	4.8 S	4.1 T	3.0 T	4.7 S	4.9 T	6.0 F	M	8.3 W	6.8 S	2.1 M
25	8.9 T	1.2 S	2.7 S	4.4 W	3.5 F	5.0 M	4.9 W	4.9 S	T	6.7 T	4.5 S	3.4 T
26	8.4 F	7.2 M	1.4 M	4.6 T	2.6 S	3.9 T	4.9 T	3.8 S	W	7.2 F	8.3 M	8.0 W
27	7.7 S	4.4 T	2.8 T	5.4 F	2.8 S	5.6 W	5.6 F	5.4 M	T	6.5 S	5.0 T	7.4 T
28	3.7 S	3.1 W	4.3 W	4.6 S	1.3 M	4.0 T	5.7 S	7.3 T	F	4.2 S	4.4 W	8.1 F
29	8.8 M		4.5 T	3.8 S	3.7 T	5.1 F	3.7 S	5.2 W	S	6.2 M	7.3 T	6.8 S
30	7.5 T		6.1 F	5.6 M	3.9 W	4.3 S	6.8 M	4.8 T	S	4.1 T	8.2 F	7.0 S
31	8.4 W		4.2 S		4.0 T		6.4 T	5.3 F		7.6 W		9.2 M
NUMBER	711	672	710	614	740	698	742	744	144	592	699	720
MAXIMUM	13.4	13.9	8.1	6.8	6.7	8.9	8.1	7.8	6.1	11.4	12.3	18.3

TOTAL SAMPLES = 7786
% OF POSSIBLE OBSERVATIONS = 88.9

251 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
251 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
2 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
45 PRIMARY NON-OVERLAPPING VIOLATIONS
45 SECONDARY NON-OVERLAPPING VIOLATIONS

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EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1980	FEB 1980	MAR 1980	APR 1980	MAY 1980	JUN 1980	JUL 1980	AUG 1980	SEP 1980	OCT 1980	NOV 1980	DEC 1980
	1	3.9 T	11.2 * F	5.7 S	4.5 T	5.2 T	3.5 S	2.1 T	5.6 F	1.5 M	4.9 W	9.5 * S	3.6 M
	2	9.2 W	8.9 S	1.9 S	3.8 W	5.7 F	4.5 M	3.1 W	3.6 S	5.3 T	6.6 T	8.2 S	1.7 T
	3	10.9 * T	4.9 S	6.8 M	3.5 T	4.7 S	2.8 T	2.7 T	3.0 S	4.3 W	9.2 F	5.4 M	1.9 W
	4	9.7 * F	8.8 M	6.9 T	3.4 F	3.8 S	3.3 W	1.7 F	3.8 M	7.7 T	6.8 S	6.4 T	8.4 T
D	5	6.5 S	5.8 T	5.1 W	3.1 S	4.2 M	3.8 T	2.6 S	5.1 T	5.6 F	5.3 S	7.9 W	4.1 F
	6	3.4 S	8.4 W	6.5 T	3.3 S	4.5 T	8.4 F	2.7 S	4.4 W	5.1 S	7.0 M	7.7 T	7.0 S
A	7	7.6 M	6.4 T	6.0 F	3.9 M	4.2 W	7.8 S	4.4 M	4.2 T	2.2 S	9.9 * T	7.4 F	6.5 S
	8	9.3 T	5.1 F	5.8 S	2.1 T	2.9 T	2.2 S	5.6 T	5.5 F	3.7 M	8.6 W	6.9 S	8.1 M
Y	9	9.0 W	7.8 S	3.9 S	3.9 W	5.7 F	3.7 M	5.4 W	3.2 S	4.3 T	5.0 T	5.0 S	6.3 T
	10	6.7 T	6.1 S	4.5 M	3.7 T	4.3 S	3.8 T	3.8 T	3.1 S	5.6 W	7.5 F	8.3 M	10.2 * W
	11	6.4 F	9.5 * M	6.3 T	5.0 F	4.1 S	3.8 W	4.6 F	6.6 M	5.6 T	7.8 S	8.0 T	11.4 * T
O	12	5.1 S	7.3 T	4.6 W	4.9 S	4.8 M	3.5 T	3.7 S	4.2 T	5.3 F	6.4 S	6.2 W	11.8 * F
	13	5.3 S	7.7 W	1.8 T	3.0 S	2.9 T	4.8 F	3.2 S	3.9 W	3.0 S	2.1 M	7.5 T	10.0 * S
F	14	2.1 M	10.9 * T	6.0 F	2.3 M	3.7 W	4.1 S	4.4 M	5.0 T	3.0 S	5.5 T	7.8 F	4.3 S
	15	8.2 T	10.3 * F	6.3 S	4.0 T	5.0 T	3.5 S	3.9 T	5.3 F	4.9 M	4.7 W	6.4 S	9.6 * M
	16	7.6 W	6.3 S	5.1 S	2.9 W	6.1 F	1.7 M	5.4 W	3.7 S	3.9 T	6.5 T	5.3 S	11.4 * T
M	17	8.2 T	1.4 S	2.3 M	3.3 T	4.6 S	3.6 T	3.6 T	3.7 S	6.8 W	6.1 F	8.2 M	12.3 * W
	18	7.3 F	4.1 M	6.7 T	5.0 F	3.1 S	3.9 W	5.0 F	3.6 M	6.0 T	6.3 S	7.7 T	9.4 T
O	19	6.4 S	4.2 T	6.5 W	5.1 S	3.6 M	3.3 T	3.8 S	3.2 T	4.8 F	S	7.8 W	12.1 * F
	20	6.6 S	5.0 W	3.9 T	5.5 S	3.0 T	4.6 F	2.5 S	4.2 W	4.2 S	M	6.9 T	8.9 S
N	21	5.1 M	8.7 T	5.9 F	5.4 M	3.2 W	3.7 S	3.8 M	4.7 T	5.0 S	6.1 T	9.3 F	6.4 S
	22	8.8 T	5.7 F	5.2 S	5.5 T	2.2 T	2.0 S	4.8 T	4.8 F	8.2 M	4.5 W	6.5 S	12.5 * M
T	23	4.7 W	4.8 S	5.1 S	4.1 W	5.7 F	3.7 M	4.3 W	3.8 S	7.4 T	4.4 T	6.4 S	6.7 T
	24	7.7 T	5.0 S	4.3 M	4.2 T	3.6 S	2.1 T	4.5 T	2.8 S	4.8 W	9.7 * F	6.0 M	10.5 * W
H	25	8.8 F	3.8 M	4.3 T	4.2 F	2.0 S	3.6 W	5.8 F	4.1 M	7.9 T	9.7 * S	8.6 T	4.0 T
	26	6.5 S	5.5 T	4.2 W	5.0 S	2.1 M	2.8 T	5.8 S	3.9 T	6.9 F	4.3 S	6.7 W	8.2 F
	27	2.4 S	6.8 W	3.5 T	S	5.6 T	4.3 F	3.6 S	3.6 W	5.6 S	6.0 M	5.9 T	8.5 S
	28	3.4 M	6.9 T	6.3 F	3.4 M	4.0 W	4.2 S	5.5 M	4.1 T	6.0 S	7.6 T	7.5 F	6.2 S
	29	7.1 T	6.3 F	6.5 S	3.9 T	3.9 T	2.9 S	4.8 T	4.9 F	5.3 M	6.8 W	7.2 S	8.0 M
	30	5.4 W		2.0 S	4.6 W	4.1 F	2.1 M	3.0 W	3.2 S	4.6 T	9.3 T	6.6 S	7.9 T
	31	6.0 T		5.5 M		4.1 S		4.9 T	3.0 S		10.1 * F		8.2 W
NUMBER		712	686	744	662	716	720	744	744	703	658	720	712
MAXIMUM		10.9	11.2	6.9	5.5	6.1	8.4	5.8	6.6	8.2	10.1	9.5	12.5

TOTAL SAMPLES = 8521
% OF POSSIBLE OBSERVATIONS = 97.0

105 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
105 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
22 PRIMARY NON-OVERLAPPING VIOLATIONS
22 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

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MONITORING OBJECTIVE ( ): *** NOT FOUND ***

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		JAN 1981	FEB 1981	MAR 1981	APR 1981	MAY 1981	JUN 1981	JUL 1981	AUG 1981	SEP 1981	OCT 1981	NOV 1981	DEC 1981
	1	2.0 T	5.6 S	6.5 S	5.5 W	F	4.2 M	3.9 W	5.1 S	T	T	7.5 S	9.3 T
	2	8.6 F	8.6 M	6.9 M	4.2 T	S	4.7 T	6.0 T	5.6 S	W	F	9.8 * M	7.8 W
	3	4.7 S	7.1 T	5.7 T	5.2 F	S	4.4 W	F	6.4 M	T	S	9.8 * T	7.8 T
	4	4.8 S	9.8 * W	4.9 W	5.0 S	M	4.9 T	S	5.9 T	F	S	7.4 W	10.4 * F
D	5	5.8 M	7.8 T	6.2 T	3.0 S	T	3.4 F	2.1 S	8.6 W	S	M	8.0 T	10.3 * S
	6	2.9 T	8.8 F	5.8 F	3.7 M	W	2.9 S	1.7 M	4.6 T	S	T	9.7 * F	3.0 S
A	7	5.8 W	8.4 S	5.5 S	4.4 T	T	2.6 S	3.7 T	9.6 * F	M	W	7.3 S	11.5 * M
	8	7.3 T	4.9 S	4.9 S	2.8 W	F	6.9 M	3.1 W	9.7 * S	T	T	5.7 S	11.8 * T
Y	9	8.4 F	6.5 M	5.3 M	4.1 T	S	4.3 T	5.4 T	7.8 S	W	F	7.8 M	11.9 * W
	10	7.4 S	4.6 T	4.6 T	3.3 F	S	3.9 W	4.9 F	3.3 M	T	S	7.8 T	1.7 T
	11	5.8 S	7.0 W	7.1 W	4.3 S	M	2.3 T	5.1 S	4.4 T	F	S	6.8 W	8.4 F
O	12	8.4 M	7.8 T	7.0 T	5.4 S	T	4.9 F	4.0 S	W	S	M	5.0 T	8.0 S
	13	7.6 T	9.5 * F	6.5 F	4.8 M	W	4.5 S	3.8 M	T	S	T	3.6 F	5.9 S
F	14	6.7 W	4.9 S	6.3 S	4.5 T	T	3.1 S	4.5 T	F	M	W	4.0 S	9.1 M
	15	6.6 T	4.9 S	4.2 S	5.1 W	F	3.4 M	4.1 W	S	T	T	4.0 S	7.9 T
	16	7.5 F	2.4 M	4.5 M	4.7 T	S	3.0 T	4.1 T	S	W	F	5.3 M	7.6 W
M	17	7.0 S	7.5 T	4.6 T	5.5 F	S	3.3 W	6.4 F	M	T	S	7.2 T	10.6 * T
	18	7.1 S	6.0 W	3.0 W	5.2 S	M	2.9 T	5.6 S	T	F	S	6.3 W	6.3 F
O	19	8.7 M	4.0 T	2.5 T	2.9 S	T	5.0 F	3.9 S	W	S	M	4.8 T	2.7 S
	20	11.4 * T	7.7 F	7.9 F	5.0 M	W	3.7 S	4.6 M	T	S	T	4.0 F	5.1 S
N	21	8.6 W	7.6 S	4.7 S	2.5 T	T	1.7 S	4.3 T	F	M	5.4 W	2.3 S	9.2 M
	22	7.4 T	6.0 S	1.6 S	3.9 W	F	4.2 M	4.7 W	S	T	9.6 * T	2.8 S	8.4 T
T	23	6.9 F	5.6 M	4.0 M	2.3 T	S	3.1 T	4.8 T	S	W	9.1 F	3.1 M	6.1 W
	24	5.6 S	4.5 T	3.5 T	5.2 F	S	2.5 W	5.5 F	M	T	8.4 S	5.5 T	4.1 T
H	25	5.5 S	7.8 W	4.0 W	4.9 S	M	4.7 T	4.6 S	T	F	6.0 S	8.2 W	3.2 F
	26	2.0 M	5.9 T	5.3 T	3.6 S	T	4.8 F	3.7 S	W	S	9.0 M	4.1 T	3.2 S
	27	5.6 T	6.4 F	2.9 F	4.5 M	W	4.5 S	3.5 M	T	S	6.7 T	7.9 F	2.9 S
	28	1.5 W	7.7 S	3.4 S	4.9 T	T	3.5 S	6.4 T	F	M	3.9 W	5.7 S	2.8 M
	29	3.4 T		3.2 S	4.5 W	F	4.2 M	5.5 W	S	T	5.6 T	2.5 S	8.6 T
	30	12.2 * F		5.3 M	2.8 T	S	3.9 T	4.0 T	S	W	6.3 F	8.0 M	8.4 W
	31	7.1 S		2.9 T		S		4.6 F	M		5.6 S		7.7 T
NUMBER		737	672	719	671		626	684	247		206	699	721
MAXIMUM		12.2	9.8	7.9	5.5		6.9	6.4	9.7		9.6	9.8	11.9

TOTAL SAMPLES = 5982
% OF POSSIBLE OBSERVATIONS = 68.3

50 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
50 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
13 PRIMARY NON-OVERLAPPING VIOLATIONS
13 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
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PAGE 15
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SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
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LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
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UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1982	FEB 1982	MAR 1982	APR 1982	MAY 1982	JUN 1982	JUL 1982	AUG 1982	SEP 1982	OCT 1982	NOV 1982	DEC 1982
	1	2.2 F	7.0 M	1.9 M	6.5 T	4.3 S	4.4 T	5.1 T	5.0 S	4.8 W	7.1 F	6.1 M	6.1 W
	2	3.6 S	8.7 T	4.2 T	3.0 F	4.3 S	4.0 W	3.2 F	3.7 M	3.8 T	8.1 S	4.2 T	5.3 T
	3	3.5 S	6.3 W	4.0 W	2.9 S	4.1 M	3.9 T	2.5 S	4.0 T	8.5 F	5.3 S	7.1 W	2.0 F
	4	11.4 * M	2.3 T	7.7 T	2.7 S	3.1 T	4.7 F	1.6 S	4.3 W	2.6 S	6.6 M	7.6 T	5.0 S
D	5	8.3 T	2.7 F	7.1 F	1.5 M	3.7 W	3.8 S	1.5 M	4.9 T	2.4 S	5.8 T	10.0 * F	3.3 S
	6	9.1 W	3.6 S	6.9 S	3.4 T	5.0 T	2.9 S	3.6 T	5.3 F	2.0 M	2.2 W	6.6 S	8.5 M
A	7	8.2 T	3.2 S	3.6 S	5.8 W	4.8 F	4.4 M	5.0 W	5.1 S	5.0 T	4.7 T	5.9 S	7.5 T
	8	11.8 * F	4.2 M	5.9 M	4.0 T	3.5 S	4.3 T	3.7 T	3.9 S	5.9 W	5.8 F	8.7 M	3.8 W
Y	9	7.2 S	8.9 T	4.4 T	5.1 F	2.7 S	2.5 W	5.2 F	4.5 M	5.5 T	5.4 S	7.3 T	8.3 T
	10	5.4 S	6.0 W	5.2 W	3.2 S	4.2 M	4.0 T	3.9 S	2.0 T	3.9 F	4.5 S	9.5 * W	10.9 * F
	11	9.7 * M	8.0 T	5.0 T	.9 S	3.9 T	3.4 F	3.8 S	W	3.9 S	7.0 M	5.5 T	8.8 S
O	12	12.8 * T	6.8 F	5.3 F	2.2 M	3.9 W	3.4 S	5.1 M	3.6 T	3.9 S	7.7 T	6.9 F	7.8 S
	13	12.1 * W	5.9 S	3.8 S	2.0 T	4.2 T	3.6 S	5.5 T	5.9 F	3.9 M	6.6 W	7.6 S	11.1 * M
F	14	14.9 * T	2.4 S	3.9 S	4.4 W	4.6 F	4.1 M	3.6 W	5.4 S	3.6 T	9.9 * T	5.3 S	4.3 T
	15	11.5 * F	1.2 M	6.6 M	4.6 T	3.4 S	3.6 T	3.8 T	3.9 S	5.0 W	9.0 F	9.3 M	1.9 W
	16	7.8 S	8.0 T	6.4 T	3.0 F	3.3 S	4.1 W	4.6 F	4.8 M	6.1 T	8.3 S	7.0 T	8.4 T
M	17	4.1 S	5.9 W	5.1 W	3.3 S	3.4 M	4.1 T	3.9 S	4.9 T	5.8 F	2.8 S	2.7 W	7.2 F
	18	5.8 M	5.6 T	3.2 T	3.4 S	5.0 T	4.5 F	3.8 S	3.9 W	3.8 S	4.8 M	2.7 T	5.3 S
O	19	4.3 T	2.3 F	7.4 F	4.2 M	3.6 W	3.9 S	3.0 M	5.8 T	2.9 S	3.2 T	5.7 F	4.5 S
	20	8.3 W	2.0 S	5.9 S	3.3 T	2.4 T	3.0 S	5.4 T	5.9 F	5.1 M	6.5 W	4.5 S	4.4 M
N	21	8.5 T	3.0 S	4.2 S	2.6 W	5.2 F	4.9 M	4.8 W	5.3 S	6.0 T	4.8 T	1.5 S	1.6 T
	22	6.4 F	5.4 M	5.7 M	3.8 T	5.0 S	4.4 T	4.4 T	5.5 S	6.9 W	2.2 F	5.4 M	5.2 W
T	23	4.9 S	4.7 T	5.9 T	5.0 F	4.1 S	3.3 W	3.6 F	4.4 M	5.8 T	3.0 S	7.4 T	7.9 T
	24	4.4 S	2.6 W	4.6 W	5.4 S	3.4 M	3.3 T	4.2 S	3.5 T	6.2 F	3.3 S	7.7 W	5.8 F
H	25	9.3 M	5.2 T	3.1 T	3.4 S	4.2 T	3.8 F	2.5 S	5.7 W	1.9 S	2.1 M	5.4 T	3.1 S
	26	7.6 T	6.1 F	4.4 F	3.9 M	4.1 W	3.4 S	6.1 M	4.8 T	1.6 S	5.3 T	7.4 F	3.5 S
	27	6.4 W	6.5 S	4.2 S	3.6 T	3.3 T	2.4 S	5.4 T	7.0 F	4.2 M	7.0 W	7.8 S	6.6 M
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	30	7.1 S		2.9 T	4.9 F	2.6 S	5.3 W	3.3 F	4.3 M	4.2 T	7.0 S	8.9 T	7.2 T
	31	3.5 S		4.3 W		.9 M		4.7 S	4.3 T		6.8 S		3.7 F
NUMBER		711	654	730	698	729	705	918	663	714	724	706	726
MAXIMUM		14.9	8.9	7.7	6.5	5.2	5.3	6.1	7.0	8.5	9.9	10.0	11.1

TOTAL SAMPLES = 8678
% OF POSSIBLE OBSERVATIONS = 99.1

53 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
53 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
12 PRIMARY NON-OVERLAPPING VIOLATIONS
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PROBE HEIGHT: 00003 M

		JAN 1983	FEB 1983	MAR 1983	APR 1983	MAY 1983	JUN 1983	JUL 1983	AUG 1983	SEP 1983	OCT 1983	NOV 1983	DEC 1983
	1	3.5 S	4.6 T	T	3.5 F	4.1 S	4.3 W	2.0 F	M	T	4.3 S	3.7 T	6.9 T
	2	4.1 S	7.5 W	W	3.6 S	5.0 M	4.2 T	S	T	F	3.5 S	2.8 W	8.3 F
	3	8.8 M	9.8 * T	T	3.6 S	4.4 T	5.4 F	S	W	S	4.8 M	2.3 T	7.5 S
	4	15.6 * T	7.9 F	F	3.8 M	3.2 W	4.5 S	M	T	S	6.6 T	8.0 F	3.8 S
D	5	15.5 * W	6.8 S	S	4.5 T	4.2 T	3.2 S	T	F	M	7.5 W	5.5 S	1.9 M
	6	10.2 * T	5.0 S	S	4.6 W	5.6 F	3.5 M	W	S	T	6.5 T	1.9 S	7.1 T
A	7	7.7 F	7.3 M	M	4.9 T	3.3 S	3.9 T	T	S	W	5.5 F	4.8 M	5.5 W
	8	5.6 S	2.9 T	T	5.1 F	3.1 S	3.3 W	F	M	T	4.9 S	4.9 T	7.3 T
Y	9	4.7 S	4.5 W	W	4.2 S	4.1 M	3.9 T	S	T	F	2.1 S	2.2 W	2.1 F
	10	6.9 M	8.6 T	T	4.5 S	4.5 T	3.9 F	S	W	S	4.3 M	1.0 T	4.0 S
	11	12.5 * T	F	F	4.8 M	4.9 W	3.1 S	M	T	S	5.2 T	5.3 F	1.6 S
O	12	10.1 * W	S	S	4.2 T	3.3 T	3.6 S	T	F	M	4.9 W	4.4 S	4.9 M
	13	11.9 * T	S	S	2.4 W	3.1 F	2.6 M	W	S	3.4 T	7.0 T	2.3 S	6.3 T
F	14	10.8 * F	M	M	T	3.1 S	1.7 T	T	S	4.7 W	5.7 F	2.5 M	5.0 W
	15	9.0 S	T	T	F	1.9 S	4.2 W	F	M	4.3 T	5.1 S	T	6.5 T
	16	5.0 S	W	W	S	4.0 M	4.1 T	S	T	5.6 F	5.3 S	3.9 W	8.2 F
M	17	7.6 M	T	T	S	3.5 T	2.9 F	S	W	5.4 S	5.2 M	6.4 T	5.7 S
	18	7.0 T	F	F	M	3.8 W	3.0 S	M	T	3.8 S	4.6 T	7.5 F	2.5 S
O	19	9.5 * W	S	S	T	3.5 T	3.3 S	T	F	3.6 M	5.7 W	6.6 S	7.4 M
	20	4.5 T	S	S	W	4.5 F	4.5 M	W	S	4.2 T	6.0 T	2.8 S	4.5 T
N	21	2.1 F	M	M	T	3.7 S	3.2 T	T	S	7.1 W	6.8 F	5.1 M	6.7 W
	22	1.0 S	T	T	3.4 F	3.7 S	1.4 W	F	M	8.5 T	7.0 S	3.4 T	8.6 T
T	23	.7 S	W	2.2 W	3.0 S	4.0 M	2.5 T	S	T	7.1 F	3.1 S	1.9 W	4.6 F
	24	5.1 M	T	4.9 T	3.0 S	4.1 T	4.2 F	S	W	5.9 S	1.6 M	1.0 T	5.8 S
H	25	5.1 T	F	7.0 F	4.6 M	4.3 W	3.8 S	M	T	6.3 S	5.7 T	5.0 F	2.3 S
	26	2.6 W	S	6.5 S	3.5 T	5.6 T	4.0 S	T	F	7.0 M	4.5 W	5.0 S	4.6 M
	27	6.9 T	S	2.0 S	3.8 W	5.3 F	4.0 M	W	S	4.4 T	6.3 T	4.0 S	8.0 T
	28	5.2 F	M	5.6 M	5.0 T	4.8 S	3.8 T	T	S	4.2 W	7.3 F	8.9 M	6.3 W
	29	2.6 S		2.8 T	5.7 F	3.0 S	3.7 W	F	M	3.7 T	7.4 S	3.8 T	7.1 T
	30	2.9 S		7.2 W	3.9 S	1.5 M	4.0 T	S	T	6.8 F	7.5 S	1.9 W	8.3 F
	31	7.1 M		5.4 T		2.5 T		S	W		5.1 M		4.6 S
NUMBER		721	231	195	490	744	703	2		420	686	660	731
MAXIMUM		15.6	9.8	7.2	5.7	5.6	5.4	2.0		8.5	7.5	8.9	8.6

TOTAL SAMPLES = 5583
% OF POSSIBLE OBSERVATIONS = 63.7

67 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
67 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
14 PRIMARY NON-OVERLAPPING VIOLATIONS
14 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

	JAN 1984	FEB 1984	MAR 1984	APR 1984	MAY 1984	JUN 1984	JUL 1984	AUG 1984	SEP 1984	OCT 1984	NOV 1984	DEC 1984
1	1.9 S	6.7 W	3.0 T	3.9 S	1.4 T	3.4 F	S	1.7 W	2.8 S	3.3 M	4.2 T	7.6 S
2	1.6 M	3.3 T	5.5 F	3.8 M	2.7 W	3.1 S	M	2.3 T	3.0 S	2.0 T	5.6 F	3.5 S
3	6.1 T	6.6 F	5.1 S	2.0 T	3.3 T	2.6 S	T	1.0 F	1.9 M	W	5.3 S	5.1 M
4	7.6 W	2.7 S	3.4 S	W	3.4 F	3.1 M	W	S	3.6 T	T	4.1 S	6.5 T
D 5	9.9/* T	1.9 S	4.9 M	T	3.4 S	3.3 T	T	S	1.7 W	5.1 F	6.0 M	8.2 W
6	5.9 F	6.5 M	1.4 T	4.1 F	3.3 S	3.2 W	2.8 F	M	2.8 T	4.8 S	5.1 T	7.8 T
A 7	4.9 S	3.9 T	W	4.1 S	1.8 M	3.9 T	2.1 S	T	3.4 F	4.0 S	3.4 W	9.6/* F
8	1.7 S	3.1 W	T	S	2.4 T	3.5 F	2.2 S	W	3.1 S	2.1 M	5.8 T	8.9 S
Y 9	.9 M	6.5 T	3.6 F	M	3.4 W	3.1 S	2.3 M	T	3.3 S	4.6 T	3.9 F	6.4 S
10	7.6 T	5.9 F	3.3 S	3.1 T	3.3 T	2.3 S	2.2 T	3.1 F	3.1 M	3.0 W	1.3 S	1.5 M
11	8.8 W	5.8 S	S	3.2 W	3.0 F	3.6 M	2.5 W	1.5 S	4.0 T	2.5 T	.8 S	7.9 T
O 12	2.3 T	3.9 S	M	3.0 T	3.3 S	3.9 T	3.1 T	1.6 S	1.8 W	2.0 F	1.4 M	6.3 W
13	7.2 F	3.8 M	1.5 T	2.5 F	4.2 S	3.5 W	3.7 F	2.8 M	T	2.8 S	8.1 T	6.3 T
F 14	4.7 S	6.0 T	4.0 W	1.6 S	4.1 M	3.6 T	3.5 S	4.3 T	4.1 F	2.9 S	5.9 W	4.0 F
15	3.3 S	3.0 W	2.7 T	1.9 S	5.1 T	4.7 F	3.0 S	3.9 W	4.1 S	4.7 M	6.8 T	2.2 S
16	6.8 M	4.9 T	2.0 F	1.8 M	3.1 W	3.0 S	3.8 M	3.0 T	3.9 S	3.3 T	8.3 F	S
M 17	3.1 T	5.1 F	3.9 S	3.6 T	3.1 T	3.1 S	4.0 T	3.2 F	5.5 M	4.0 W	7.3 S	M
18	6.7 W	4.6 S	4.8 S	1.7 W	3.7 F	2.7 M	4.0 W	3.3 S	4.5 T	4.9 T	3.7 S	7.0 T
O 19	6.6 T	4.4 S	3.4 M	3.6 T	3.6 S	3.8 T	3.8 T	3.4 S	6.0 W	4.0 F	3.4 M	9.6/* W
20	7.8 F	3.5 M	2.0 T	4.0 F	1.5 S	2.1 W	2.1 F	3.1 M	2.5 T	4.3 S	4.9 T	8.9 T
N 21	5.0 S	5.1 T	4.2 W	4.0 S	M	2.9 T	.9 S	2.8 T	4.0 F	4.2 S	8.2 W	9.4 F
22	2.5 S	5.7 W	4.0 T	4.0 S	1.0 T	3.1 F	.9 S	2.5 W	3.4 S	5.1 M	3.7 T	9.0 S
T 23	9.8/* M	2.6 T	2.1 F	.8 M	2.6 W	2.6 S	2.9 M	2.2 T	2.4 S	7.0 T	5.9 F	4.5 S
24	8.6 T	3.0 F	3.3 S	T	1.3 T	S	1.6 T	4.0 F	3.3 M	3.8 W	5.3 S	4.9 M
H 25	7.5 W	4.3 S	3.5 S	2.7 W	F	M	1.3 W	3.6 S	3.9 T	2.6 T	4.4 S	2.4 T
26	7.9 T	4.5 S	4.7 M	2.2 T	S	4.1 T	1.9 T	1.4 S	3.4 W	5.6 F	5.9 M	8.4 W
27	10.2/* F	1.9 M	4.0 T	3.0 F	S	3.3 W	3.1 F	3.1 M	3.3 T	3.7 S	2.6 T	9.5/* T
28	4.0 S	2.7 T	2.6 W	2.9 S	M	T	2.7 S	3.0 T	4.8 F	1.0 S	4.1 W	6.7 F
29	5.5 S	5.2 W	2.7 T	3.1 S	T	F	3.2 S	3.7 W	4.9 S	4.3 M	4.6 T	1.9 S
30	6.1 M		4.1 F	2.8 M	W	S	3.9 M	3.6 T	5.3 S	6.4 T	8.0 F	2.6 S
31	7.2 T		3.2 S		T		4.6 T	4.6 F		4.6 W		3.0 M
NUMBER	667	690	570	514	490	571	576	571	658	616	720	594
MAXIMUM	10.2	6.7	5.5	4.1	5.1	4.7	4.6	4.6	6.0	7.0	8.3	9.6

TOTAL SAMPLES = 7237
% OF POSSIBLE OBSERVATIONS = 82.4

11 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
11 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
6 PRIMARY NON-OVERLAPPING VIOLATIONS
6 SECONDARY NON-OVERLAPPING VIOLATIONS

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PAGE 15
16:32:11

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

SITE-ID: 16-001-0007 POC: 1
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SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1985	FEB 1985	MAR 1985	APR 1985	MAY 1985	JUN 1985	JUL 1985	AUG 1985	SEP 1985	OCT 1985	NOV 1985	DEC 1985
	1	T	3.4 F	8.7 F	3.7 M	3.2 W	1.7 S	3.8 M	1.2 T	S	6.8 T	F	3.2 S
	2	W	3.4 S	5.4 S	3.8 T	3.1 T	1.8 S	3.7 T	3.2 F	M	4.0 W	S	4.3 M
	3	7.7 T	2.1 S	2.5 S	2.9 W	3.7 F	3.2 M	3.7 W	2.9 S	T	3.9 T	S	8.4 T
	4	5.6 F	5.9 M	1.3 M	3.0 T	2.9 S	2.8 T	1.9 T	3.2 S	W	3.5 F	3.7 M	6.4 W
D	5	S	4.8 T	1.9 T	4.0 F	3.7 S	3.0 W	3.3 F	3.3 M	T	4.5 S	4.7 T	6.7 T
	6	S	4.0 W	4.5 W	3.5 S	3.8 M	1.4 T	3.4 S	3.0 T	3.1 F	5.0 S	4.9 W	6.0 F
A	7	M	2.0 T	4.8 T	2.8 S	3.8 T	2.9 F	1.2 S	3.1 W	2.7 S	2.8 M	3.2 T	5.7 S
	8	9.6 * T	5.5 F	3.2 F	3.5 M	3.2 W	2.4 S	3.9 M	2.7 T	1.7 S	3.6 T	4.3 F	3.6 S
Y	9	8.7 W	3.4 S	2.4 S	3.3 T	2.8 T	2.2 S	2.9 T	2.6 F	4.7 M	3.6 W	3.3 S	4.3 M
	10	8.2 T	.9 S	3.5 S	2.7 W	3.7 F	3.0 M	3.4 W	2.3 S	3.8 T	4.8 T	1.0 S	5.0 T
	11	4.8 F	1.3 M	3.0 M	3.6 T	2.6 S	3.2 T	4.2 T	2.9 S	4.3 W	4.6 F	3.9 M	6.6 W
O	12	S	6.4 T	3.8 T	4.2 F	2.8 S	3.3 W	3.6 F	2.2 M	2.3 T	4.3 S	5.4 T	6.4 T
	13	S	4.3 W	2.7 W	4.0 S	3.1 M	2.7 T	3.4 S	2.4 T	3.5 F	4.7 S	5.8 W	4.1 F
F	14	M	4.5 T	4.2 T	2.4 S	3.7 T	3.2 F	3.3 S	2.8 W	2.8 S	5.6 M	4.1 T	5.6 S
	15	7.3 T	7.3 F	4.8 F	2.0 M	3.0 W	3.0 S	3.5 M	4.2 T	3.4 S	7.5 T	4.9 F	4.6 S
	16	4.3 W	6.9 S	4.4 S	4.0 T	3.7 T	3.0 S	4.0 T	3.4 F	3.2 M	5.0 W	3.4 S	7.7 M
M	17	4.3 T	1.8 S	6.2 S	3.3 W	3.4 F	3.0 M	3.0 W	3.9 S	1.8 T	5.5 T	3.6 S	9.9 * T
	18	8.3 F	1.4 M	4.2 M	3.0 T	3.4 S	2.7 T	3.0 T	3.5 S	4.2 W	7.2 F	4.4 M	8.2 W
O	19	5.3 S	5.5 T	3.8 T	3.0 F	3.7 S	3.8 W	4.2 F	3.1 M	3.2 T	4.9 S	2.8 T	8.7 T
	20	6.1 S	4.0 W	3.9 W	3.0 S	3.3 M	2.9 T	2.5 S	3.3 T	5.5 F	S	1.5 W	9.9 * F
N	21	6.9 M	5.1 T	3.1 T	3.1 S	3.0 T	2.9 F	2.2 S	2.6 W	3.5 S	M	3.2 T	5.8 S
	22	9.2 T	6.6 F	3.0 F	3.2 M	2.9 W	3.4 S	3.2 M	3.0 T	4.1 S	T	5.0 F	4.3 S
T	23	6.1 W	6.1 S	3.2 S	2.6 T	2.8 T	3.6 S	2.8 T	4.3 F	2.9 M	3.9 W	3.9 S	8.7 M
	24	2.4 T	2.8 S	3.6 S	2.8 W	3.4 F	2.4 M	2.7 W	3.4 S	5.7 T	2.9 T	3.7 S	5.0 T
H	25	7.3 F	3.4 M	4.0 M	2.4 T	2.0 S	2.3 T	2.6 T	2.8 S	4.2 W	6.1 F	4.7 M	4.1 W
	26	5.2 S	3.3 T	2.1 T	4.3 F	1.7 S	1.1 W	4.9 F	4.1 M	4.4 T	5.3 S	6.0 T	7.9 T
	27	4.7 S	4.5 W	2.2 W	4.2 S	.8 M	1.6 T	5.2 S	2.9 T	3.6 F	3.1 S	8.2 W	8.4 F
	28	6.8 M	4.4 T	5.7 T	2.2 S	3.3 T	3.5 F	3.1 S	3.4 W	3.5 S	3.6 M	5.0 T	5.9 S
	29	7.0 T		4.7 F	3.5 M	2.3 W	1.7 S	1.8 M	3.2 T	3.2 S	4.1 T	5.8 F	4.6 S
	30	6.2 W		4.4 S	3.7 T	2.3 T	2.3 S	2.8 T	4.1 F	4.5 M	6.2 W	4.1 S	9.2 M
	31	4.4 T		3.4 S		4.3 F		3.4 W	3.2 S		4.6 T		7.8 T
NUMBER		479	672	736	720	736	720	744	709	590	616	613	744
MAXIMUM		9.6	7.3	8.7	4.3	4.3	3.8	5.2	4.3	5.7	7.5	8.2	9.9

TOTAL SAMPLES = 8079
% OF POSSIBLE OBSERVATIONS = 92.2

6 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
6 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
3 PRIMARY NON-OVERLAPPING VIOLATIONS
3 SECONDARY NON-OVERLAPPING VIOLATIONS

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EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT

MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

DAY OF MONTH	JAN 1986	FEB 1986	MAR 1986	APR 1986	MAY 1986	JUN 1986	JUL 1986	AUG 1986	SEP 1986	OCT 1986	NOV 1986	DEC 1986
1	5.1 W	6.7 S	6.7 S	4.5 T	1.3 T	.4 S	.3 T	F	M	W	5.5 S	7.1 M
2	5.4 T	4.6 S	4.9 S	1.9 W	2.9 F	.3 M	W	S	T	T	5.5 S	6.7 T
3	8.0 F	5.4 M	2.7 M	2.3 T	3.1 S	2.9 T	T	S	W	F	6.6 M	6.8 W
4	8.0 S	5.5 T	5.3 T	2.6 F	1.2 S	3.6 W	F	M	T	S	5.9 T	7.4 T
5	3.4 S	4.9 W	7.0 W	4.2 S	1.3 M	2.2 T	S	T	F	S	*7.8 W	9.1 F
6	8.3 M	4.5 T	5.4 T	5.4 S	2.7 T	1.3 F	S	W	S	M	3.2 T	8.4 S
7	8.3 T	3.1 F	3.5 F	3.4 M	2.3 W	1.2 S	M	T	S	T	7.4 F	3.8 S
8	6.3 W	2.9 S	3.7 S	4.6 T	2.0 T	1.3 S	T	F	M	W	6.9 S	5.2 M
9	6.0 T	2.9 S	3.3 S	3.5 W	3.1 F	2.1 M	W	S	T	T	3.6 S	4.4 T
10	8.5 F	4.9 M	1.2 M	4.3 T	2.6 S	1.8 T	T	S	W	F	2.4 M	7.5 W
11	4.9 S	3.2 T	4.3 T	4.4 F	2.0 S	2.9 W	F	M	T	T	5.0 T	7.8 T
12	4.3 S	2.3 W	3.7 W	4.3 S	3.1 M	3.2 T	S	T	F	S	3.1 W	8.2 F
13	8.7 M	6.1 T	3.2 T	4.1 S	1.4 T	3.4 F	S	W	S	M	7.1 T	8.0 S
14	9.6 * T	6.0 F	5.4 F	.9 M	2.2 W	2.6 S	M	T	S	T	*8.7 F	5.2 S
15	9.0 W	5.2 S	5.3 S	1.8 T	2.3 T	2.9 S	T	F	M	W	6.1 S	7.7 M
16	5.3 T	1.4 S	1.7 S	3.1 W	3.0 F	1.9 M	W	S	T	T	4.4 S	6.3 T
17	7.5 F	2.2 M	3.1 M	2.8 T	2.8 S	2.3 T	T	S	W	F	4.5 M	6.4 W
18	6.9 S	3.7 T	3.3 T	4.2 F	2.3 S	2.5 W	F	M	T	S	3.7 T	7.0 T
19	7.4 S	5.9 W	3.5 W	4.2 S	2.1 M	2.2 T	S	T	F	S	4.5 W	7.8 F
20	6.5 M	4.6 T	2.6 T	3.6 S	3.2 T	2.7 F	S	W	S	M	2.6 T	5.4 S
21	5.5 T	4.8 F	5.2 F	3.1 M	2.9 W	2.0 S	M	T	S	T	5.7 F	2.7 S
22	5.0 W	5.1 S	4.9 S	3.9 T	2.3 T	2.1 S	T	F	M	W	5.9 S	9.7 * M
23	6.5 T	5.4 S	3.3 S	2.4 W	3.2 F	2.7 M	W	S	T	T	5.9 S	11.6 * T
24	6.4 F	6.8 M	3.9 M	2.4 T	3.1 S	4.1 T	T	S	W	F	1.7 M	8.4 W
25	6.0 S	6.2 T	3.0 T	3.2 F	2.1 S	3.7 W	F	M	T	S	5.3 T	3.3 T
26	3.1 S	4.6 W	2.8 W	3.2 S	1.2 M	3.9 T	S	T	F	M	6.8 W	5.6 F
27	6.2 M	4.1 T	2.8 T	1.6 S	4.4 T	4.6 F	S	W	S	T	3.8 T	6.5 S
28	6.2 T	6.5 F	3.8 F	2.7 M	3.8 W	4.5 S	M	T	S	W	5.8 F	6.6 S
29	6.4 W		3.6 S	2.5 T	4.6 T	2.3 S	T	F	M	T	5.4 S	5.5 M
30	7.6 T		4.9 S	2.8 W	2.0 F	2.3 M	W	S	T	F	3.9 S	9.1 T
31	8.1 F		1.6 M		1.1 S		T	S				7.1 W
NUMBER	723	666	738	712	744	714	2	292		499	708	744
MAXIMUM	9.6	6.8	7.0	5.4	4.6	4.6	.3	5.0		6.9	8.7	11.6

TOTAL SAMPLES = 6542
% OF POSSIBLE OBSERVATIONS = 74.7

11 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
11 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
3 PRIMARY NON-OVERLAPPING VIOLATIONS
3 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1987		FEB 1987		MAR 1987		APR 1987		MAY 1987		JUN 1987		JUL 1987		AUG 1987		SEP 1987		OCT 1987		NOV 1987		DEC 1987	
	1	3.0	T	1.8	S	1.5	S	4.9	W	2.7	F	M		W		S		T		3.5	T	5.4	S	.8	T
	2	1.3	F	2.3	M	3.2	M	2.8	T	2.6	S	T		T		S		W		5.6	F	5.3	M	2.4	W
	3	1.3	S		T	1.3	T	4.2	F	2.5	S	W		F		M		T		5.0	S	3.4	T	1.9	T
	4	2.9	S		W	1.0	W	3.9	S	5.6	M	T		S		T		F		4.9	S	3.6	W	-7.7	F
D	5	6.5	M		T	.9	T	3.6	S	6.8	T	F		S		W		S		3.2	M	4.4	T	-7.7	S
	6	5.4	T	3.6	F	3.7	F	3.4	M	3.5	W	S		M		T		S		5.1	T	4.3	F	1.2	S
A	7	-7.5	W	6.4	S	3.9	S	3.3	T	5.4	T	S		T		F		M		6.6	W	5.5	S	5.3	M
	8	5.8	T	6.7	S	4.6	S	2.1	W	5.0	F	M		W		S		T		4.5	T	3.8	S	2.6	T
Y	9	4.9	F	4.2	M	3.7	M	3.0	T	4.5	S	T		T		S		W		3.7	F	5.4	M	1.6	W
	10	2.2	S	-7.3	T	2.5	T	4.2	F	4.6	S	W		F		M		T		3.5	S	5.5	T	6.0	T
	11	2.5	S	6.7	W	3.3	W	2.7	S	4.8	M	T		S		T		F		4.0	S	5.2	W	6.4	F
O	12	7.1	M	-7.4	T	2.1	T	2.8	S	1.7	T	F		S		W		S		3.5	M	4.6	T	6.2	S
	13	5.7	T	6.3	F	5.5	F	2.1	M		W	S		M		T		S		2.9	T	5.6	F	2.9	S
F	14	4.0	W	6.1	S	5.4	S	3.3	T		T	S		T		F		M		3.1	W	5.5	S	4.2	M
	15	4.4	T	2.7	S	3.4	S	3.5	W		F	M		W		S		T		2.2	T	4.5	S	3.9	T
	16	5.6	F	4.0	M	4.0	M	3.1	T		S	T		T		S		W		3.1	F	4.4	M	3.2	W
M	17	4.2	S	4.3	T	3.8	T	2.7	F		S	W		F		M		T		3.8	S	4.9	T	-7.9	T
	18	3.1	S	3.4	W	3.6	W	2.3	S		M	T		S		T		F		4.0	S	6.8	W	-7.5	F
O	19	4.4	M	3.2	T	4.0	T	1.8	S		T	F		S		W		S		3.2	M	6.8	T	6.3	S
	20	6.6	T	5.5	F	3.9	F	2.9	M		W	S		M		T		S		5.4	T	-7.9	F	3.6	S
N	21	4.1	W	5.1	S	4.0	S	2.7	T		T	S		T		F		M		7.1	W	7.1	S	-8.3	M
	22	4.6	T	3.7	S	4.5	S	2.9	W		F	M		W		S		T		6.8	T	4.7	S	6.9	T
T	23	7.3	F	4.2	M	3.4	M	2.3	T		S	T		T		S		W		7.0	F	6.1	M	5.3	W
	24	5.8	S	5.4	T	3.2	T	4.9	F		S	W		F		M		T		5.8	S	4.3	T	3.9	T
H	25		S	3.7	W	3.5	W	4.4	S		M	T		S		T		F		4.7	S	3.9	W	1.8	F
	26		M	3.9	T	2.9	T	3.0	S		T	F		S		W		S		3.7	M	2.5	T	3.6	S
	27		T	5.2	F	4.8	F	3.8	M		W	S		M		T		S		5.3	T	5.5	F	4.8	S
	28	4.5	W	2.8	S	5.0	S	2.7	T		T	S		T		F		M		4.9	W	4.9	S	5.6	M
	29	3.5	T			2.2	S	1.8	W		F	M		W		S		T		4.4	T	5.3	S	-7.7	T
	30	2.9	F			4.3	M	2.2	T		S	T		T		S		W		3.7	F	5.3	M	5.8	W
	31	3.0	S			4.0	T				S			F		M				5.4	S			5.5	T
NUMBER		573		573		744		702		258										705		720		737	
MAXIMUM		7.5		7.4		5.5		4.9		6.8										7.1		7.9		8.3	

TOTAL SAMPLES = 5012
% OF POSSIBLE OBSERVATIONS = 57.2

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1988		FEB 1988		MAR 1988		APR 1988		MAY 1988		JUN 1988		JUL 1988		AUG 1988		SEP 1988		OCT 1988		NOV 1988		DEC 1988	
	1	1.8	F	6.1	M	4.6	T	3.9	F	2.7	S	.8	W	3.1	F	2.1	M	2.4	T		S	5.1	T	1.4	T
	2	3.2	S	5.8	T	3.9	W	2.7	S	4.2	M	.6	T	2.6	S	2.2	T	3.7	F		S	2.7	W		F
	3	3.7	S	5.8	W	4.9	T	1.8	S	3.8	T	.6	F	1.7	S	2.5	W	3.7	S		M	2.3	T		S
	4	5.3	M	6.2	T	4.0	F	3.0	M	4.7	W	.6	S	1.8	M	3.4	T	2.6	S		T	3.5	F		S
D	5	6.7	T	5.0	F	3.7	S	2.4	T	4.6	T	.3	S	2.4	T	3.1	F	2.9	M		W	3.9	S	3.3	M
	6	6.3	W	4.8	S	1.9	S	2.9	W	5.2	F	.7	M	2.5	W	1.7	S	3.9	T		T	1.2	S	4.4	T
A	7	5.5	T	3.3	S	4.2	M	3.7	T	4.7	S	.8	T	3.1	T	1.8	S	3.4	W		F	1.9	M	3.9	W
	8	7.4	F	5.9	M	6.2	T	3.5	F	4.1	S	.8	W	3.3	F	3.2	M	2.6	T		S	5.4	T	2.0	T
Y	9	5.9	S	7.6	T	3.2	W	3.3	S	3.8	M	.8	T	2.8	S	2.8	T	4.3	F		S	3.1	W	5.5	F
	10	1.8	S	5.3	W	3.4	T	2.3	S	4.0	T	.4	F	2.5	S	2.8	W		S		M	1.2	T	3.8	S
	11	4.9	M	6.7	T	3.7	F	4.7	M	1.7	W	.6	S	2.7	M	1.8	T		S		T	2.9	F	2.9	S
O	12	3.5	T	7.0	F	3.3	S	4.7	T		T	.3	S	2.3	T	1.6	F		M		W	2.5	S	1.4	M
	13	3.0	W	4.8	S	3.3	S	2.3	W	2.5	F	.5	M	2.7	W	.9	S		T		T	1.9	S	4.4	T
F	14	1.8	T	5.4	S	3.5	M	2.1	T	2.3	S	.6	T	2.0	T	1.3	S		W		F	4.0	M	3.8	W
	15	5.7	F	3.2	M	2.8	T	2.5	F	2.0	S	.7	W	2.0	F	2.0	M		T		S	4.0	T	3.7	T
	16	4.1	S	5.5	T	3.1	W	3.9	S	3.3	M	.5	T	1.7	S	2.2	T		F		S	2.9	W	4.0	F
M	17	2.6	S	3.6	W	2.4	T	3.9	S	3.0	T		F	2.1	S	2.5	W		S		M	3.9	T	4.0	S
	18	6.7	M	3.1	T	4.6	F	3.0	M	3.3	W		S	2.3	M	1.6	T		S	2.8	T	7.6	F	3.9	S
O	19	7.3	T	4.5	F	3.7	S	2.6	T	3.0	T		S	2.3	T	2.5	F		M	2.6	W	7.6	S		M
	20	7.1	W	4.4	S	3.1	S	4.1	W	4.0	F	2.3	M	2.8	W	1.9	S		T	3.0	T	1.0	S		T
N	21	7.7	T	4.9	S	3.3	M	2.9	T	4.0	S	1.3	T	3.2	T	1.5	S		W	4.2	F	1.0	M		W
	22	6.9	F	3.7	M	2.1	T	4.9	F	1.9	S	.7	W	2.5	F	2.9	M		T	4.6	S	.5	T		T
T	23	4.4	S	3.3	T	2.9	W	3.0	S	1.5	M	.8	T	1.7	S	4.0	T		F	3.1	S	4.0	W		F
	24	4.3	S	4.7	W	2.7	T	2.8	S	1.7	T	1.1	F	1.4	S	3.8	W		S	6.1	M	2.6	T		S
H	25	6.8	M	4.9	T	3.2	F	3.7	M	2.1	W	.4	S	2.3	M	3.3	T		S	5.0	T	1.5	F		S
	26	6.0	T	5.7	F	2.7	S	2.3	T	1.7	T	.3	S	1.9	T	2.7	F		M	4.9	W	1.7	S		M
	27	7.3	W	5.8	S	2.9	S	3.2	W	1.9	F	1.1	M	1.7	W	2.0	S		T	4.1	T	1.6	S		T
	28	8.9	T	4.5	S	3.7	M	4.2	T	1.4	S	1.7	T	1.6	T	2.3	S		W	5.2	F	4.4	M		W
	29	7.1	F	4.6	M	4.5	T	2.8	F	1.6	S	2.1	W	2.1	F	5.2	M		T	4.0	S	4.8	T		T
	30	4.4	S			3.2	W	2.7	S	2.1	M	2.4	T	1.8	S	1.6	T		F	4.4	S	4.6	W		F
	31	3.2	S			3.5	T			2.6	T			1.9	S	2.9	W			5.2	M				S
NUMBER		717		690		730		720		672		618		744		718		211		319		688		269	
MAXIMUM		8.9		7.6		6.2		4.9		5.2		2.4		3.3		5.2		4.3		6.1		7.6		5.5	

TOTAL SAMPLES = 7096
% OF POSSIBLE OBSERVATIONS = 80.8

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

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EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
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SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1989	FEB 1989	MAR 1989	APR 1989	MAY 1989	JUN 1989	JUL 1989	AUG 1989	SEP 1989	OCT 1989	NOV 1989	DEC 1989
	1	S	4.5 W	W	3.7 S	4.0 M	2.9 T	3.5 S	3.2 T	3.2 F	1.8 S	3.8 W	4.8 F
	2	M	3.7 T	T	1.8 S	3.7 T	3.6 F	2.5 S	3.2 W	2.8 S	4.5 M	5.4 T	4.9 S
	3	T	4.4 F	F	3.5 M	4.0 W	3.8 S	3.3 M	3.4 T	2.1 S	3.8 T	6.4 F	3.6 S
	4	W	2.8 S	S	3.8 T	3.6 T	2.7 S	2.3 T	4.7 F	1.5 M	3.5 W	5.4 S	5.5 M
D	5	T	2.0 S	S	4.8 W	3.3 F	4.0 M	3.5 W	3.6 S	4.0 T	3.9 T	2.8 S	6.1 T
	6	F	4.4 M	2.4 M	3.6 T	3.1 S	3.9 T	4.4 T	2.6 S	2.6 W	4.5 F	6.6 M	5.1 W
A	7	S	5.3 T	4.1 T	3.8 F	1.9 S	4.2 W	2.6 F	3.8 M	3.6 T	4.3 S	4.8 T	5.4 T
	8	S	4.8 W	3.0 W	3.3 S	3.6 M	4.0 T	2.3 S	3.6 T	5.3 F	3.2 S	5.3 W	3.8 F
Y	9	M	6.4 T	2.9 T	3.2 S	3.3 T	4.5 F	2.4 S	4.2 W	5.1 S	5.7 M	6.8 T	3.7 S
	10	T	4.8 F	4.4 F	2.2 M	4.3 W	4.0 S	3.5 M	4.3 T	2.9 S	4.4 T	6.5 F	3.7 S
	11	W	4.3 S	4.2 S	3.6 T	3.5 T	2.9 S	3.9 T	3.9 F	3.0 M	3.9 W	6.3 S	4.4 M
O	12	T	2.7 S	1.3 S	2.6 W	3.2 F	3.4 M	3.8 W	2.6 S	2.8 T	4.4 T	6.3 S	5.6 T
	13	F	2.0 M	2.4 M	4.5 T	2.7 S	2.3 T	3.6 T	1.3 S	4.1 W	4.3 F	4.8 M	5.9 W
F	14	S	T	2.2 T	5.7 F	2.2 S	4.4 W	3.3 F	3.5 M	6.3 T	4.4 S	4.7 T	7.1 T
	15	S	W	.9 W	4.8 S	3.8 M	4.0 T	1.8 S	3.2 T	6.5 F	3.6 S	5.6 W	6.7 F
	16	M	T	2.3 T	2.2 S	3.6 T	3.3 F	1.8 S	4.2 W	5.1 S	4.6 M	6.9 T	5.6 S
M	17	T	F	2.3 F	3.7 M	2.4 W	3.1 S	3.3 M	3.4 T	3.1 S	4.8 T	5.3 F	3.0 S
	18	W	S	.8 S	1.9 T	3.0 T	3.0 S	3.0 T	3.7 F	3.0 M	4.1 W	4.5 S	4.1 M
O	19	T	S	1.2 S	4.4 W	2.9 F	3.1 M	5.3 W	3.1 S	3.1 T	.3 T	2.5 S	8.2 T
	20	F	M	2.7 M	4.6 T	3.0 S	2.5 T	4.4 T	2.2 S	4.2 W	2.7 F	5.8 M	7.5 W
N	21	S	T	2.8 T	3.4 F	2.6 S	3.4 W	3.6 F	3.7 M	3.9 T	3.3 S	7.9 T	8.6 T
	22	S	W	3.1 W	2.6 S	3.2 M	3.1 T	3.0 S	2.7 T	5.4 F	1.4 S	6.0 W	7.7 F
T	23	M	T	3.7 T	2.1 S	2.3 T	3.9 F	4.0 S	3.2 W	5.1 S	1.4 M	5.2 T	7.0 S
	24	T	F	2.7 F	3.7 M	2.7 W	2.1 S	3.0 M	3.2 T	4.5 S	1.3 T	2.4 F	4.2 S
H	25	W	S	2.0 S	1.7 T	2.7 T	1.6 S	3.9 T	3.8 F	5.2 M	3.9 W	2.3 S	2.6 M
	26	T	S	2.4 S	3.6 W	2.2 F	2.6 M	4.4 W	3.2 S	2.6 T	3.0 T	.9 S	4.5 T
	27	F	M	3.5 M	3.0 T	2.2 S	4.1 T	3.6 T	2.4 S	.3 W	3.4 F	3.8 M	2.3 W
	28	S	T	3.4 T	3.2 F	1.3 S	3.2 W	4.1 F	3.6 M	3.4 T	3.2 S	3.3 T	.3 T
	29	S		3.0 W	2.9 S	1.1 M	2.5 T	3.5 S	4.4 T	4.9 F	1.9 S	3.4 W	6.6 F
	30	M		2.4 T	3.0 S	2.3 T	3.5 F	2.2 S	3.0 W	2.7 S	4.4 M	3.8 T	5.5 S
	31	T		3.9 F		3.4 W		3.6 M	3.5 T		4.1 T		4.2 S
NUMBER			285	568	717	744	720	744	744	720	744	720	744
MAXIMUM			6.4	4.4	5.7	4.3	4.5	5.3	4.7	6.5	5.7	7.9	8.6

TOTAL SAMPLES = 7450
% OF POSSIBLE OBSERVATIONS = 85.0

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

DAY OF MONTH	JAN 1990		FEB 1990		MAR 1990		APR 1990		MAY 1990		JUN 1990		JUL 1990		AUG 1990		SEP 1990		OCT 1990		NOV 1990		DEC 1990	
1	3.3	M	4.1	T	3.4	T		S		T		F		S		W		S		M	4.3	T	4.3	S
2	5.9	T	2.7	F	4.3	F		M		W		S		M		T		S		T	4.4	F	2.5	S
3	5.2	W	1.4	S	3.6	S		T		T		S		T		F		M		W	3.9	S	4.0	M
4	5.2	T	1.5	S	2.3	S		W		F		M		W		S		T		T	3.3	S	3.7	T
5	5.2	F	1.4	M	1.3	M		T		S		T		T		S		W		F	4.5	M	4.9	W
6	5.2	S	4.4	T	2.0	T		F		S		W		F		M		T		S	4.9	T	5.7	T
7	4.5	S	3.3	W	1.5	W		S		M		T		S		T		F		S	4.2	W	8.1	F
8	5.5	M	3.1	T	2.2	T		S		T		F		S		W		S		M	5.0	T	7.2	S
9	2.2	T	2.5	F	3.2	F		M		W		S		M		T		S		T	6.2	F	6.0	S
10	5.3	W	3.0	S	.7	S		T		T		S		T		F		M		W	6.9	S	6.3	M
11	5.2	T	2.4	S	1.2	S		W		F		M		W		S		T		T	6.8	S	6.0	T
12	6.1	F	3.6	M	3.3	M		T		S		T		T		S		W		F	5.9	M	5.2	W
13	5.0	S	4.7	T	3.3	T		F		S		W		F		M		T		S	5.7	T	5.9	T
14	4.6	S	3.0	W	3.4	W		S		M		T		S		T		F		S	5.4	W	2.9	F
15	4.3	M	2.5	T	3.7	T		S		T		F		S		W		S		M	5.9	T	4.3	S
16	4.8	T	2.7	F	3.7	F		M		W		S		M		T		S		T	7.7	F	4.4	S
17	4.7	W	2.9	S	2.8	S		T		T		S		T		F		M		W	7.3	S	6.7	M
18	4.7	T	2.7	S	3.5	S		W		F		M		W		S		T		T	4.2	S	6.7	T
19	5.8	F	3.0	M	2.5	M		T		S		T		T		S		W		F	7.5	M	6.0	W
20	5.3	S	5.6	T	3.2	T		F		S		W		F		M		T		S	4.8	T	5.6	T
21	4.4	S	6.0	W	3.0	W		S		M		T		S		T		F		S	2.8	W	6.0	F
22	6.4	M	5.8	T	3.2	T		S		T		F		S		W		S		M	2.7	T	3.7	S
23	5.8	T	5.1	F	2.3	F		M		W		S		M		T		S		T	5.4	F	2.5	S
24	5.5	W	2.9	S	2.2	S		T		T		S		T		F		M		W	1.6	S	5.3	M
25	4.6	T	2.7	S	1.2	S		W		F		M		W		S		T		T	2.0	S	1.8	T
26	4.5	F	5.9	M	2.3	M		T		S		T		T		S		W	5.5	F	4.5	M	3.8	W
27	4.3	S	4.6	T	1.5	T		F		S		W		F		M		T	5.1	S	5.7	T	5.4	T
28	1.2	S	5.1	W	1.8	W		S		M		T		S		T		F	5.4	S	4.6	W	5.3	F
29	3.3	M			2.6	T		S		T		F		S		W		S	3.5	M	4.9	T	2.8	S
30	2.1	T			3.5	F		M		W		S		M		T		S	1.9	T	4.4	F	2.5	S
31	3.2	W				S				T				T		F			4.9	W			2.0	M
NUMBER	730		672		706														126		712		725	
MAXIMUM	6.4		6.0		4.3														5.5		7.7		8.1	

TOTAL SAMPLES = 3671
% OF POSSIBLE OBSERVATIONS = 41.9

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1991		FEB 1991		MAR 1991		APR 1991		MAY 1991		JUN 1991		JUL 1991		AUG 1991		SEP 1991		OCT 1991		NOV 1991		DEC 1991	
	1	2.7	T	9.1	F	1.4	F	3.4	M	3.6	W	2.3	S	3.5	M	2.6	T		S	5.4	T	6.5	F	3.5	S
	2	7.9	W	6.7	S	2.3	S	3.1	T	3.2	T	2.3	S	3.6	T	3.6	F		M	3.8	W	4.1	S	4.0	M
	3	9.4	T	2.1	S	2.5	S	2.0	W	2.6	F	3.1	M	4.1	W	1.8	S		T	2.7	T	2.2	S	3.6	T
	4	8.7	F	2.4	M	2.1	M	1.3	T	2.1	S	2.6	T	2.0	T	1.1	S		W	3.2	F	5.4	M	5.1	W
D	5	6.0	S	4.6	T	3.3	T	3.1	F	1.6	S	2.6	W	2.6	F	2.6	M		T	2.8	S	6.6	T	4.9	T
	6	3.6	S	4.7	W	4.2	W	2.7	S	3.1	M	3.5	T	2.1	S	3.5	T		F	2.6	S	6.0	W	4.6	F
A	7	6.8	M	5.1	T	3.3	T	1.4	S	1.9	T	2.9	F	2.0	S	3.5	W		S	4.9	M	5.1	T	3.9	S
	8	7.8	T	5.0	F	3.6	F	2.1	M	2.6	W	2.9	S	3.4	M	3.5	T		S	5.6	T	5.9	F	3.5	S
Y	9	7.3	W	3.6	S	1.5	S	1.3	T	2.5	T	2.3	S	4.3	T	4.0	F		M	5.2	W	4.2	S	4.9	M
	10	7.7	T	2.8	S	1.3	S	2.0	W	3.0	F	3.0	M	3.6	W	2.5	S		T	6.1	T	3.0	S	4.5	T
	11	9.6 *	F	5.9	M	2.7	M	1.7	T	2.1	S	3.0	T	4.2	T	2.5	S	2.3	W	7.0	F	2.2	M	3.8	W
O	12	5.8	S	6.0	T	1.2	T	1.6	F	2.0	S	2.9	W	4.5	F	3.0	M	3.0	T	4.0	S	5.9	T	3.6	T
	13	4.2	S	5.6	W	4.6	W	2.2	S	3.2	M	2.9	T	2.7	S	3.1	T	3.6	F	3.9	S	5.2	W	5.1	F
F	14	5.4	M	5.7	T	3.5	T	2.2	S	2.2	T	3.1	F	2.6	S	3.6	W	2.4	S	4.3	M	3.5	T	5.3	S
	15	4.8	T	5.6	F	4.0	F	2.9	M	2.7	W	1.8	S	3.7	M	3.3	T	2.6	S	5.8	T	5.4	F	5.0	S
	16	5.9	W	3.7	S	3.4	S	2.9	T	3.8	T	1.7	S	3.7	T	4.2	F	3.6	M	3.3	W	4.9	S	6.3	M
M	17	8.0	T	3.4	S	1.3	S	3.0	W	4.1	F	3.1	M	3.3	W	2.2	S	4.0	T	3.4	T	.8	S	8.4	T
	18	6.5	F	3.3	M	2.2	M	2.7	T	2.1	S	2.5	T	3.5	T	1.6	S	2.6	W	4.0	F	4.8	M	5.4	W
O	19	3.4	S	5.0	T	2.3	T	3.6	F	.9	S	2.3	W	4.4	F	3.6	M	4.9	T	3.6	S	3.4	T	5.3	T
	20	2.6	S	4.7	W	3.2	W	2.0	S	2.5	M	2.6	T	2.8	S	3.3	T	4.1	F	2.7	S	3.6	W	5.1	F
N	21	4.5	M	4.2	T	3.4	T	1.2	S	3.4	T	3.5	F	2.3	S	3.3	W	3.3	S	4.5	M	4.1	T	3.7	S
	22	6.7	T	5.0	F	4.0	F	1.8	M	2.9	W	2.7	S	4.0	M	3.2	T	2.4	S	6.1	T	5.1	F	3.6	S
T	23	4.8	W	3.6	S	2.4	S	2.2	T	2.9	T	1.8	S	1.6	T	3.7	F	3.6	M	3.8	W	4.4	S	6.1	M
	24	4.3	T	1.8	S	1.2	S	2.7	W	2.9	F	2.5	M	2.9	W	2.9	S	2.9	T	1.8	T	3.8	S	5.6	T
H	25	5.7	F	4.2	M	3.4	M	2.6	T	1.3	S	3.3	T	3.2	T	2.7	S	4.4	W	1.9	F	7.7	M	3.9	W
	26	4.8	S	4.0	T	3.0	T	3.4	F	1.2	S	2.9	W	3.3	F	3.7	M	3.7	T	1.9	S	4.5	T	5.0	T
	27	3.7	S	5.5	W	3.0	W	2.1	S	1.1	M	3.8	T	2.6	S	3.4	T	4.1	F	1.9	S	3.6	W	7.6	F
	28	4.7	M	4.6	T	3.0	T	1.7	S	2.6	T	1.9	F	2.7	S	1.8	W	2.8	S	3.8	M	1.5	T	7.4	S
	29	6.4	T			3.4	F	2.3	M	2.5	W	2.6	S	3.4	M	3.4	T	1.9	S	4.6	T	1.9	F	2.6	S
	30	7.5	W			3.4	S	1.1	T	3.1	T	2.6	S	3.2	T	1.3	F	3.8	M	3.4	W	3.4	S	6.1	M
	31	6.4	T			1.8	S			3.0	F			3.2	W		S			5.6	T			5.1	T
NUMBER		705		666		742		716		737		720		744		698		465		744		678		738	
MAXIMUM		9.6		9.1		4.6		3.6		4.1		3.8		4.5		4.2		4.9		7.0		7.7		8.4	

TOTAL SAMPLES = 8353
% OF POSSIBLE OBSERVATIONS = 95.4

1 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
1 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
1 PRIMARY NON-OVERLAPPING VIOLATIONS
1 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
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EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

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SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1992		FEB 1992		MAR 1992		APR 1992		MAY 1992		JUN 1992		JUL 1992		AUG 1992		SEP 1992		OCT 1992		NOV 1992		DEC 1992	
	1	1.8	W	5.0	S	3.7	S	4.5	W	2.6	F	2.6	M	3.2	W	3.3	S	1.7	T	2.8	T	1.9	S	5.8	T
	2	6.1	T	3.8	S	4.5	M	4.5	T	2.6	S	2.7	T	3.4	T	2.1	S	2.5	W	3.2	F	2.4	M	6.3	W
	3	7.3	F	5.5	M	5.0	T	4.7	F	2.7	S	3.1	W	2.4	F	3.5	M	4.1	T	2.4	S	2.6	T	5.4	T
	4	5.6	S	6.0	T	4.1	W	3.7	S	3.7	M	3.1	T	2.4	S	3.7	T	3.3	F	2.4	S	3.8	W	4.4	F
D	5	2.7	S	6.0	W	5.0	T	3.1	S	4.5	T	2.8	F	1.8	S	2.4	W	1.9	S	3.9	M	4.7	T	4.2	S
	6	5.5	M	6.1	T	3.9	F	3.8	M	4.5	W	2.4	S	3.3	M	3.2	T	1.3	S	2.6	T	5.3	F	4.1	S
A	7	5.3	T	5.9	F	3.1	S	3.0	T	3.7	T	2.4	S	3.4	T	3.1	F	.9	M	4.0	W	5.1	S	7.2	M
	8	6.3	W	4.1	S	3.3	S	4.4	W	3.4	F	3.4	M	3.5	W	2.8	S	2.8	T	4.0	T	4.0	S	4.6	T
Y	9	5.1	T	3.4	S	3.5	M	2.9	T	1.8	S	3.2	T	3.3	T	2.9	S	2.5	W	3.9	F	4.5	M	5.2	W
	10	6.5	F	5.6	M	4.0	T	3.1	F	1.8	S	4.1	W	3.3	F	2.9	M	4.2	T	3.7	S	4.6	T	2.7	T
	11	5.3	S	4.6	T	3.7	W	2.5	S	2.5	M	2.0	T	2.8	S	3.1	T	3.9	F	3.2	S	4.9	W	6.0	F
O	12	2.5	S	3.4	W	3.9	T	2.4	S	2.8	T	2.7	F	1.4	S	2.5	W	2.0	S	5.5	M	4.7	T	4.5	S
	13	6.5	M	5.2	T	4.6	F	3.6	M	2.8	W	2.2	S	3.4	M	1.8	T	2.3	S	3.3	T	5.5	F	2.8	S
F	14	6.8	T	2.6	F	4.7	S	4.3	T	2.8	T	2.2	S	2.7	T	2.3	F	1.6	M	2.9	W	4.3	S	3.8	M
	15	4.1	W	2.0	S	1.2	S	3.6	W	3.3	F	4.5	M	3.3	W	2.1	S	3.0	T	3.0	T	5.5	S	5.4	T
	16	6.3	T	2.5	S	3.7	M	2.7	T	2.2	S	5.1	T	3.5	T	1.3	S	3.1	W	4.0	F	4.4	M	4.4	W
M	17	5.7	F	1.4	M	3.2	T	2.9	F	2.1	S	3.1	W	3.6	F	1.1	M	3.0	T	4.1	S	4.6	T	2.8	T
	18	4.1	S	1.1	T	3.3	W	1.6	S	3.1	M	3.9	T	2.7	S	2.5	T	3.0	F	4.4	S	4.7	W	6.2	F
O	19	4.4	S	1.3	W	4.6	T	1.2	S	3.6	T	4.1	F	1.6	S	2.0	W	3.7	S	6.3	M	4.8	T	4.7	S
	20	4.6	M	4.1	T	4.2	F	2.1	M	3.4	W	3.2	S	2.6	M	2.4	T	3.8	S	6.2	T	4.0	F	1.6	S
N	21	6.4	T	3.0	F	3.4	S	3.8	T	2.8	T	2.3	S	3.2	T	1.2	F	2.9	M	4.6	W	3.9	S	4.9	M
	22	6.3	W	3.4	S	2.3	S	3.6	W	3.2	F	3.6	M	3.1	W	1.1	S	4.6	T	4.1	T	2.6	S	5.9	T
T	23	6.7	T	3.7	S	3.1	M	3.7	T	2.4	S	4.1	T	3.0	T	.9	S	3.6	W	6.6	F	3.6	M	5.8	W
	24	8.7	F	4.6	M	3.2	T	2.8	F	2.5	S	3.6	W	3.2	F	2.1	M	2.9	T	7.0	S	2.6	T	4.5	T
H	25	6.1	S	3.5	T	3.5	W	2.3	S	1.3	M	4.0	T	2.2	S	2.6	T	2.9	F	4.1	S	4.2	W	1.8	F
	26	5.4	S	4.2	W	2.6	T	2.8	S	2.6	T	3.4	F	2.2	S	3.4	W	3.0	S	6.9	M	2.8	T	3.0	S
	27	6.3	M	5.4	T	3.2	F	3.1	M	3.1	W	3.2	S	3.9	M	3.0	T	3.6	S	5.1	T	3.5	F	2.8	S
	28	3.9	T	5.1	F	3.1	S	3.1	T	3.4	T	2.4	S	3.2	T	2.6	F	3.9	M	4.7	W	2.6	S	1.4	M
	29	5.3	W	4.7	S	2.2	S	3.6	W	3.3	F	3.1	M	2.5	W	2.3	S	5.3	T	2.8	T	2.5	S	1.5	T
	30	7.1	T			3.1	M	3.2	T	2.7	S	2.8	T	1.7	T	1.8	S	3.8	W	3.3	F	5.8	M	4.0	W
	31	5.3	F			3.2	T			2.7	S			3.9	F	2.5	M			2.7	S			1.9	T
NUMBER		737		696		734		695		742		717		714		729		709		744		718		744	
MAXIMUM		8.7		6.1		5.0		4.7		4.5		5.1		3.9		3.7		5.3		7.0		5.8		7.2	

TOTAL SAMPLES = 8679
% OF POSSIBLE OBSERVATIONS = 98.8

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1993		FEB 1993		MAR 1993		APR 1993		MAY 1993		JUN 1993	JUL 1993	AUG 1993	SEP 1993	OCT 1993	NOV 1993	DEC 1993
	1	1.5	F	4.0	M	3.1	M	3.8	T	2.2	S	T	T	S	W	F	M	W
	2	2.8	S	2.9	T	4.8	T	2.9	F	1.9	S	W	F	M	T	S	T	T
	3	2.9	S	5.0	W	5.2	W	2.0	S	2.8	M	T	S	T	F	S	W	F
	4	1.4	M	4.8	T	4.4	T	1.9	S	3.2	T	F	S	W	S	M	T	S
D	5	5.6	T	5.6	F	5.2	F	3.5	M	3.1	W	S	M	T	S	T	F	S
	6	6.1	W		S	3.7	S		T	4.7	T	S	T	F	M	W	S	M
A	7	5.2	T		S	2.0	S		W	3.2	F	M	W	S	T	T	S	T
	8	6.4	F	5.8	M	3.4	M	1.3	T	2.1	S	T	T	S	W	F	M	W
Y	9	4.2	S	5.6	T	2.2	T	2.5	F	2.2	S	W	F	M	T	S	T	T
	10	3.0	S	3.8	W	5.0	W	1.9	S	2.2	M	T	S	T	F	S	W	F
	11	5.8	M	4.2	T	3.0	T	2.0	S	1.4	T	F	S	W	S	M	T	S
O	12	7.3	T	5.5	F	1.9	F	2.3	M	2.1	W	S	M	T	S	T	F	S
	13	8.1	W	3.7	S	1.6	S	2.0	T	2.4	T	S	T	F	M	W	S	M
F	14	7.2	T	2.8	S	2.4	S	2.6	W	2.7	F	M	W	S	T	T	S	T
	15	6.7	F	1.7	M	4.1	M	2.8	T	2.2	S	T	T	S	W	F	M	W
	16	4.1	S	1.7	T	3.6	T	2.7	F	1.1	S	W	F	M	T	S	T	T
M	17	3.4	S	2.7	W	1.8	W	1.3	S	2.2	M	T	S	T	F	S	W	F
	18	6.4	M	5.4	T		T	1.3	S	2.9	T	F	S	W	S	M	T	S
O	19	5.5	T	3.1	F		F	2.8	M	1.8	W	S	M	T	S	T	F	S
	20	2.6	W	1.3	S		S	2.3	T	2.4	T	S	T	F	M	W	S	M
N	21	3.4	T	1.2	S		S	2.4	W	2.5	F	M	W	S	T	T	S	T
	22	3.5	F	2.2	M		M	2.3	T	2.1	S	T	T	S	W	F	M	W
T	23	3.3	S	5.3	T		T	2.9	F	2.0	S	W	F	M	T	S	T	T
	24	2.0	S	3.8	W		W	2.2	S	2.7	M	T	S	T	F	S	W	F
H	25	5.2	M	3.9	T	5.0	T	1.5	S	2.3	T	F	S	W	S	M	T	S
	26	4.8	T	4.3	F	4.6	F	2.5	M	2.4	W	S	M	T	S	T	F	S
	27	4.0	W	3.5	S	3.6	S	2.8	T	2.6	T	S	T	F	M	W	S	M
	28	5.6	T	2.1	S	2.7	S	3.4	W	1.3	F	M	W	S	T	T	S	T
	29	3.5	F			3.0	M	3.5	T		S	T	T	S	W	F	M	W
	30	1.8	S			2.7	T	2.8	F		S	W	F	M	T	S	T	T
	31	1.7	S			2.5	W				M		S	T		S		F
NUMBER		737		612		548		639		656								
MAXIMUM		8.1		5.8		5.2		3.8		4.7								

TOTAL SAMPLES = 3192
% OF POSSIBLE OBSERVATIONS = 36.4

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1993	FEB 1993	MAR 1993	APR 1993	MAY 1993	JUN 1993	JUL 1993	AUG 1993	SEP 1993	OCT 1993	NOV 1993	DEC 1993
	1	F	M	M	T	S	1.7 T	1.6 T	1.3 S	2.8 W	3.2 F	2.7 M	4.5 W
	2	S	T	T	F	S	2.3 W	1.8 F	1.6 M	2.2 T	3.2 S	4.6 T	2.8 T
	3	S	W	W	S	M	2.2 T	1.1 S	2.2 T	3.3 F	3.1 S	4.5 W	5.3 F
	4	M	T	T	S	T	2.4 F	1.0 S	2.7 W	2.9 S	4.7 M	2.5 T	2.7 S
D	5	T	F	F	M	W	1.8 S	.8 M	1.7 T	2.9 S	3.7 T	3.9 F	3.0 S
	6	W	S	S	T	T	1.7 S	1.5 T	2.1 F	1.4 M	2.5 W	4.0 S	4.1 M
A	7	T	S	S	W	F	1.5 M	1.3 W	1.6 S	2.0 T	1.6 T	3.8 S	3.9 T
	8	F	M	M	T	S	1.2 T	1.6 T	1.3 S	2.8 W	2.5 F	4.9 M	1.7 W
Y	9	S	T	T	F	S	1.9 W	1.8 F	1.7 M	2.7 T	2.4 S	4.7 T	3.9 T
	10	S	W	W	S	M	2.0 T	1.8 S	1.9 T	3.4 F	2.5 S	4.5 W	2.1 F
	11	M	T	T	S	T	1.4 F	1.8 S	2.0 W	3.2 S	2.9 M	4.0 T	1.6 S
O	12	T	F	F	M	W	1.5 S	1.0 M	1.4 T	2.0 S	3.0 T	3.5 F	1.9 S
	13	W	S	S	T	T	1.8 S	1.5 T	1.9 F	2.1 M	2.2 W	1.6 S	2.6 M
F	14	T	S	S	W	F	2.0 M	1.2 W	1.9 S	2.4 T	2.6 T	1.7 S	3.2 T
	15	F	M	M	T	S	1.5 T	1.2 T	1.2 S	2.2 W	2.9 F	4.6 M	2.8 W
	16	S	T	T	F	S	1.4 W	1.5 F	1.7 M	2.4 T	2.8 S	4.2 T	3.4 T
M	17	S	W	W	S	M	1.6 T	1.4 S	1.9 T	3.4 F	1.5 S	6.4 W	4.0 F
	18	M	T	T	S	T	1.9 F	1.7 S	2.2 W	3.5 S	2.4 M	5.8 T	3.8 S
O	19	T	F	F	M	W	2.0 S	2.5 M	2.3 T	3.1 S	3.2 T	5.1 F	3.2 S
	20	W	S	S	T	T	1.1 S	T	1.7 F	2.0 M	3.5 W	4.2 S	3.3 M
N	21	T	S	S	W	F	1.9 M	W	1.7 S	2.1 T	3.3 T	4.8 S	3.4 T
	22	F	M	M	T	S	1.1 T	T	1.4 S	2.3 W	4.8 F	3.3 M	2.8 W
T	23	S	T	T	F	S	1.2 W	1.6 F	1.7 M	2.8 T	4.3 S	2.6 T	3.8 T
	24	S	W	W	S	M	1.4 T	1.6 S	1.0 T	4.3 F	3.3 S	2.9 W	3.6 F
H	25	M	T	T	S	T	2.4 F	1.8 S	1.5 W	4.7 S	3.1 M	2.7 T	2.6 S
	26	T	F	F	M	W	2.5 S	1.4 M	1.7 T	2.7 S	2.8 T	3.2 F	2.7 S
	27	W	S	S	T	T	2.4 S	2.1 T	3.5 F	4.0 M	3.9 W	3.2 S	3.6 M
	28	T	S	S	W	2.6 F	1.1 M	2.0 W	2.7 S	3.7 T	4.1 T	2.9 S	4.1 T
	29	F		M	T	2.3 S	1.4 T	1.8 T	1.1 S	4.3 W	3.1 F	6.7 M	3.8 W
	30	S		T	F	1.8 S	1.5 W	1.8 F	1.9 M	4.4 T	3.6 S	5.0 T	3.7 T
	31	S		W		1.3 M		2.0 S	3.1 T		4.0 S		4.4 F
NUMBER						80	720	658	741	720	737	720	735
MAXIMUM						2.6	2.5	2.5	3.5	4.7	4.8	6.7	5.3

TOTAL SAMPLES = 5111
% OF POSSIBLE OBSERVATIONS = 58.3

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5-PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5-PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 -PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1994		FEB 1994		MAR 1994		APR 1994		MAY 1994		JUN 1994	JUL 1994	AUG 1994	SEP 1994	OCT 1994	NOV 1994		DEC 1994	
	1	4.0	S	3.4	T	2.9	T	2.2	F	2.1	S	W	F	M	T	S		T	4.2	T
	2	4.2	S	3.3	W	2.5	W	2.5	S	1.9	M	T	S	T	F	S	3.0	W	3.7	F
	3	4.4	M	3.7	T	2.8	T	1.9	S	2.8	T	F	S	W	S	M	3.3	T	3.0	S
	4	5.4	T	4.3	F	2.8	F	1.5	M	2.5	W	S	M	T	S	T	3.3	F	1.4	S
D	5	3.3	W	3.7	S	2.8	S	2.3	T	2.1	T	S	T	F	M	W	2.1	S	2.5	M
	6	3.3	T	3.5	S	2.0	S	2.3	W	2.4	F	M	W	S	T	T	1.9	S	3.7	T
A	7	4.6	F	4.5	M	2.2	M	2.2	T	1.7	S	T	T	S	W	F	2.9	M	3.2	W
	8	4.4	S	2.5	T	2.1	T	1.8	F	1.6	S	W	F	M	T	S	3.5	T	3.3	T
Y	9	2.4	S	4.6	W	3.2	W	1.5	S	2.8	M	T	S	T	F	S	3.8	W	3.4	F
	10	6.8	M	3.4	T	2.7	T	1.1	S	2.4	T	F	S	W	S	M	3.2	T	2.7	S
	11	4.5	T	3.3	F	2.3	F	1.9	M	1.9	W	S	M	T	S	T	3.0	F	2.6	S
O	12	3.4	W	3.3	S	2.4	S	1.9	T	1.3	T	S	T	F	M	W	2.9	S	3.6	M
	13	4.1	T	1.8	S	2.6	S	2.2	W	1.7	F	M	W	S	T	T	1.4	S	3.2	T
F	14	3.8	F	2.7	M	3.5	M	1.4	T	1.7	S	T	T	S	W	F	2.4	M	2.4	W
	15	2.6	S	4.8	T	2.4	T	3.3	F	1.4	S	W	F	M	T	S	2.4	T	3.3	T
	16	1.3	S	4.5	W	2.8	W	2.8	S	1.7	M	T	S	T	F	S	2.3	W	3.5	F
M	17	2.4	M	2.5	T	1.9	T	2.9	S	1.8	T	F	S	W	S	M	2.2	T	3.1	S
	18	3.5	T	2.8	F	2.1	F	3.6	M	2.0	W	S	M	T	S	T	3.2	F	3.1	S
O	19	2.6	W	3.3	S	1.9	S	2.2	T	2.1	T	S	T	F	M	W	3.0	S	3.7	M
	20	2.6	T	2.0	S	2.1	S	2.8	W	2.2	F	M	W	S	T	T	1.7	S	3.7	T
N	21	3.3	F	1.4	M	2.3	M	2.1	T	1.6	S	T	T	S	W	F	2.9	M	4.7	W
	22	2.4	S	2.0	T	1.7	T	1.7	F	1.4	S	W	F	M	T	S	3.1	T	5.3	T
T	23	2.3	S	3.0	W	2.6	W	1.8	S	2.4	M	T	S	T	F	S	3.6	W	3.8	F
	24	3.8	M	2.7	T	2.2	T	1.7	S	2.4	T	F	S	W	S	M	2.7	T	2.5	S
H	25	3.4	T	3.1	F	2.5	F	1.9	M	2.4	W	S	M	T	S	T	2.3	F	2.4	S
	26	3.5	W	2.6	S	2.5	S	1.5	T	1.8	T	S	T	F	M	W	1.6	S	2.4	M
	27	3.5	T	2.0	S	1.5	S	2.8	W	.9	F	M	W	S	T	T	1.4	S	3.6	T
	28	4.0	F	3.3	M	2.2	M	2.0	T		S	T	T	S	W	F	2.9	M	2.6	W
	29	3.7	S			1.6	T	2.2	F		S	W	F	M	T	S	4.2	T	2.3	T
	30	1.2	S			2.3	W	2.1	S		M	T	S	T	F	S	3.7	W	3.1	F
	31	3.4	M			1.6	T				T		S	W		M			2.8	S
NUMBER		730		666		744		711		632							680		744	
MAXIMUM		6.8		4.8		3.5		3.6		2.8							4.2		5.3	

TOTAL SAMPLES = 4907
% OF POSSIBLE OBSERVATIONS = 56.0

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

		JAN 1995		FEB 1995		MAR 1995		APR 1995		MAY 1995		JUN 1995		JUL 1995		AUG 1995		SEP 1995		OCT 1995		NOV 1995		DEC 1995	
	1	1.7	S	3.7	W	2.8	W	2.0	S	3.5	M	3.3	T	1.6	S	3.3	T	3.3	F	2.5	S	4.8	W	3.4	F
	2	1.8	M	2.6	T	2.7	T	1.3	S	3.5	T	2.9	F	1.4	S	2.5	W	2.7	S	2.7	M	5.4	T	2.9	S
	3	3.7	T	4.2	F	2.6	F	2.2	M	3.2	W	2.0	S	1.3	M	3.4	T	2.0	S	2.9	T	4.5	F	1.9	S
	4	3.7	W	4.9	S	2.0	S	2.2	T	4.1	T	1.5	S	.9	T	2.9	F	.7	M	1.5	W	3.6	S	1.8	M
D	5	3.3	T	3.4	S	1.5	S	1.7	W	6.1	F	2.4	M	2.2	W	3.1	S	2.0	T	2.0	T	1.8	S	2.4	T
	6	6.4	F	4.0	M	1.9	M	2.4	T	2.7	S	2.8	T	1.9	T	1.3	S	2.7	W	3.3	F	3.7	M	3.7	W
A	7	5.7	S	2.4	T	2.5	T	2.2	F	2.4	S	2.6	W	2.1	F	1.8	M	1.7	T	2.9	S	5.4	T	3.2	T
	8	1.8	S	2.8	W	2.2	W	1.6	S	3.6	M	2.2	T	1.6	S	2.7	T	2.1	F	2.0	S	4.2	W	3.2	F
Y	9	1.7	M	2.6	T	1.4	T	1.5	S	2.5	T	2.3	F	1.0	S	3.4	W	1.8	S	3.1	M	2.8	T	2.7	S
	10	1.6	T	2.2	F	1.3	F	2.2	M	3.3	W	1.7	S	1.8	M	2.8	T	1.9	S	2.7	T	2.8	F	2.0	S
	11	2.8	W	1.8	S	1.8	S	2.3	T	4.1	T	1.3	S	1.7	T	1.9	F	3.4	M	2.6	W	2.0	S	1.8	M
O	12	2.2	T	1.1	S	2.1	S	2.7	W	3.7	F	2.6	M	1.6	W	1.8	S	3.1	T	1.5	T	2.1	S	1.2	T
	13	2.2	F	2.6	M	1.9	M	1.8	T	2.7	S	2.7	T	1.9	T	1.1	S	2.7	W	2.8	F	4.4	M	2.9	W
F	14	1.8	S	2.3	T	2.0	T	1.1	F	1.9	S	2.4	W	1.9	F	2.7	M	3.5	T	2.7	S	3.6	T	2.1	T
	15	1.9	S	3.1	W	1.7	W	1.1	S	2.8	M	2.6	T	1.7	S	3.6	T	3.9	F	2.9	S	5.3	W	2.9	F
	16	1.9	M	3.8	T	1.9	T	1.2	S	3.2	T	2.9	F	1.6	S	1.9	W	3.7	S	2.0	M	4.9	T	1.8	S
M	17	3.3	T	3.6	F	2.5	F	1.4	M	2.6	W	1.9	S	2.2	M	1.6	T	1.8	S	2.3	T	8.1	F	1.9	S
	18	3.3	W	2.6	S	2.4	S	1.1	T	2.2	T	1.5	S	2.6	T	2.1	F	4.1	M	1.8	W	7.4	S	3.2	M
O	19	3.3	T	1.6	S	1.6	S	1.0	W	3.3	F	2.1	M	1.9	W	1.6	S	1.8	T	2.6	T	3.1	S	3.0	T
	20	3.9	F	2.5	M	1.9	M	1.8	T	1.9	S	2.0	T	1.9	T	3.8	S	1.7	W	3.8	F	5.7	M	2.8	W
N	21	3.9	S	3.6	T	1.6	T	1.3	F	1.7	S	2.3	W	1.8	F	2.4	M	1.7	T	2.7	S	5.1	T	2.7	T
	22	2.7	S	3.5	W	1.5	W	1.4	S	2.7	M	1.9	T	1.5	S	2.5	T	2.7	F	1.0	S	4.0	W	3.0	F
T	23	3.9	M	3.4	T	2.0	T		S	2.2	T	3.4	F	1.0	S	2.2	W	1.9	S	3.3	M	2.3	T	2.6	S
	24	3.5	T	4.1	F	1.9	F		M	2.9	W	3.2	S	2.3	M	2.5	T	1.9	S	2.3	T	3.0	F	2.2	S
H	25	3.1	W	4.2	S	1.9	S	2.7	T	2.1	T	2.6	S	2.9	T	2.6	F	2.0	M	3.0	W	2.6	S	.8	M
	26	2.9	T	2.6	S	2.0	S	2.3	W	2.6	F	2.5	M	2.2	W	2.4	S	2.0	T	2.2	T	1.6	S	1.8	T
	27	2.9	F	1.7	M	2.0	M	3.0	T	1.3	S	1.5	T	2.7	T	1.9	S	2.2	W	3.7	F	2.1	M	1.9	W
	28	3.0	S	1.9	T	1.9	T	3.1	F	1.1	S	1.7	W	3.2	F	2.4	M	1.9	T	3.4	S	2.8	T	2.2	T
	29	2.1	S			1.8	W	1.7	S	.6	M	2.0	T	2.1	S	2.4	T	2.3	F	3.1	S	2.2	W	4.0	F
	30	2.7	M			1.6	T	1.6	S	2.4	T	2.2	F	1.0	S	2.1	W	2.3	S	4.7	M	3.1	T	5.1	S
	31	3.6	T			2.7	F			2.8	W			2.4	M	2.7	T			3.9	T			4.5	S
NUMBER		737		661		744		634		744		720		744		744		720		744		720		738	
MAXIMUM		6.4		4.9		2.8		3.1		6.1		3.4		3.2		3.8		4.1		4.7		8.1		5.1	

TOTAL SAMPLES = 8650
% OF POSSIBLE OBSERVATIONS = 98.7

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

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MONITORING OBJECTIVE ( ): *** NOT FOUND ***

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ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

DAY	JAN 1996		FEB 1996		MAR 1996		APR 1996		MAY 1996		JUN 1996		JUL 1996		AUG 1996		SEP 1996		OCT 1996		NOV 1996		DEC 1996	
1	1.7	M	2.7	T	2.6	F	1.8	M	1.4	W	1.6	S	1.5	M	1.7	T	1.1	S	2.3	T	3.2	F	.9	S
2	3.3	T	2.1	F	2.7	S	1.2	T	1.6	T	1.3	S	1.3	T	1.4	F	.9	M	2.9	W	3.2	S	2.0	M
3	2.8	W	1.8	S	1.7	S	1.5	W	1.3	F	1.5	M	2.3	W	1.0	S	2.3	T	3.7	T	3.1	S	1.9	T
4	2.4	T	1.6	S	2.1	M	1.4	T	1.2	S	1.1	T	1.0	T	1.1	S	1.6	W	3.4	F	3.1	M	1.9	W
5	3.0	F	3.8	M	1.9	T	2.1	F	1.4	S	.9	W	1.5	F	1.5	M	1.0	T	3.2	S	2.7	T	2.8	T
6	2.8	S	4.3	T	2.2	W	2.0	S	1.3	M	1.4	T	1.6	S	1.3	T	3.0	F	2.8	S	3.1	W	3.1	F
7	2.3	S	4.1	W	2.3	T	2.0	S	.9	T	1.7	F	1.3	S	2.1	W	2.1	S	2.9	M	2.9	T	2.2	S
8	4.3	M	2.3	T	2.7	F	2.1	M	.9	W	1.3	S	2.0	M	2.4	T	2.0	S	3.8	T	3.0	F	.7	S
9	4.9	T	3.0	F	2.6	S	1.6	T	1.0	T	1.4	S	1.9	T	2.1	F	2.3	M	3.8	W	3.4	S	2.7	M
10	4.0	W	1.9	S	2.6	S	1.6	W	1.6	F	.8	M	1.5	W	2.4	S	2.4	T	2.9	T	5.0	S	1.5	T
11	4.5	T	1.9	S	2.2	M	1.5	T	1.8	S	.9	T	1.5	T	1.4	S	1.9	W	3.2	F	3.2	M	2.0	W
12	3.7	F	4.1	M	1.4	T	1.2	F	1.6	S	1.1	W	1.8	F	1.5	M	1.7	T	3.2	S	5.0	T	2.5	T
13	3.8	S	2.6	T	1.9	W	1.3	S	1.3	M	1.6	T	1.7	S	1.6	T	2.3	F	2.3	S	5.0	W	2.0	F
14	3.0	S	3.1	W	1.8	T	1.4	S	1.5	T	1.3	F	1.7	S	1.4	W	2.2	S	2.0	M	2.6	T	2.1	S
15	3.2	M	2.3	T	1.7	F	1.7	M	1.7	W	1.3	S	1.7	M	1.8	T	1.4	S	1.8	T	2.6	F	2.2	S
16	3.9	T	3.1	F	1.4	S	1.7	T	1.6	T	1.0	S	1.8	T	2.1	F	1.2	M	1.8	W	2.6	S	1.7	M
17	2.1	W	2.9	S	1.6	S	1.3	W	1.5	F	.9	M	1.6	W	1.7	S	1.6	T	2.8	T	1.1	S	2.3	T
18	1.9	T	2.1	S	1.6	M	1.1	T	1.0	S	.8	T	.9	T	.9	S	1.8	W	1.9	F	2.4	M	2.7	W
19	2.2	F	1.4	M	2.1	T	1.9	F	.8	S	1.5	W	1.6	F	2.0	M	1.8	T	1.4	S	2.2	T	3.4	T
20	2.1	S	2.2	T	1.9	W	1.5	S	1.2	M	1.4	T	1.8	S	1.5	T	2.4	F	1.5	S	2.1	W	3.7	F
21	1.1	S	1.8	W	2.2	T	1.6	S	1.3	T	1.8	F	1.3	S	1.5	W	2.1	S	2.5	M	2.6	T	3.2	S
22	3.1	M	1.7	T	2.1	F	2.4	M	.8	W	1.4	S	1.3	M	1.6	T	1.2	S	2.3	T	4.5	F	2.2	S
23	2.9	T	1.8	F	1.3	S	2.1	T	.8	T	1.3	S	1.3	T	2.3	F	1.8	M	1.7	W	4.5	S	3.5	M
24	2.0	W	1.5	S	1.0	S	1.5	W	1.7	F	1.6	M	2.2	W	1.9	S	2.2	T	2.3	T	3.2	S	3.4	T
25	2.3	T	1.2	S	1.6	M	1.8	T	1.1	S	1.3	T	1.5	T	2.0	S	1.4	W	1.2	F	2.1	M	1.4	W
26	2.7	F	1.4	M	1.5	T	1.4	F	1.2	S	1.3	W	1.9	F	2.6	M	1.5	T	1.6	S	2.4	T	2.6	T
27	1.8	S	2.2	T	2.0	W	1.4	S	.5	M	1.1	T	1.8	S	1.5	T	2.4	F	1.6	S	2.6	W	2.9	F
28	1.1	S	2.0	W	1.5	T	1.0	S	.7	T	1.3	F	1.0	S	1.5	W	2.9	S	2.5	M	1.0	T	2.1	S
29	2.7	M	2.4	T	1.7	F	1.6	M	.8	W	1.3	S	1.3	M	2.0	T	3.4	S	2.3	T	2.1	F	1.4	S
30	1.8	T			1.6	S	1.6	T	1.1	T	1.7	S	1.4	T	2.8	F	3.0	M	2.8	W	2.2	S	1.6	M
31	2.1	W			1.3	S			1.5	F			1.5	W	2.6	S			2.6	T			1.5	T
NUMBER	737		696		744		720		744		720		744		744		720		736		720		744	
MAXIMUM	4.9		4.3		2.7		2.4		1.8		1.8		2.3		2.8		3.4		3.8		5.0		3.7	

TOTAL SAMPLES = 8769
% OF POSSIBLE OBSERVATIONS = 99.8

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
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DAY OF MONTH	JAN 1997		FEB 1997		MAR 1997		APR 1997		MAY 1997		JUN 1997		JUL 1997		AUG 1997		SEP 1997		OCT 1997		NOV 1997		DEC 1997	
1	1.0	W	4.1	S	2.0	S	1.1	T	1.0	T	1.1	S	2.3	T	3.2	F	1.3	M	2.5	W	2.9	S	2.2	M
2	2.0	T	2.4	S	1.0	S	1.5	W	1.8	F	1.3	M	1.9	W	2.2	S	2.7	T		T		S	3.2	T
3	1.7	F	2.4	M	1.7	M	1.9	T	1.5	S	1.4	T	2.1	T	2.1	S	2.3	W		F		M	3.7	W
4	2.4	S	2.3	T	1.7	T	1.0	F	1.5	S	1.9	W	1.1	F	1.9	M	3.4	T		S		T	3.8	T
5	3.2	S	2.2	W	1.6	W	1.2	S	2.0	M	1.5	T	1.5	S	2.0	T	3.3	F		S		W	4.0	F
6	2.8	M	2.1	T	2.0	T	1.5	S	1.4	T	2.4	F	1.5	S	1.9	W	2.5	S		M		T	4.0	S
7	3.2	T	2.3	F	2.4	F	1.4	M	1.1	W	1.8	S	1.9	M		T	2.2	S	2.2	T	3.7	F	3.0	S
8	4.0	W	2.1	S	2.0	S	1.7	T	1.9	T	1.5	S	2.9	T		F	3.0	M	3.0	W	3.6	S	1.8	M
9	3.5	T	1.8	S	1.6	S	1.3	W	2.3	F	1.9	M	2.8	W		S	3.4	T	2.9	T	2.4	S	2.5	T
10	4.0	F	2.0	M	2.0	M	1.3	T	2.3	S	2.6	T	1.3	T		S	3.5	W	2.9	F	2.8	M	3.0	W
11	2.5	S	2.4	T	2.1	T	1.5	F	1.9	S	3.8	W	1.9	F		M	2.9	T	1.9	S	2.9	T	2.9	T
12	1.1	S	1.7	W	1.8	W	1.5	S	1.8	M	2.0	T	1.5	S		T	2.7	F	1.4	S	3.8	W	3.0	F
13	2.4	M	2.2	T	1.8	T	1.5	S	1.7	T	3.1	F	1.6	S		W	2.2	S	3.8	M	3.7	T	2.2	S
14	3.4	T	3.6	F	1.7	F	1.5	M	1.9	W	1.6	S	2.9	M		T	2.4	S	4.8	T	3.2	F	2.0	S
15	3.2	W	3.4	S	1.5	S	2.2	T	1.8	T	1.3	S	2.4	T		F	2.0	M	4.5	W	2.8	S	3.3	M
16	2.9	T	3.3	S	1.9	S	1.6	W	1.4	F	1.9	M	3.3	W		S	2.3	T	3.5	T	2.5	S	2.7	T
17	3.1	F	1.4	M	1.8	M	1.8	T	1.1	S	2.5	T	2.5	T		S	2.6	W	6.0	F	1.9	M	3.0	W
18	4.6	S	2.4	T	1.5	T	2.1	F	1.1	S	1.9	W	1.4	F		M	2.4	T	5.3	S	2.7	T	1.9	T
19	4.7	S	1.6	W	2.2	W	1.5	S	1.5	M	1.4	T	1.8	S		T	3.3	F	3.3	S	2.8	W	3.0	F
20	2.9	M	2.2	T	1.9	T	1.5	S	1.3	T	1.6	F	1.7	S		W	2.8	S	3.3	M	3.5	T	2.5	S
21	2.8	T	2.8	F	1.9	F	1.2	M	1.3	W	1.2	S	3.7	M		T	2.5	S	4.6	T	2.7	F	2.3	S
22	2.1	W	2.7	S	2.2	S	1.2	T	1.5	T	.7	S	3.1	T	2.8	F	3.0	M	4.9	W	2.8	S	2.9	M
23	3.0	T	1.7	S	2.1	S	1.0	W	1.5	F	1.4	M	1.7	W	2.2	S	3.3	T	3.7	T	1.7	S	2.4	T
24	2.9	F	3.1	M	1.0	M	1.0	T	.7	S	1.9	T	2.2	T	1.4	S	4.6	W	3.5	F	2.8	M	2.5	W
25	2.5	S	3.3	T	1.9	T	1.5	F	.9	S	3.6	W	2.2	F	2.7	M	4.2	T	2.6	S	2.2	T	1.5	T
26	2.1	S	2.4	W	1.5	W	1.9	S	1.0	M	2.5	T	2.0	S	3.3	T	2.5	F	2.3	S	2.2	W	2.6	F
27	2.6	M	2.0	T	1.0	T	2.0	S	1.5	T	4.3	F	1.1	S	2.8	W		S	4.9	M	1.3	T	2.7	S
28	2.8	T	1.9	F	1.2	F	1.3	M	1.5	W	4.1	S	2.0	M	2.0	T		S	8.0	T	2.5	F	3.1	S
29	2.2	W			1.3	S	.9	T	1.2	T	2.4	S	2.2	T	2.9	F	2.3	M	6.5	W	2.7	S	3.3	M
30	3.1	T			1.1	S	2.0	W	2.1	F	2.7	M	2.1	W	2.7	S	4.0	T	5.0	T	2.8	S	3.9	T
31	6.2	F			.9	M			1.5	S			2.7	T	2.4	S			3.7	F			3.7	W
NUMBER	737		672		744		720		744		720		744		357		650		604		573		744	
MAXIMUM	6.2		4.1		2.4		2.2		2.3		4.3		3.7		3.3		4.6		8.0		3.8		4.0	

TOTAL SAMPLES = 8009
% OF POSSIBLE OBSERVATIONS = 91.4

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

08/25/99
AMP355RP

EPA AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS)
AIR QUALITY SUBSYSTEM
STANDARDS REPORT - CARBON MONOXIDE (42101)
MAXIMUM OF 8-HOUR RUNNING AVERAGE
STATE 16 IDAHO

PAGE 15
16:32:11

SITE-ID: 16-001-0007 POC: 1
COUNTY (001): ADA
CITY (08700): BOISE CITY
SITE ADDRESS: ODD FELLOWS BLDG/115.2 N 9TH
SUPPORT AGENCY (001): IDAHO DEPARTMENT OF HEALTH AND WELFARE-E
SITE COMMENTS: SO2 SITE FROM 1975 TO 10/81.
MONITOR COMMENTS: 11
REPORTING ORGANIZATION (000): *** NOT FOUND ***
MONITOR TYPE (0): UNKNOWN
COLLECTION AND ANALYSIS METHOD (011): INSTRUMENTAL NONDISPERSIVE INFRA-RED

AQCR (064): METROPOLITAN BOISE
URBAN AREA (1080): BOISE CITY, ID
LAND USE (2): COMMERCIAL
LOCATION-SETTING (1): URBAN AND CENTER CIT
MONITORING OBJECTIVE ( ): *** NOT FOUND ***

LATITUDE: 43:36:50 N
LONGITUDE: 116:12:12 W
UTM ZONE: 11
UTM-NORTHING: 4829082
UTM-EASTING: 00564287
ELEVATION-MSL: 00822 M
UNITS (007): PPM
PROBE HEIGHT: 00003 M

	JAN 1998		FEB 1998		MAR 1998		APR 1998		MAY 1998		JUN 1998		JUL 1998		AUG 1998		SEP 1998		OCT 1998		NOV 1998		DEC 1998	
1	2.6	T	2.5	S	1.4	S	2.0	W	1.8	F	1.7	M	1.2	W	1.1	S	2.2	T	2.5	T	2.0	S	2.1	T
2	2.8	F	2.2	M	1.8	M	1.6	T	1.3	S	2.3	T	1.2	T	.8	S	3.0	W	1.8	F	2.1	M	2.2	W
3	2.5	S	1.3	T	1.4	T	2.6	F	1.2	S	1.0	W	1.0	F	1.2	M	3.6	T	1.8	S	3.1	T	1.9	T
4	1.5	S	2.5	W	1.9	W	2.5	S	1.5	M	1.3	T	1.1	S	2.1	T	3.7	F	1.5	S	2.6	W	2.4	F
D 5	2.5	M	3.3	T	2.1	T	1.2	S	1.3	T	1.4	F	.6	S	1.8	W	3.6	S	1.8	M	3.1	T	2.5	S
6	2.4	T	2.5	F	1.7	F	1.8	M	1.6	W	1.2	S	1.1	M	1.5	T	2.0	S	2.5	T	2.3	F	1.3	S
A 7	2.9	W	1.1	S	1.3	S	1.1	T	1.4	T	1.3	S	1.3	T	1.4	F	1.0	M	2.0	W	2.4	S	1.8	M
8	2.0	T	1.1	S	1.3	S	1.3	W	.9	F	1.4	M	1.8	W	1.4	S	2.0	T	1.9	T	1.7	S	2.4	T
Y 9	2.8	F	1.9	M	1.9	M	1.7	T	1.1	S	1.3	T	1.7	T	1.6	S	1.8	W	2.1	F	1.9	M	2.3	W
10	2.4	S	1.7	T	2.3	T	1.8	F	1.1	S	2.2	W	1.4	F	1.3	M	1.7	T	2.0	S	1.9	T	2.4	T
11	2.6	S	2.1	W	1.9	W	1.2	S	1.5	M	1.4	T	1.5	S	1.6	T	1.5	F	2.3	S	2.2	W	2.8	F
O 12	3.8	M	1.8	T	1.9	T	1.1	S	1.4	T	2.0	F	1.6	S	1.4	W	1.5	S	2.9	M	2.9	T	2.9	S
13	2.8	T	2.0	F	2.5	F	1.6	M	1.3	W	1.6	S	1.2	M	1.7	T	1.5	S	3.0	T	3.2	F	2.7	S
F 14	2.4	W	2.0	S	2.4	S	1.3	T	1.4	T	1.0	S	1.2	T	1.7	F	1.9	M	2.5	W	3.5	S	1.8	M
15	2.6	T	1.8	S	1.9	S	2.0	W	1.6	F	1.6	M	1.5	W	1.6	S	2.5	T	1.7	T	3.9	S	2.9	T
16	3.1	F	1.4	M	2.0	M	1.4	T	1.3	S	1.0	T	1.3	T	1.5	S	2.0	W	1.5	F	2.6	M	3.0	W
M 17	2.6	S	2.1	T	1.2	T	1.7	F	1.3	S	1.4	W	2.2	F	.9	M	2.2	T	2.0	S	2.4	T	3.9	T
18	2.2	S	2.6	W	1.5	W	1.8	S	1.5	M	1.6	T	2.0	S	1.2	T	1.9	F	2.3	S	2.2	W	3.1	F
O 19	2.0	M	1.6	T	1.6	T	1.5	S	3.1	T	1.3	F	1.4	S	1.6	W	1.2	S	2.6	M	2.0	T	2.0	S
20	2.0	T	1.9	F	2.3	F	1.6	M	1.3	W	1.1	S	1.2	M	1.4	T	1.4	S	2.8	T	1.8	F	1.8	S
N 21	3.2	W	1.7	S	2.0	S	1.9	T	1.2	T	1.2	S	1.5	T	2.1	F	1.6	M	3.2	W	1.7	S	2.4	M
22	2.5	T	1.8	S	2.0	S	1.8	W	2.3	F	1.4	M	1.4	W	2.1	S	1.8	T	2.5	T	1.8	S	2.2	T
T 23	2.4	F	1.5	M	1.7	M	1.8	T	1.5	S	1.1	T	1.4	T	1.8	S	1.9	W	2.8	F	1.1	M	2.7	W
24	1.9	S	1.4	T	2.1	T	1.1	F	1.2	S	1.3	W	1.4	F	1.4	M	2.4	T	2.6	S	1.5	T	2.2	T
H 25	2.2	S	1.7	W	1.6	W	1.0	S	.8	M	1.7	T	1.4	S	2.1	T	2.0	F	1.2	S	1.5	W	1.5	F
26	2.0	M	1.9	T	1.2	T	.7	S	2.2	T	1.1	F	1.5	S	2.1	W	1.8	S	2.0	M	.8	T	2.1	S
27	2.4	T	2.1	F	1.9	F	1.4	M	1.5	W	1.3	S	1.5	M	2.0	T	2.1	S	2.7	T	2.1	F	2.1	S
28	3.2	W	2.3	S	1.9	S	2.6	T	1.5	T	1.6	S	1.8	T	3.2	F	2.3	M	2.2	W	1.9	S	3.3	M
29	2.5	T			1.0	S	2.0	W	1.2	F	1.7	M	1.8	W	2.4	S	2.4	T	2.0	T	1.9	S	3.1	T
30	2.8	F			1.4	M	1.8	T	1.2	S	1.4	T	1.5	T	2.0	S	2.1	W	2.5	F	1.5	M	3.8	W
31	2.8	S			1.8	T			1.3	S			1.1	F	2.6	M			2.5	S			3.3	T
NUMBER	737		672		744		720		744		720		744		744		720		744		720		744	
MAXIMUM	3.8		3.3		2.5		2.6		3.1		2.3		2.2		3.2		3.7		3.2		3.9		3.9	

TOTAL SAMPLES = 8753
% OF POSSIBLE OBSERVATIONS = 99.9

0 STARRED (*) ITEMS EXCEEDED THE PRIMARY STANDARD OF 9.5 PPM
0 PLUSSED (+) ITEMS EXCEEDED THE SECONDARY STANDARD OF 9.5 PPM
0 DAILY MAXIMUMS EXCEED THE ALERT LEVEL OF 17 PPM
0 PRIMARY NON-OVERLAPPING VIOLATIONS
0 SECONDARY NON-OVERLAPPING VIOLATIONS

Appendix C-2.
Boise Carbon Monoxide Saturation Study
1991-1992

BOISE CARBON MONOXIDE

SATURATION STUDY

~ º ~ º ~ º ~ º ~

WINTER

1991 – 1992

Prepared by

Douglas P. Collins

for

Division of Environmental Quality
Idaho Department of Health and Welfare
1410 North Hilton
Boise, ID 83706

April 1993

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ABSTRACT

The State of Idaho, Division of Environmental Quality (DEQ) conducted a carbon monoxide (CO) saturation study in Boise City from December 9, 1991 to February 7, 1992. The objectives of the study were to measure CO concentration levels at various selected sites throughout the city, to see if the measured concentrations exceeded state or federal standards, and to determine if the permanent CO monitor located at the Oddfellows site was representative of a maximum concentration. Carbon monoxide concentrations were measured using a series of portable samplers at 22 temporary sites. The individual samplers were operated for a continuous 8-hour period yielding an eight hour average concentration that could be directly compared to the eight hour standard.

During the study period, no violations of the 8-hour standard (9.0 ppm) were measured. The maximum 8-hour concentration measured by a portable sampler was 7.9 ppm at the Oddfellows site. Sampling occurred on 20 days, sampling an average of 139 sites per day. The Oddfellows site, also the location of the permanent CO monitor, consistently showed the highest 8-hour values, and was evaluated as the site most representative of a maximum concentration.

INTRODUCTION

Boise City/Northern Ada Co has been designated a nonattainment area for CO since 1977. The original designation was based on data collected from 1975 to 1977. During this period, both the 1-hour and 8-hour standards were exceeded. In 1976 alone, the 8-hour standard was exceeded 125 times. Ninety percent of all exceedances have occurred during the months from November through March. A control plan was submitted to the EPA by the Ada Planning Association in 1982 and revised in 1983. According to the plan, area attainment was to be reached by 1987. The past decade has seen a steady drop in the number of exceedances, with only three exceedances in the past five years. There were two exceedances of the eight hour standard in 1987, and one in 1991

With the drop in the number of exceedances, the Northern Ada County/Boise City non-attainment area is a candidate for redesignation as attainment of the CO standard. To qualify data collected at Boise's only CO monitoring site, the Oddfellows Hall site (Idaho & 9th), the DEQ operated a CO saturation study during the 1991-92 winter season. The study's goal was to determine if area CO concentrations were exceeding state and federal standards, and to determine if the Oddfellows site was still representative of maximum CO concentrations in Northern Ada County.

METHODS

The saturation study involved placing portable CO samplers at sites expected to produce significant levels of CO, and during the time estimated to produce the highest 8-hour average levels The portable samplers were operated simultaneously allowing for the direct comparison of daily data

CO Bag Sampler

The CO Bag Sampler is a single housing consisting of a 40” length of 6” inch diameter PVC drain field pipe, with a 6” PVC Cap on the top end which holds the electronic components. A small piece of PVC pipe is attached to the side of main housing, for mounting at the sample sites.

The sample bag is suspended inside the main housing. The electronics package, including 6v battery, two on/off clock-timers, and pump motor are attached to the 6" cap. The sample bag is attached to the bottom of the head assembly, which is then slipped onto the main housing. The head assembly occupies the upper 6" of the housing, and the sample bag occupies the rest The clock/timers start and stop the pump motors at the desired times, allowing the pumps to fill the sample bags at a fixed flow rate over an 8-hour period. The pump pulls ambient air through a plastic tube from the bottom of the sample, and pumps it into the collection bag. Air cannot enter or escape the bag unless the pump is operating (For more detailed information on sampler design and operation, see Attachment 3, CO Bag Sampler, December 1989 version)

Site Selection

Sampler sites were selected by DEQ, with help from Ada Planning Association and EPA, based on vehicle traffic volume, and public exposure. Vehicle traffic data was provided by the Ada Planning Association (Attachment 5) identifying intersections with the highest vehicle traffic. Vehicle traffic was used as the site selection criteria, because motor vehicles provide the largest source of CO Sites selected based on public exposure combined high traffic locations with locally dense populations such as schools, hospitals, and the down town business district. Twenty-two sites were selected for the study. These sites were broken into three categories; 5 central business district (CBD) sites, 14 corridor sites, and 2 background sites.

Central Business District sites were characterized by high and narrow traffic corridors, higher frequency of traffic signals, and slower average speed limits than corridor sites. The corridor sites were characterized by shallower and wider traffic corridors, lower frequency of traffic signals, and higher average speed limit than CBD sites. Background sites were located off of the main traffic areas. The monitor site located in Ann Morrison Park was selected as the general background site. The purpose of the site was to measure ambient levels of CO with as little impact from anthropogenic sources as possible. The 24th St and Irene background site was set up in a “low traffic” residential area in an attempt to evaluate the residential exposure to CO levels.

All study Sites were Selected using 40 CFR part 58 siting, criteria More information is available in the Boise CO Saturation Study Sampling Site Report (Attachment 1)

Two sites, Cole and Fairview, and 9th Street-Oddfellows Hall, had collocated bag samplers. Collocated means to operate two samplers simultaneously at one location. Comparison of data from the collocated samplers gives an indication of sampler precision. The 9th Street Oddfellows Hall collocated site is also the DEQ permanent CO monitoring site. Comparison of the Bag Sampler data to the data collected by the EPA reference method monitor produces an indication of the bag sampler accuracy.

Sampling Period

Because the portable samplers were to be operated simultaneously, and required several hours of preparation for each sampling day, it was necessary to determine if any one eight hour continuous period would provide the highest daily CO levels. Hourly CO data from the Oddfellows permanent monitor were reviewed for the winter months (December through February) of 1988, 89, and 90. The hourly CO values showed a regular diurnal pattern that corresponded with times of maximum traffic activity The two highest hourly values were regularly recorded at 5:00 p.m. and 7:00 a.m. From the CO data reviewed, a sampling period from noon to 8:00 p.m. was selected This period was judged to produce the highest 8 hour average value during the months of December through February.

During the latter stages of the study, hourly data from the permanent CO monitor showed an increased CO level during morning, business hours. On February 7, the sampling period was changed to 9:00 am to 5:00 p.m., but February 7 was the last day of the study period that had weather conditions that warranted sampling. So, only one day used this sampling period.

Sampling Day Selections

Due to study constraints, only a limited number of samples could be obtained. It was therefore necessary to establish criteria for selection of sampling days. With the objective of sampling during periods of elevated CO concentrations, sampling days were selected based on conditions that contribute to high CO levels. Assuming that daily vehicle traffic patterns would be fairly constant, meteorology was evaluated by DEQ staff to provide the best indicator of days that would have elevated CO. The primary indicator was a
forecasted stagnant air condition for the eight hour sampling period which would minimize the dispersion of pollutants. The secondary indicator was the forecasted temperature, as colder temperatures reduce the combustion efficiency of motor vehicles, resulting in higher CO emissions. Colder temperatures also result in higher levels of heating emissions, including CO from residential wood combustion. Each working day during the study, DEQ staff evaluated the forecasted meteorological conditions for the following day. If the forecast indicated that the desired conditions were probable, that day was selected for sampling.

Daily Sampling Procedures

Bag samplers week assembled, operated, disassembled, and the sample gases analyzed all in a 24-hour period. Assembly of the samplers included removing the head assembly from the battery chargers, checking batteries for sufficient charge, and checking both on and off clock/timers for the clock and timer settings. Sampling bags were picked at random and attached to the pump in the head assembly. Hose clamps between the pump and bag were closed off. The head assembly and attached bag were then slipped into the 6" PVC pipe housing, the air inlet hose was checked against blockage and then taped securely to the bottom of the housing. After all the samplers were assembled they were transported to the sampling sites, the bag hose clamps were opened, and the samplers were mounted in position. Once in place, the samplers operated during the preset time period (noon to 8:00 p.m.), being turned on and off by the clock/timers in the head assembly.

Starting just after 8:00 p.m. the samplers were retrieved, the bag hose clamps closed, and the samplers were returned to the DEQ lab for analysis Once at the DEQ lab, the samplers were disassembled, the heads hooked back up to the battery chargers, and the field sample bags were analyzed

In turn, each bag was attached to the analyzer (Dasibi 3003 SN160) and its concentration was recorded. After all the bags were analyzed, three or four bags were rechecked for quality assurance. Finally the bags were emptied and clamped closed Before and after the individual bag gases were analyzed, the analyzer was calibrated using both zero and span checks. Also the corresponding eight hour average CO concentration was retrieved from the permanent monitor for comparison with concentrations collected from the Oddfellows collocated site.

Sampler and Bags Tests

Prior to field use, small scale tests were done on bag effects, and sampling head flow constancy on CO concentration (Attachments 3 & 4). The results of the sampling head flow constancy showed a flow rate chance of ±3%. The bag effect test results showed that CO levels declined with time, with a 5% decrease in CO concentration after 12 hours residual time in the sampling bag and no further decrease after 24 hours. This test points out that CO concentration measurements will be conservative and that analysis should take place as soon as possible after sampling is complete.

Sampling bags were also individually tested for leaks before their initial use by submerging them in water while partially (60-80%) filled. It is assumed that the pressure exerted on the bags under these conditions greatly exceeded the pressure reached under normal operating conditions. While under water the bags were checked visually for leaks Any leaking bags were discarded and replaced. Bags were also rechecked for leaks after three to four uses.

RESULTS AND DISCUSSION

The data collected was evaluated using three methods, daily comparisons, inter-site comparison, and comparisons with the permanent site.

Daily Network Statistics

Table 1 (pages 15-16) and Figure 1 display daily 8-hour sampling period values and statistics for all sites, including the following features:

1. The 8-hour standard of 9.0 ppm was not exceeded on any day during the study.

2. Nine days had recorded values that reached or exceeded the 6.0 ppm level. One day, 12/17, had three sites exceed this level; one day, 1/10, had two sites exceed this level, and seven days, 1/8, 1/9, 1/13, 1/29, 1/23, and 1/24, had only one site exceed that level.

3. Daily maximum values ranged from 7.9 ppm (12/17) to 2.3 ppm (12/12).

4. Daily mean values ranged from 5.5 ppm (12/17) to 1.7 ppm (12/12).

5. Daily minimum values ranged from 2.3 ppm (12/17) to 0.2 ppm (12/20).

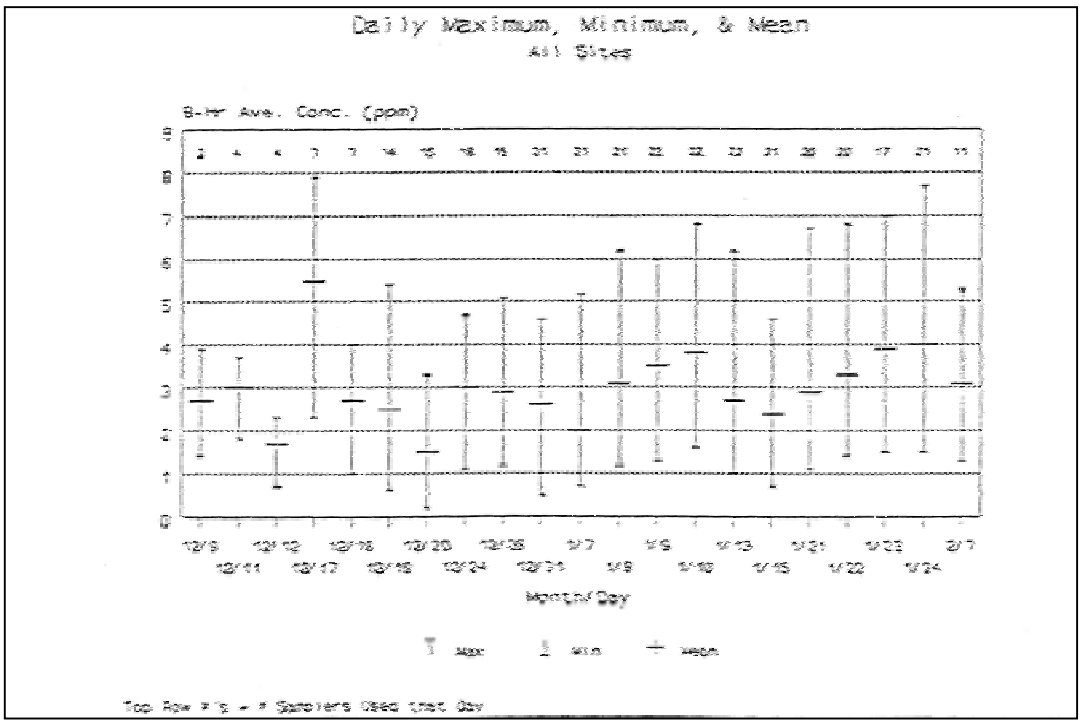


Figure 1.

Inter-Site Comparison

Table 1 and Figure 2 display 8-hour sampling period values and statistics by site, including the following features:

1. None of the sites exceeded the 8-hour standard of 9.0 ppm.

2. Four sites (1,12,14, & 17) exceeded the 6.0 ppm level. Sites 14 and 17 exceeded 6.0 ppm once, site 12 exceeded it twice, and site 1 exceeded it nine times.

3. The maximum values ranged from 7.9 ppm (site 1) to 1.8 ppm (site 21).

4. The mean values ranged ppm 5.2 (site 1) to 1.1 ppm (site 21).

5. The minimum values ranged from 2.5 ppm (sites 4 & 15) to 0.2 ppm (sites 9 & 21).

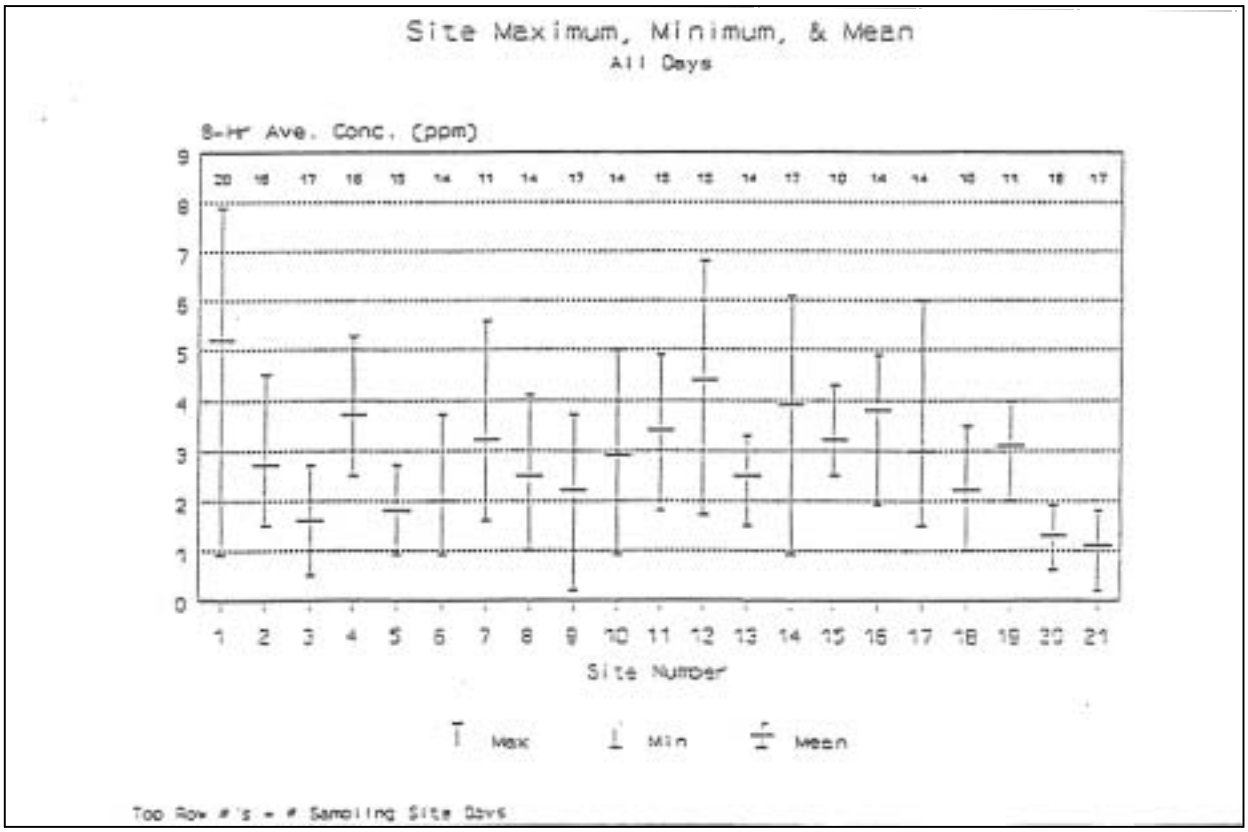


Figure 2.

Permanent Site Comparison

Table 1 and Figures 3, 4, and 5 display 8-hour sampling period data from the permanent site, including the following, features:

1. The permanent site did not exceed the 8-hour standard of 9.0 ppm, but exceeded the 6.0 ppm level nine times.

2. One site (site 1), the Oddfellows collocated site, recorded greater maximum and mean values than the permanent site.

3. The 9th Street-Oddfellows Hall site location recorded the highest 8 hour value, 18 out of 21 days.

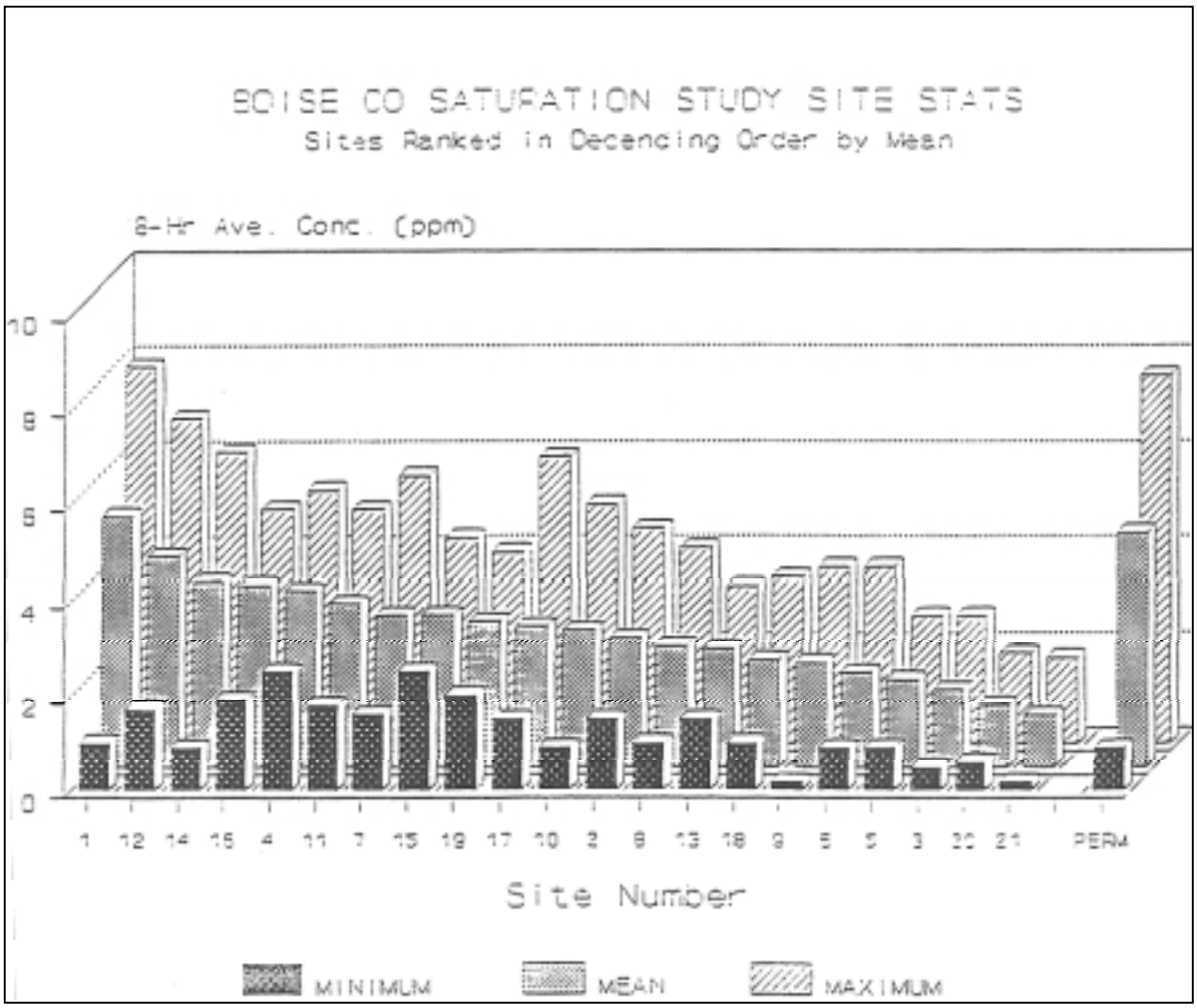


Figure 3.

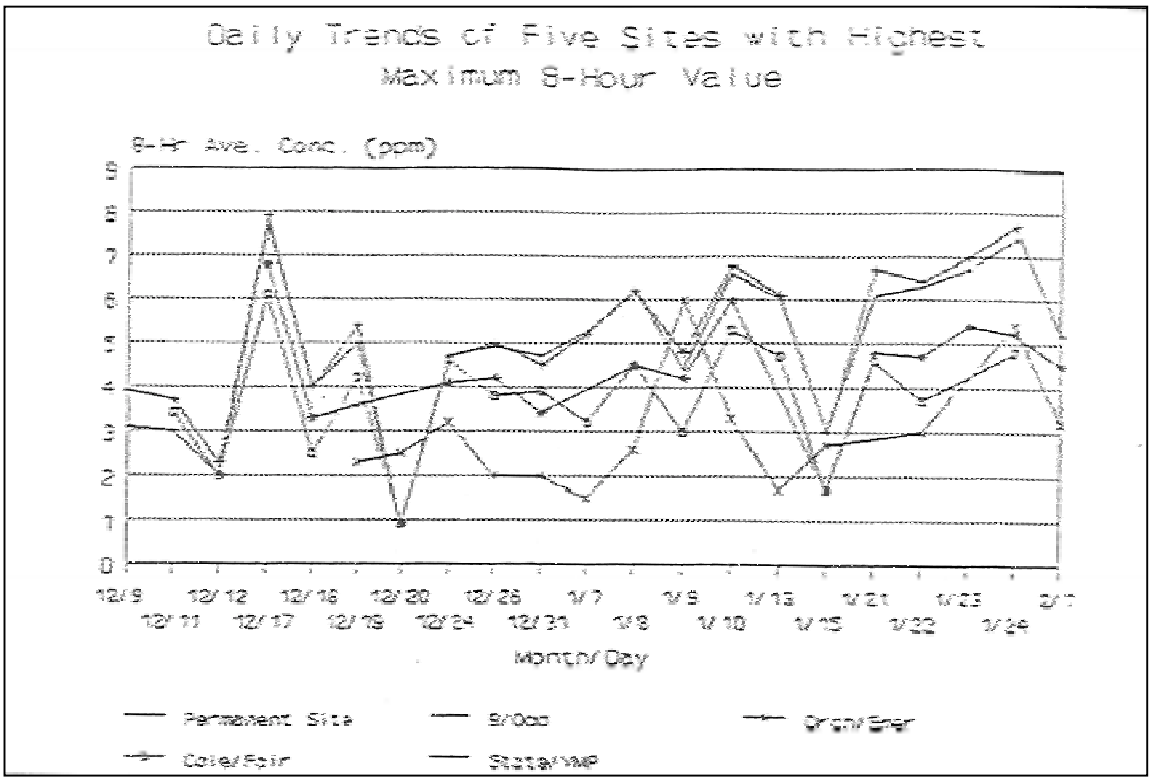


Figure 4.

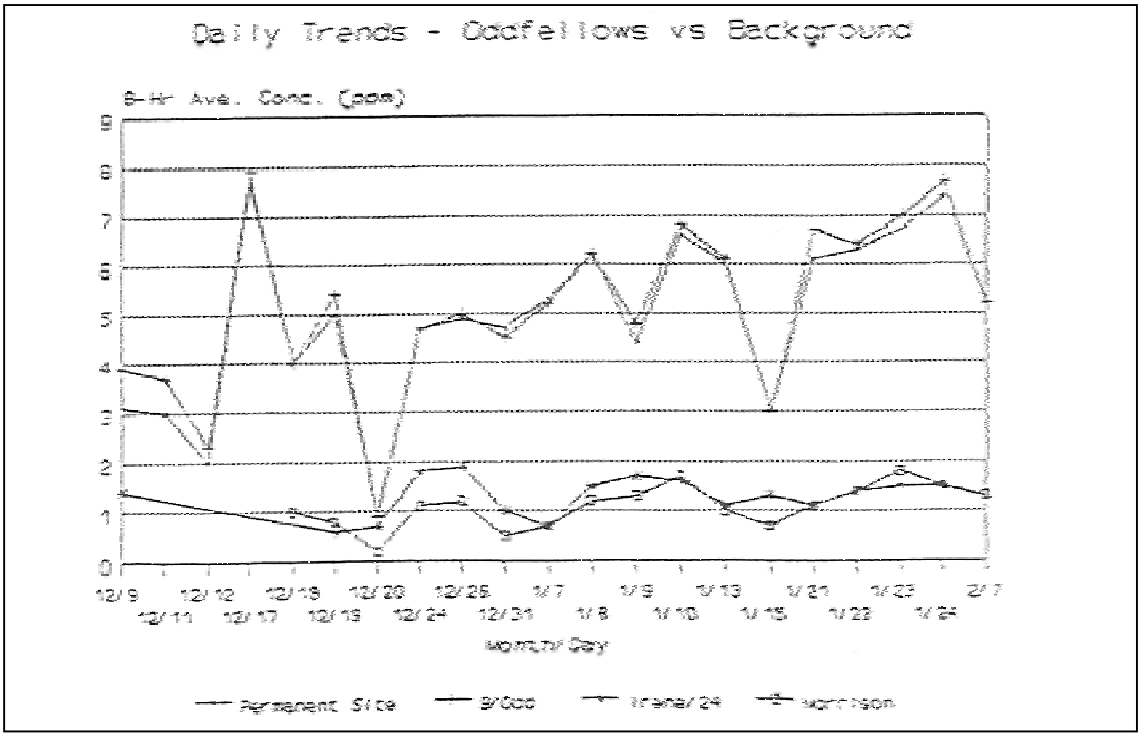


Figure 5.

Background Site Data

Table 1 and Figure 5 display 8-hour sampling period data from the background sites, including the following features:

1. The maximum values recorded by the background sites were 1.9 ppm at site 20, and 1.8 ppm at site 21.

2. The mean values recorded by the background sites were 1.3 ppm at site 20, and 1.1 ppm at site 21.

3. The minimum values recorded by the background sites were 0.9 ppm at site 20, and 0.2 ppm at site 21.

Collocated Site Comparison

Statistics on the precision collocated sites at the 9th Street-Oddfellows Hall site are displayed in Table 2 and Figure 6. The data shows a significant positive relationship (r = 0.9937).

Table 2

Collocated Precision Site Data, Oddfellows A & B
Daily 8-Hour Average CO Concentrations (ppm)

Date	9/ODDA	9/ODDB		
			Regression Output:	
12-17	7.9	7.9	Constant	-0.07105
12-18	4.0	4.0	Std Err of Y Est	0.203357
12-19	5.4	5.1	R Squared	0.987365
12-20	0.9	1.0	No of Observations	17
12-24	4.7	4.6	Degrees of Freedom	15
12-26	5.0	5.1	X Coefficient(s)	1.019932
12-31	4.5	4.6	Std Err of Coef	0.02979
1-7	5.2	5.2		
1-9	4.8	4.7	Correlation Coefficient	0.9937
1-10	6.8	6.6		
1-13	6.1	6.2		
1-15	3.0	3.0		
1-21	6.7	6.2		
1-22	6.4	6.8		
1-23	7.0	6.9		
1-24	7.7	7.5		
2-7	5.2	5.3		

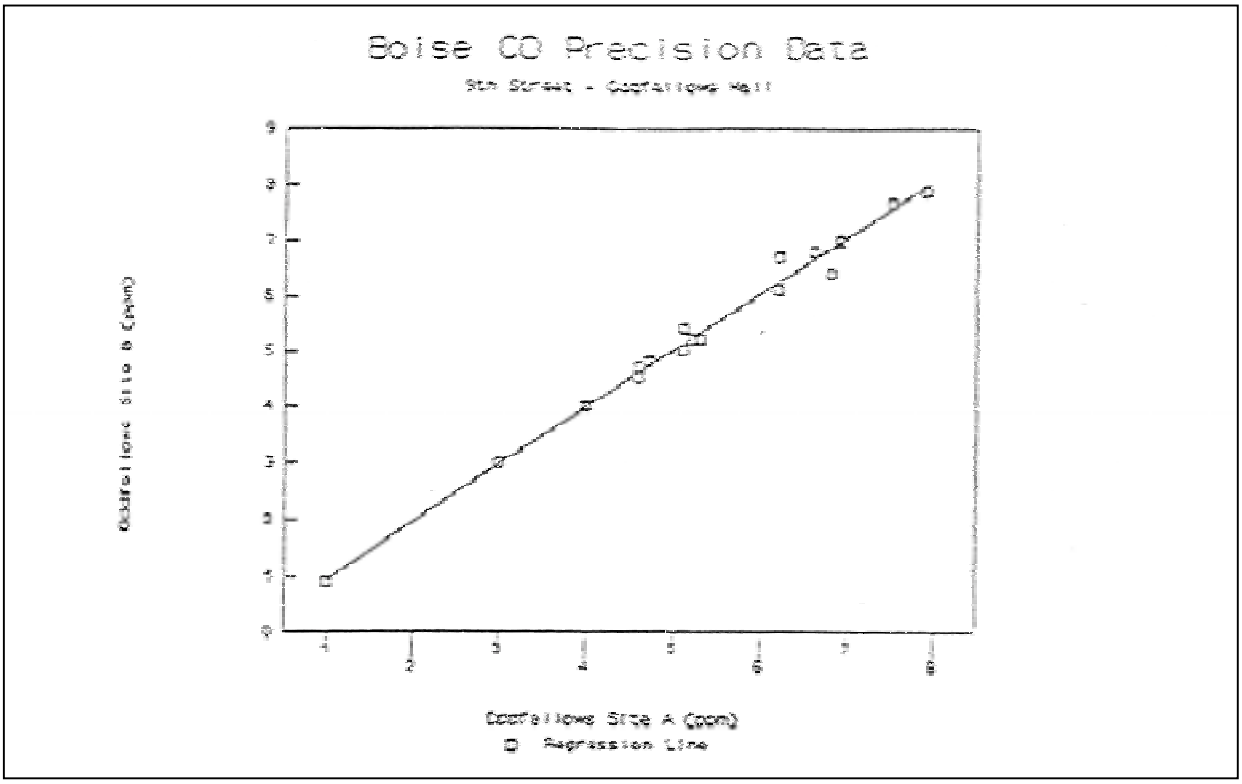


Figure 6.

Table 3 displays statistics on the precision collocated sites, Cole and Fairview A & B. A positive correlation was found between these two limited data sets, correlation coefficient of 0.9956.

Table 3

Collocated Precision Site Data, Cole & Fairview A & B Daily 8-Hour Average CO Concentrations (ppm)

Date	Site A	Site B	Regression Output:	
1-7	3.2	3.3	Constant	0.4207
1-8	4.5	4.3	Std Err of Y Est	0.0888
1-9	3.0	3.0	R Squared	0.9911
1-13	4.7	4.6	No of Observations	4
			Degrees of Freedom	2
			X Coefficient(s)	0.8777
			Std Err of Coef	0.0587
			Correlation Coefficient	0.9956

Table 4 and Figure 7 display statistics on the accuracy between the collocated Oddfellows site and the permanent site. A positive correlation was found between these two data sets, correlation coefficient of 0.9919 for OddA, and 0.9913 for OddB.

Table 4

Collocated Accuracy Site Data, Oddfellows A & B – Permanent (ppm)
Daily 8-Hour Average CO Concentrations (ppm)

Date	**9/ODDA**	**PERM**		
12-11	3.7	3.0	Regression Output:	
12-12	2.3	2.0	Constant	0.138688
12-17	7.9	7.7	Std Err of Y Est	0.241043
12-18	4.0	4.0	R Squared	0.98387
12-19	5.4	5.0	No of Observations	19
12-20	0.9	0.9	Degrees of Freedom	17
12-24	4.7	4.7		
12-26	5.0	4.9	X Coefficient(s)	1.00806
12-31	4.5	4.7	Std Err of Coef	0.031304
1-7	5.2	5.3		
1-8	6.2	6.2	Correlation Coefficient	0.9919
1-9	4.8	4.4		
1-10	6.8	6.6		
1-13	6.1	6.0		
1-15	3.0	3.0		
1-21	6.7	6.1		
1-22	6.4	6.3		
1-23	7.0	6.7		
1-24	7.7	7.4		
Date	**9/ODDB**	**PERM**		
			Regression Output:	
12-9	3.9	3.1	Constant	0.177175
12-17	7.9	7.7	Std Err of Y Est	0.236738
12-18	4.0	4.0	R Squared	0.982682
12-19	5.1	5.0	No of Observations	17
12-20	1.0	0.9	Degrees of Freedom	15
12-24	4.6	4.7		
12-26	5.1	4.9	X Coefficient(s)	0.994102
12-31	4.6	4.7	Std Err of Coef	0.034075
1-7	5.2	5.3		
1-9	4.7	4.4	Correlation Coefficient	0.9913
1-10	6.6	6.6		
1-13	6.2	6.0		
1-15	3.0	3.0		
1-21	6.2	6.1		
1-22	6.8	6.3		
1-23	6.9	6.7		
1-24	7.5	7.4		

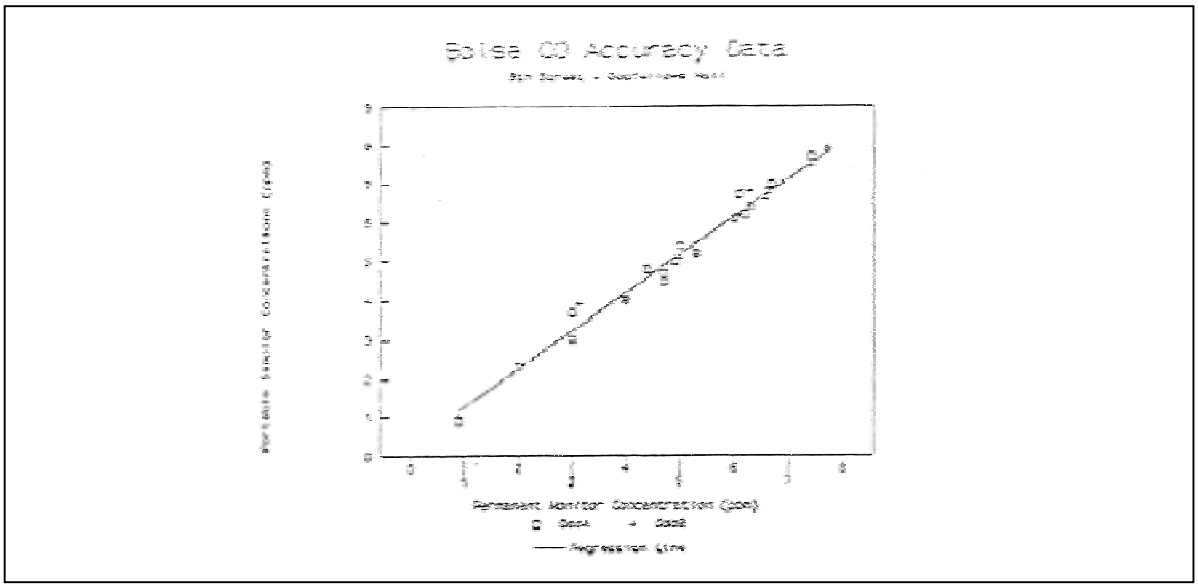


Figure 7.

The high correlation values obtained from the collocated sampling sites for both accuracy and precision indicate a high degree of reliability ($r_{0.005}$) for the data collected.

Meteorological Conditions

Ideally, the meteorological conditions that exist during the study period should approximate normal winter conditions. Normal winter conditions in Boise would include several extended periods of stagnant air patterns and/or temperature inversions, often combined with sub-freezing temperatures. Under these conditions CO levels can increase due to a decrease in pollutant dispersion, and an increase in pollutant emissions.

The 1991-92 winter study period did not have normal winter conditions. The unusually mild winter produced short-lived stagnant air masses and above average temperatures.

Review of Sampling Day Selections

During the 61 day study period, 21 days were selected for sampling based on forecasted meteorological conditions. Each afternoon the forecast was reviewed for the following day. If meteorological conditions looked favorable, the project manager would make the decision to place the samplers in the field on the following day. In order to determine if these 21 sampling days measured maximum concentration levels, hourly and running 8-hour averages measured by the permanent monitor were reviewed. The permanent monitor data showed even though a few good sampling days were missed, the sampling days selected were representative of maximum concentrations for the period from December 9, to February 7. Figure 8 displays the CO 8-hour averages during the study period, using the noon to 800 PM hourly data from the permanent monitor.

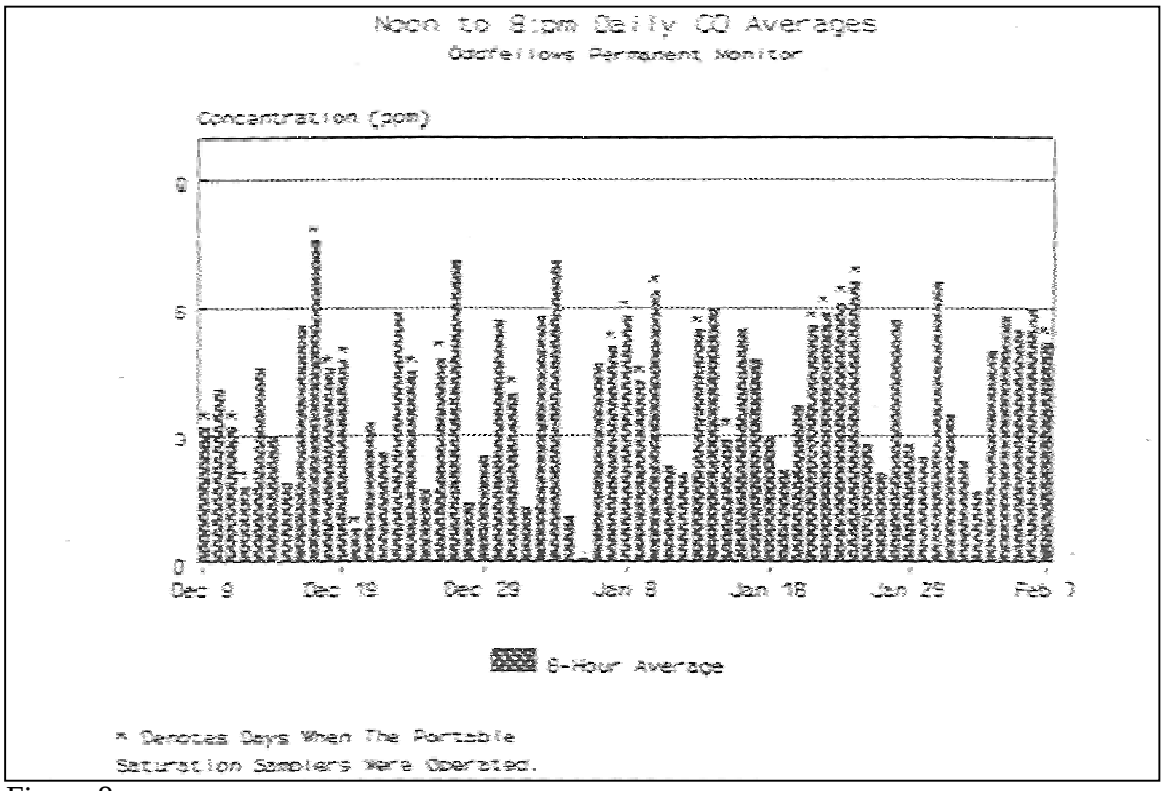


Figure 8.

CONCLUSIONS

Data collected during the study did not show a violation of the 8-hour CO standard. The 9th Street-Oddfellows Hall site, location of the permanent CO monitor, consistently collected the maximum 8-hour concentrations, doing so on 18 of 21 days. Of the sites studied, the permanent monitoring site at the Oddfellows Hall provided the best location for measuring maximum concentration.

TABLE 1 CO SATURATION STUDY SUMMARY DATA

SAMPLING INTERVAL: 1200-2000 Daily 8-Hour Average CO Concentrations (ppm)

SITE #	SITE CODE	12-9	12-11	12-12	12-17	12-18	12-19	12-20	12-24	12-26	12-31	1-7	1-8
1	9/ODDBA		3.7	2.3	7.9	4.0	5.4	0.9	4.7	5.0	4.5	5.2	6.2
1	9/ODDB	3.9			7.9	4.0	5.1	1.0	4.6	5.1	4.6	5.2	
2	7/CITY		3.1	1.8				1.5	2.1	2.6	2.6	1.9	2.3
3	MAIN/7					1.3	0.9	0.5	1.5	1.6	1.4	1.1	1.5
4	IDAHO/9				5.3	2.9	3.3		3.4	3.6	2.7	3.1	3.8
5	HWHGH				2.5		1.1	0.9	1.6	1.8	1.4	1.3	2.1
6	CAP/SHER				2.3				1.9	1.7	1.1	0.9	1.7
7	BDWY/BEAC										2.4	1.6	2.5
8	BDWY/BOISE						1.0	3.0		2.5	1.5	1.4	2.1
9	BDWY/GAR		1.8	0.7				0.2	2.5	2.6	2.0	1.5	2.7
10	VISTA/OVER						1.0	3.3	2.9	2.7	3.1	0.9	2.6
11	OVER/ORCH						1.9	3.1	4.2	3.6	4.1	1.8	3.8
12	ORCH/EMER				6.8	3.3	3.6		4.1	4.2	3.4		4.5
13	FRANK/MIL							1.6	3.2	2.7	3.1	1.5	2.8
14	COLE/FAIRA		3.4	2.0	6.1	2.5	4.2	0.9	4.6	3.8	3.9	3.2	4.5
14	COLE/FAIRB											3.3	4.3
15	CURT/EMER								3.3	3.1	3.0		
16	CHIND/VMP						3.1	1.9	4.0	3.5		3.0	4.7
17	STATE/VMP						2.3	2.5	3.2	2.0	2.0	1.5	2.6
18	FAIR/MIL										2.6	1.0	3.5
19	16/MAIN										2.8	2.1	3.5
20	IRENE/24	1.4					0.6	0.7	1.8	1.9	1.0	0.7	1.5
21	MORRISON					1.0	0.8	0.2	1.1	1.2	0.5	0.7	1.2
CONT'D	ODDFELLOWS 3.1	3.0	2.0	7.7	4.0	5.0	0.9	4.7	4.9	4.7	5.3	6.2	
	N	2	4	4	7	7	14	15	18	19	21	21	21
	MEAN	2.7	3.0	1.7	5.5	2.7	2.5	1.5	3.0	2.9	2.6	2.0	3.1
	MIN	1.4	1.8	0.7	2.3	1	0.6	0.2	1.1	1.2	0.5	0.7	1.2
	MAX	3.9	3.7	2.3	7.9	4	5.4	3.3	4.7	5.1	4.6	5.2	6.3

Table 1 (cont.) CO SATURATION STUDY SUMMARY DATA

SAMPLING INTERVAL: 1200-2000 Daily 8-Hour Average CO Concentrations (ppm)

SITE #	SITE CODE	1-9	1-10	1-13	1-15	1-21	1-22	1-23	1-24	2-7	N	MEAN	MIN	MAX
1	9/ODDA	4.8	6.8	6.1	3.0	6.7	6.4	7.0	7.7	5.2	20	5.2	0.9	7.9
1	9/ODDB	4.7	6.6	6.2	3.0	6.2	6.8	6.9	7.5	5.3	18	5.3	1.0	7.9
2	7/CITY	3.6	3.5	2.3	2.5		3.3	3.5	4.5	2.3	16	2.7	1.5	4.5
3	MAIN/7	1.9	2.4	1.6	1.2	1.6	2.3	2.6	2.7	1.5	17	1.6	0.5	2.7
4	IDAHO/9	3.7	4.6	3.9	2.5	4.0	4.5	4.7		3.5	16	3.7	2.5	5.3
5	10/HIGH	2.4	2.6	1.9	1.7	2.0			2.7	1.5	15	1.8	0.9	2.7
6	CAP/SHER	3.7	2.0	1.1	2.9	1.2	1.8	2.4	3.2		14	2.0	0.9	3.7
7	BDWY/BEAC	5.6	3.2	1.9	4.6	1.9	3.3	3.4	4.9		11	3.2	1.6	5.6
8	BDWY/BOISE	4.1	3.1	1.9	3.4	1.6	3.0	3.3	3.7		14	2.5	1.0	4.1
9	BDWY/GAR	1.5	3.7	2.6	1.0	2.3	2.8	3.6	2.9	2.8	17	2.2	0.2	3.7
10	VISTA/OVER	5.0	3.5	2.0	3.6	1.9		3.3	4.4		14	2.9	0.9	5.0
11	OVER/ORCH	4.2	4.9	2.5	3.0	2.8	2.8	4.5	4.4		15	3.4	1.8	4.9
12	ORCH/EMER	4.2	6.0		1.7	4.8	4.7	5.4	5.2	4.5	15	4.4	1.7	6.8
13	FRANK/MIL	2.1	3.3	2.1	2.2	2.2	2.1	3.1	2.6		14	2.5	1.5	3.3
14	COLE/FAIRA	3.0		4.7	1.7	4.6	3.7		4.8		17	3.6	0.9	6.1
14	COLE/FAIRB	3.0	5.3	4.6							5	4.1	3.0	5.3
15	CURT/EMER	2.9	3.4	2.5		2.8	3.2	4.3	3.5		10	3.2	2.5	4.3
16	CHIND/VMP	4.2	4.8	3.9	3.1	4.3	3.7	4.9	4.5		14	3.8	1.9	4.9
17	STATE/VMP	6.0	3.3	1.7	2.7		3.0		5.4	3.2	14	3.0	1.5	6.0
18	FAIR/MIL	3.0	2.2	1.4	2.3	1.6	1.8		3.0		10	2.2	1.0	3.5
19	16/MAIN	2.9	4.0	3.2	2.0	3.1	3.3		3.7	3.2	11	3.1	2.0	4.0
20	IRENE/24	1.7	1.6	1.1	1.3	1.1	1.4	1.5	1.5		16	1.3	0.6	1.9
21	MORRISON	1.3	1.7	1.0	0.7	1.1	1.4	1.8	1.5	1.3	17	1.1	0.2	1.8
CONT	ODDFELLOWS	4.4	6.6	6.0	3.0	6.1	6.3	6.7	7.4		20	4.9	0.9	7.7
	N	23	22	22	21	20	20	17	21	11				
	MEAN	3.5	3.8	2.7	2.4	2.9	3.3	3.9	4.0	3.1				
	MIN	1.3	1.6	1	0.7	1.1	1.4	1.5	1.5	1.3				
	MAX	6	6.8	6.2	4.6	6.7	6.8	7	7.7	5.3				

Appendix C-3.
Boise Carbon Monoxide Saturation Study 1995-1996

Boise Carbon Monoxide Saturation Study 1995-1996 Summary

Winter 1995-1996

Department of Environmental Quality
1445 North Orchard
Boise, ID 83706

Appendix C-3

BACKGROUND

Northern Ada County, Idaho was designated as a Nonattainment Area for carbon monoxide in 1978. An Air Quality Improvement Plan (AQIP) was submitted to EPA in 1980, and again in 1984. The current AQIP is a minor revision of the 1984 Plan, submitted in 1994. The area was never designated under Section 186 of the Clean Air Act, so it remains a Not-Classified Nonattainment Area.

The Northern Ada County not-classified carbon monoxide Nonattainment Area consists of that portion of Ada County that is north of the Boise baseline (43 degrees North latitude). Areas to the north, east, and south of the Nonattainment Area are either unpopulated or separated from the Nonattainment Area by natural barriers.

Canyon County, to the west of the Nonattainment Area, is populated and has significant sources of carbon monoxide. Canyon County also contains one major point source (emits 100 tons per year or more) of carbon monoxide.

DEQ operates a permanent, continuous gas analyzer that measures carbon monoxide concentration by non-dispersive infrared photometry (NDIR). The monitor has been in the same downtown Boise location since 1977. It is currently located in the Eastman Parking Garage, 166 North 9th Street, where it has been since 1993. Between 1977 and 1993, the monitor was located within 100 feet of its current position at 115 North 9th Street.

A steady downward trend in carbon monoxide concentrations has been measured in Ada County, despite tremendous growth in the region. Only one exceedance of the eight-hour National Ambient Air Quality Standard (NAAQS) has been recorded since 1986. This was recorded in January of 1991.

The primary source of carbon monoxide emissions in Ada County is incomplete combustion of gasoline by motor vehicles. Wood burning, outdoor burning, lawn and garden equipment (summer only), industry, and other types of fossil fuel burning equipment make up the majority of the remaining carbon monoxide emissions in this area.

The area typically sees its highest carbon monoxide levels when high emissions periods (rush-hour traffic) coincide with short-term, lower level temperature inversions. Winter, defined as the months between November and February, is generally the time when these minor inversions occur. In addition, colder ambient temperatures result in less efficient combustion of fuels and consequently somewhat higher emissions from motor vehicles. The bowl shaped topography of the region also presents a barrier to air movement in the region, contributing to the potential for accumulation.

OBJECTIVES

The Department of Environmental Quality conducted a short-term carbon monoxide saturation study in Canyon and Ada Counties from December 4, 1995 to February 2, 1996. The objectives of the study were to:

- Characterize carbon monoxide concentrations in Nampa;
- Characterize carbon monoxide concentrations around the major point source in Canyon County (The Amalgamated Sugar Company in Nampa);
- Characterize carbon monoxide concentrations Caldwell;
- Evaluate various sites in Canyon County for use as a long-term monitoring site;
- Determine the relationship between carbon monoxide concentrations in Canyon and Ada Counties;
- Determine whether elevated carbon monoxide is a regional phenomenon.

METHODS

Carbon monoxide concentrations were measured using a series of temporary portable samplers and the permanent carbon monoxide monitor. The individual samplers were operated for continuous eight-hour periods.

Site Selection

Portable carbon monoxide samplers were placed in the two urban centers in Canyon County, Nampa and Caldwell. Samplers were also placed at various locations within the City of Boise. Data from the permanent carbon monoxide monitor in downtown Boise was also used in the analysis. All samplers were installed to meet U.S. EPA siting requirements of 40 CFR 58 Appendix E.

Nineteen temporary monitoring sites were established in addition to the permanent carbon monoxide monitor. Five of the portable samplers and the permanent monitor were located in Boise. Three of the portable samplers were located in the City of Caldwell. Seven samplers were deployed in the City of Nampa. Canyon County contains one major point source, the Amalgamated Sugar Company, located in Nampa. Four additional samplers were deployed around this source.

The majority of sites were located in central business districts where the greatest potential for traffic congestion and population exposure exists. More sites were located in Nampa because it is larger than Caldwell and has more congested intersections.

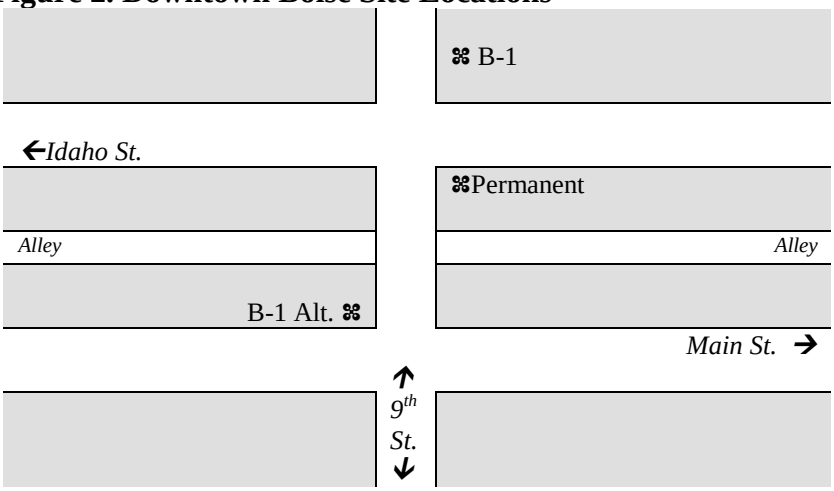
Two sites, one in Nampa and one in Caldwell, were located away from traffic corridors to measure the background carbon monoxide levels.

Some samplers were collocated to provide a check on sampler precision. Two portable samplers were collocated at the N-4 site in Nampa, and two portable samplers (B-1 and B-1 alternate) were located near the permanent carbon monoxide monitor in downtown Boise.

Table 2. Sampler sites

	Number	City	Location	Notes
1	C-1	Caldwell	Arthur between 7th & Kimball	
2	C-2	Caldwell	10th & Blaine, SW Corner	
3	C-3	Caldwell	17th & Everett, SW Corner	Residential background
4	N-1	Nampa	11th & Front, at Railroad underpass	
5	N-2	Nampa	11th & 2nd, NE corner	
6	N-3	Nampa	Caldwell Blvd. near Karcher Rd.	Karcher Mall
7	N-4a	Nampa	2nd & Nampa, SE corner	Collocated
8	N-4b	Nampa	2nd & Nampa, SE corner	Collocated
9	N-5	Nampa	Nampa & 4th	
10	N-6	Nampa	Lake View Park	Urban background
11	Amal-1	Nampa	Franklin near Noodles	E of Sugar Plant
12	Amal-2	Nampa	Cherry & Northside, SE corner	N of Sugar Plant
13	Amal-3	Nampa	Cherry & Ten Lane, SE corner	NW of Sugar Plant
14	Amal-4	Nampa	Ten Lane, before Karcher	W of Sugar Plant
15	B-1	Boise	9th & Idaho, NE corner	
16	B-1 alt	Boise	9th & Main, SW corner	
17	B-2	Boise	Glenwood between Chinden & stadium	
18	B-3	Boise	Franklin West of Milwaukee	Towne Square Mall
19	B-4	Boise	Veteran's Memorial South of State	
20	Perm.	Boise	9th & Idaho	Permanent Monitor

Figure 2. Downtown Boise Site Locations

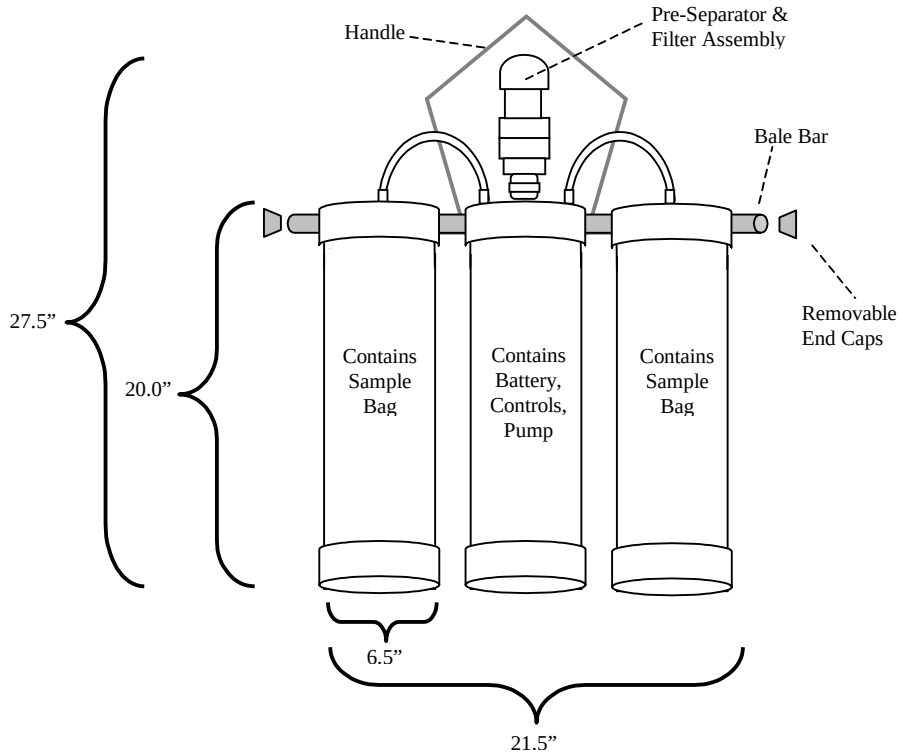


Sampler type

Aerometrics Mini-Vol carbon monoxide samplers were used to collect samples. These are small, lightweight battery-operated samplers useful for saturation studies because they are portable and self-contained.

The CO Mini-Vol sampler is contained within three 6-inch diameter PVC pipe housings. The central pipe contains an air pump, battery, and electronic controlling devices. The other two PVC housings hold Tedlar bags that are used to collect air samples. A pump draws air into the sampler through an inlet tube. The sampler can inflate one bag at a time or inflate them simultaneously within a programmed period. Fill rate is modified by adjusting the frequency and duration of the interval that air is drawn in. The samplers are hung outdoors from a bracket, which can be mounted, on a variety of structures. Samplers are placed so that the air intake is approximately 3 meters above ground.

Figure 1. Diagram of Sampler



The amount of ambient air collected in a sampling period is determined by the pulse interval (frequency that air is drawn in) and the pulse duration (how long each pulse continues to draw air in). The pulse interval for this study was set to draw one pulse of air every seven seconds. The pulse duration was set to last 300 milliseconds. This combination of settings was determined, through

laboratory testing, to be necessary to obtain a bag fill of between 80 and 90 percent, or 4 to 4.5 liters of air. Additional information about the portable samplers can be found in Mini-VOL Portable Sampler Operation Manual, Airmetrics, Springfield Oregon, December 1994.

Sampling Period

DEQ analyzed weekday carbon monoxide data from the permanent monitor in downtown Boise to determine the time period most likely to contain high carbon monoxide concentrations. For the winters of 1992, 1993, and 1994 the time period from 10:00 a.m. to 6:00 p.m. most frequently measured the highest eight-hour average carbon monoxide concentration. The one-hour peaks generally corresponded with peak traffic periods, falling between 5:00 and 7:00 p.m.

It was decided to shift the sampling period one hour later than the time periods of peak concentrations in Boise to ensure overlap with peak periods in Canyon County because traffic leaving Ada County arrives in Nampa and Caldwell about 30 to 60 minutes later. This resulted in the sampling period being set from 11:00 a.m. to 7:00 p.m.

At sites located around the sugar production facility in Nampa additional overnight samples, taken from 11:00 p.m. to 7:00 a.m., were collected because the emissions from this facility are continuous.

Sampling Day Selection

The study was run from December 5, 1995 to February 2, 1996. Samples were collected at each location during the same period on at least two weekdays of every week. Additional samples were taken on days that DEQ meteorologists forecasted to have conditions conducive to carbon monoxide accumulation.

Table 1. Sample Days

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12/03	12/04	12/05	12/06	12/07	12/08	12/09
12/10	12/11	12/12	12/13	12/14	12/15	12/16
12/17	12/18	12/19	12/20	12/21	12/22	12/23
12/24	12/25	12/26	12/27	12/28	12/29	12/30
12/31	01/01	01/02	01/03	01/04	01/05	01/06
01/07	01/08	01/09	01/10	01/11	01/12	01/13
01/14	01/15	01/16	01/17	01/18	01/19	01/20
01/21	01/22	01/23	01/24	01/25	01/26	01/27
01/28	01/29	01/30	1/31	02/01	02/02	02/03

Sampling Procedures

Before each sampling day new batteries were installed on all samplers, the pump interval and duration was programmed, and the Tedlar bags were installed. Bag numbers and corresponding sampler numbers were recorded.

A sampler can be programmed to collect data for two separate sampling periods because each sampler contains two separate sample bags. Each sampler was programmed to collect an eight-hour sample through the period 11:00 a.m. to 7:00 p.m. If samples were to be collected on two consecutive days, the additional day was programmed at this time. For samplers located near the sugar facility, a second sampling schedule from 11:00 p.m. to 7:00 a.m. could be programmed.

On the sampling day, staff loaded the prepared samplers into a vehicle and began deploying samplers at 7:00 a.m. The bag number, sampler number, and site location for each was recorded along with any observations or explanation of problems. Near the sugar facility, plume direction was also noted.

Samplers were collected the following day, unless two consecutive days were to be sampled. In this case, staff checked each sampler for proper operation, but left the sampler in the field overnight.

Retrieved samples were taken to the DEQ laboratory for analysis. carbon monoxide concentration in each bag was analyzed using a Monitor Labs Model 8830 carbon monoxide analyzer.

Quality Assurance

To ensure sampler precision, two portable samplers were collocated at the N-4 site in Nampa. In addition, two portable samplers were located near the permanent carbon monoxide monitor in downtown Boise, each within ½ block of the permanent monitor.

To ensure accurate sample analysis, a complete audit of the Monitor Labs carbon monoxide analyzer was conducted before the study began. Prior to operation, the carbon monoxide analyzer was calibrated by conducting a zero and span check following EPA certified procedures. A zero and span check was also conducted immediately following analysis.

To ensure complete capture during each sampling period each bag was examined for fullness. If fullness was 70% or less, the sample was discarded. For each sampler the elapsed time recorded by the sampler was checked to ensure that the sampler operated for a full eight-hour period.

Data from the collocated sites in Nampa (located at the intersection of 2nd Street and Nampa Boulevard) show a significant positive relationship. Based on days when both samplers captured valid data, there is over 99% correlation between data sets. This indicates that the data collected in this study has a high degree of precision.

Table 5. Comparison of Data Collected at Collocated Nampa Sites N-4a and N4-b (ppm)

Date	N-4a	N-4b
12/05/95	3.1	3.0
12/07/95	4.4	4.3
12/11/95	1.0	1.3
12/15/95	3.8	3.8
12/20/95	1.8	1.8
12/21/95	2.2	2.2
12/27/95	2.6	2.6
01/03/96	3.4	3.3
01/09/96	3.3	3.4
01/16/96	1.8	1.9
01/22/96	2.5	2.4
01/23/96	0.9	0.9
01/31/96	3.1	2.9
02/02/96	2.9	2.9
	Correlation Coefficient = .994428	

RESULTS

During the study period, no exceedances of the eight-hour carbon monoxide standard (9.0 ppm) were measured. 5.1 ppm was the maximum concentration measured.

On 6 of 18 days (33%) the maximum eight-hour concentrations were measured at the downtown Nampa sites. The average of eight-hour concentrations was similar to those measured in Boise. Based on the results from this study, a permanent carbon monoxide monitor was installed in downtown Nampa. A continuous gas analyzer that measures carbon monoxide concentration by non-dispersive infrared photometry was established at the Nampa library located on 11th Street on December 1998.

Concentrations measured in Caldwell and the sites located around The Amalgamated Sugar Company were significantly lower overall than those measured at other sites within the study area. Therefore, no recommendations for long-term monitoring in this area were made.

On 10 of 18 days (56%), the maximum eight-hour concentrations were measured at the downtown Boise samplers. Sampler B-1 and B-1 Alternate measured the maximum eight-hour concentrations on 5 and 4 days respectively. The permanent carbon monoxide monitor measured the maximum eight-hour concentrations on one day.

The maximum eight-hour measurement, 5.1 parts per million (ppm), was recorded at the B-1 Alternate site at the 9th Street and Main. The highest eight-hour average concentration was 3.3 ppm, measured at the B-1 site at Idaho and 9th Street.

Site B-3 had the maximum concentration on two days. This site is located at the Boise Towne Square Mall. On these two days traffic flow was unusually heavy near this site as a result of holiday shopping.

The data clearly shows that downtown Boise remains the location of maximum carbon monoxide concentration. However, a precise determination of the location of maximum carbon monoxide concentration in Boise cannot be made from this study due to a difference in the height of the air intake on the downtown samplers (Site B-1, site B-1 Alternate and the permanent monitor). The inlet on the permanent carbon monoxide monitor was at 4.8 meters, while the two saturation study sampler inlets were set at approximately 3.5 meters. Due to this difference, concentrations at these sites could not be directly compared.

While the permanent monitor measured the maximum concentration on only one day, it will remain the site for the permanent monitor. This decision is supported by data from the previous saturation study and the fact that the B-1 and B-1 Alternate sites, where the majority of maximum concentrations were measured, are located within a few hundred feet of this position. However,

based on the findings of this study, the carbon monoxide analyzer intake probe on the permanent monitor was lowered to 3.5 meters to meet U.S. EPA siting requirements.

Current scientific understanding is that carbon monoxide disperses readily and airborne transport is not a significant factor in carbon monoxide accumulation. However, motor vehicles, the primary source of carbon monoxide in this area, travel between areas, particularly in an interconnected metropolitan area like the Treasure Valley. Elevated levels of carbon monoxide can be said to be a regional phenomenon in areas with high traffic congestion.

Table 3. Eight-Hour Average Carbon Monoxide Concentrations. 11:00 a.m. to 7:00 p.m. (ppm)

Date	Day	Perm	B-1	B-1 alt	B-2	B-3	B-4	C-1	C-2	C-3	N-1	N-2	N-3	N-4a	N-4b	N-5	N-6
12-05-95	T	2.4	2.7	-	1.5	NF	-	1.4	2.0	0.9	NF	2.9	NF	**3.1**	3.0	-	NF
12-07-95	Th	3.2	3.3	-	NF	3.3	-	NF	3.0	1.1	2.2	4.1	2.5	**4.4**	4.3	0.9	1.2
12-11-95	M	1.6	**3.1**	1.1	NF	2.5	-	1.7	1.6	0.6	1.8	1.3	NF	1.0	1.3	1.1	0.4
12-15-95	F	2.1	**4.3**	2.1	1.5	NF	-	2.5	3.3	0.9	2.4	3.4	3.9	3.8	3.8	1.3	0.8
12-18-95	M	2.8	3.2	**4.1**	2.0	1.7	-	1.8	NF	0.9	2.0	NF	3.5	NF	3.1	1.4	0.9
12-20-95	W	2.7	3.2	2.8	1.8	**4.2**	-	2.7	3.4	1.3	3.0	3.2	2.5	1.8	1.8	2.0	1.0
12-21-95	Th	2.7	3.2	2.2	1.4	**3.5**	-	2.3	NF	1.1	3.2	2.7	2.3	2.2	2.2	1.9	1.0
12-27-95	W	1.9	2.4	2.7	1.4	1.7	-	1.0	2.4	0.5	1.4	1.9	**3.5**	2.6	2.6	-	0.4
12-28-95	Th	2.1	2.3	**3.4**	1.5	1.2	-	1.2	2.0	0.7	1.6	2.5	2.8	NF	2.8	1.0	0.6
01-03-96	W	2.5	2.6	**3.8**	1.6	1.2	-	2.6	2.9	NF	1.2	3.6	2.4	3.4	3.3	-	0.9
01-05-96	F	2.8	3.1	NF	2.0	NF	3.0	2.0	NF	NF	2.5	**4.4**	3.3	4.0	NF	-	1.6
01-08-96	M	4.3	**4.6**	3.5	2.3	3.5	3.2	1.8	NF	1.0	3.1	3.3	2.8	NF	3.1	-	1.0
01-09-96	T	4.6	4.8	**5.1**	1.8	3.8	NF	2.5	3.3	1.4	3.2	3.6	2.7	3.3	3.4	-	1.4
01-16-96	T	**3.8**	3.7	NF	1.5	3.4	2.4	2.1	3.3	0.9	2.4	1.9	2.8	1.8	1.9	-	0.5
01-22-96	M	2.7	**3.4**	NF	-	NF	-	--	1.5	-	1.8	NF	2.3	2.5	2.4	-	0.7
01-23-96	T	2.9	**3.3**	1.6	-	2.0	-	--	1.5	-	1.6	1.4	1.4	0.9	0.9	-	0.5
01-31-96	W	2.1	2.2	2.9	NF	1.6	NF	NF	1.6	0.6	1.1	2.8	2.7	**3.1**	2.9	-	0.7
02-02-96	F	2.1	NF	NF	1.3	1.5	2.3	NF	2.1	NF	1.2	2.1	NF	**2.9**	2.9	-	NF
Valid Samples		18	17	12	13	14	4	13	14	13	17	16	15	15	17	7	16
Maximum		**4.6**	**4.8**	**5.1**	**2.3**	**4.2**	**3.2**	**2.7**	**3.4**	**1.4**	**3.2**	**4.4**	**3.9**	**4.4**	**4.3**	**2.0**	**1.6**
Average		2.7	3.3	3.0	1.7	2.5	2.7	2.0	2.4	0.9	2.1	2.8	2.8	2.7	2.7	1.4	0.9
# Times Max		1	5	4	-	2	-	-	-	-	-	1	1	4	-	-	-

Bold Text – Maximum value
- - No data collected
NF – Bag fill less than 70%

Table 4. Eight-Hour Average Carbon Monoxide Concentrations. Amalgamated Sugar Sites (ppm)

		Day – 11:00 a.m. to 7:00 p.m.				Overnight– 11:00 p.m. to 7:00 a.m.			
Date	Day	Amal-1	Amal-2	Amal-3	Amal-4	Amal-1	Amal-2	Amal-3	Amal-4
12-05-95	T	NF	0.7	-	-	-	-	-	-
12-07-95	Th	2.1	0.7	-	-	-	.03	-	-
12-11-95	M	-	-	0.5	0.6	-	-	0.4	0.3
12-15-95	F	-	-	0.6	0.6	-	-	0.4	0.3
12-18-95	M	-	0.6	0.6	-	-	1.0	1.0	-
12-20-95	W	-	-	NF	1.1	-	-	0.6	0.6
12-21-95	Th	-	-	1.1	1.3	-	-	0.5	0.7
12-27-95	W	-	0.6	0.4	-	-	-	-	-
12-28-95	Th	NF	0.5	-	-	-	-	-	-
01-03-96	W	1.5	0.7	-	-	-	-	-	-
01-05-96	F	2.3	-	0.9	-	-	-	-	-
01-08-96	M	1.5	-	-	1.1	-	-	-	-
01-09-96	T	2.0	-	-	1.4	-	-	-	-
01-16-96	T	NF	0.4	0.4	-	-	-	-	-
01-22-96	M	NF	-	-	-	-	-	-	-
01-23-96	T	NF	-	-	-	-	-	-	-
01-31-96	W	1.4	-	-	-	-	-	-	-
02-02-96	F	NF	-	0.4	-	-	-	-	-
# Valid Samples		6	7	8	6	0	2	5	4
Maximum		**2.3**	**0.7**	**1.1**	**1.4**	**-**	**1.0**	**1.0**	**0.7**
Average		1.8	0.6	0.6	1.0	-	0.6	0.6	0.5

Bold Text – Maximum value
- - No data collected
NF – Bag fill less than 70

Meteorological Conditions

A DEQ analysis of carbon monoxide concentration and weather patterns documents the lack of correlation between carbon monoxide levels and seasonal weather patterns. Instead, the dominating factor in carbon monoxide buildup appears to be emissions from motor vehicles. Short-term stable meteorological conditions can contribute to elevated CO levels. These short-term low level stagnations usually occur on late winter afternoons, which happens to coincide with rush hour, the highest emissions period.

The occurrence of these low level, short-term stagnations was actually higher than normal during 1995 and 1996. Therefore, the study was conducted under conservative meteorological circumstances.

CONCLUSIONS

During the study period, no exceedances of the eight-hour carbon monoxide standard (9.0 ppm) were measured.

Carbon monoxide concentrations measured in Caldwell and the sites located around The Amalgamated Sugar Company do not indicate a need for additional monitoring at this time.

Carbon monoxide concentrations can be significant in downtown Nampa. It was recommended that a permanent carbon monoxide monitor be installed in downtown Nampa.

Downtown Boise remains the location of maximum carbon monoxide concentration. Since a direct comparison of data at the downtown sites can not be made, the permanent monitor site will not be changed. It was recommended that the carbon monoxide analyzer intake probe on the permanent monitor be lowered to 3.5 meters to meet U.S. EPA siting requirements.

Carbon monoxide concentrations can be significant near the Boise Towne Square Mall during holiday shopping periods, and may warrant additional monitoring.

Although carbon monoxide disperses readily, elevated carbon monoxide can be said to be a regional phenomenon that occurs in areas with high traffic congestion.

Appendix D.
Treasure Valley Meteorology & Impact on Carbon Monoxide

Treasure Valley Meteorology & Impact on Carbon Monoxide

In general, comparing seasonal or annual weather trends and levels of carbon monoxide (CO) is not a productive exercise because there is a very low correlation between long term weather trends and CO levels. Shorter term, daily variations in weather do play a role in the accumulation of CO on specific days. However, predicting day to day variations in weather still proves to be a challenge. This analysis documents the lack of correspondence between CO levels and seasonal weather patterns, and describes the short-term conditions that do contribute to CO buildup.

1. CO Trends

Average CO concentrations have decreased over time in Ada County. The decrease is attributed to reduced CO emissions since the 1970's as a result of cleaner new vehicle emissions standards, the local vehicle emissions testing program, and efforts to improve traffic flow.

The highest eight-hour value measured each year declined from 20 parts per million (ppm) in the late 1970's to about 8 ppm in recent years. An average of the maximum daily eight-hour concentrations recorded over the winter season declined from 10 ppm in the late 1970's to below 5 ppm in recent years. The number of days with maximum eight-hour values greater than 8 ppm fell from 92 days in 1977 to 1 day or fewer in recent years.

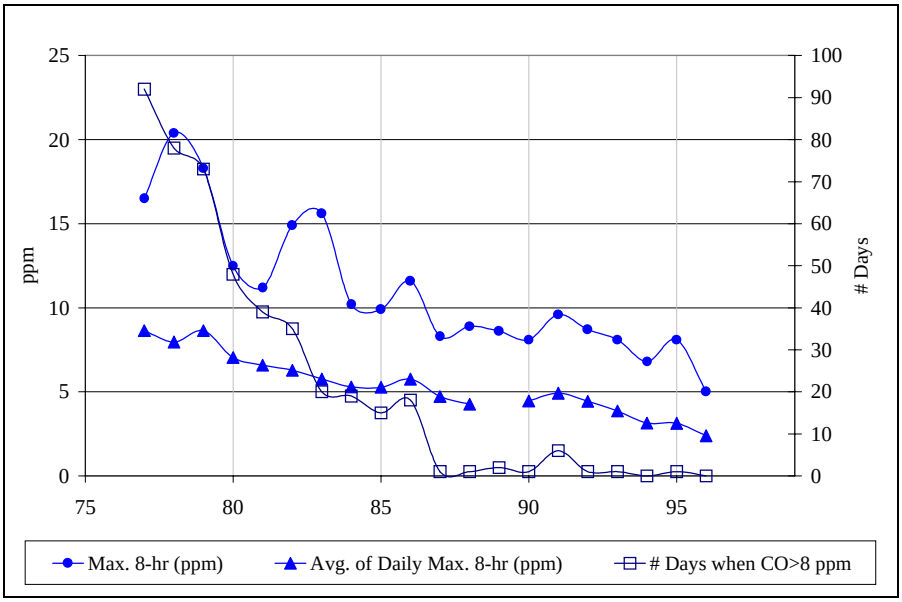


Figure 1. Changes in Carbon Monoxide Levels; 1976-1996

Based on trends shown in monitoring data from the last 20 years, the highest eight-hour value that would be expected in 1995 would be 6.7 ppm, and the average of maximum daily eight-hour values

for the winter months in 1995 would be 3.1 ppm. Based on 1984 through 1998 data the maximum variation, or the most that actual measured concentrations departed from the expected value, is about 2 ppm.

The potential maximum CO levels are determined by adding the maximum variation to the expected values. With 1995 CO emissions levels, the maximum potential eight-hour CO level is estimated to be 8.7 ppm. Predicted CO values for the years 1996 through 1998 also agreed with the actual observed levels.

If the trend in CO concentrations continues, it is estimated that the potential maximum eight-hour CO concentration would be about 7 ppm between the years 2000 and 2005.

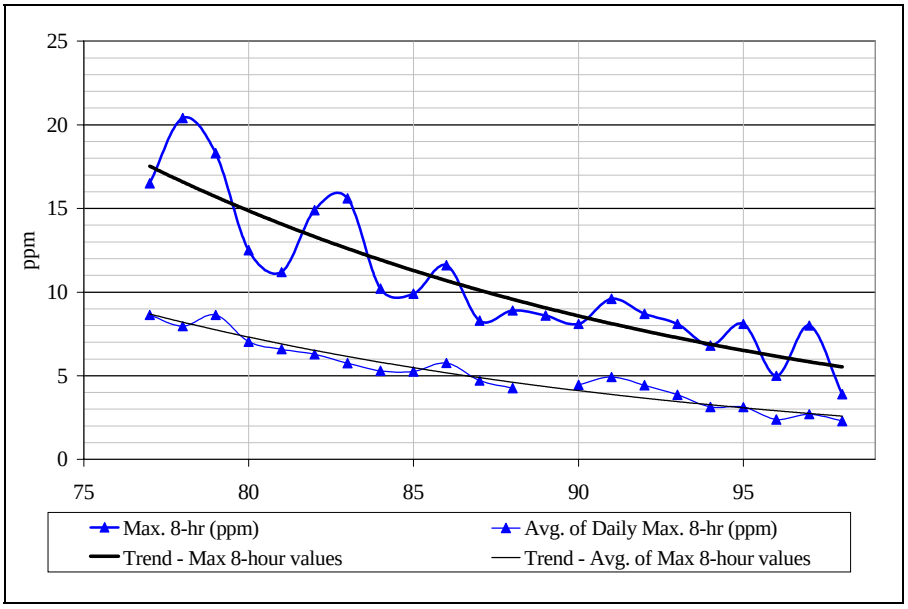


Figure 2. Eight-Hour Maximum & Average Of Eight-Hour Maximums; 1977-1997

2. Stagnation Conditions

Meteorological Conditions

The Treasure Valley is a region of complex terrain bordered by a mountain range to the north and east and a sequence of terrain benches to the south. These topographical features contribute to a tendency for stagnant weather conditions, which allow pollution to build up.

A study by Wolyn and McKee (1989) defined a meteorological condition termed a Deep Stable Layer (DSL). DSL is an atmospheric structure in which at least 65% of the lowest 1500m has strong inversion layers (lapse rate of -2.5 °C per km or less). High-pressure weather systems, common during the winter season, create very stable conditions that are associated with the development of DSL conditions. These conditions prevent air circulation, and cause pollution levels to build up. The Wolyn and McKee study showed that in December and January about 15% of all days in Boise had DSL conditions.

Mixing height is a term to describe the elevation level up to which vertical mixing of air takes place. A low mixing height indicates weak dispersion and the potential for pollutant concentrations to increase. Based on data provided by National Weather Service, it was found that the mixing height in Boise is often lower at 5:00 p.m. than at 5:00 a.m.

In addition to mixing height and DSL, a condition termed a Lower Stable Layer (LSL) has been identified as playing a role in CO accumulation. LSL is defined as a condition when 10% or more of the lower 500 meters of the atmosphere consists of strong inversion layers (lapse rate greater than -2.5 °C per km).

Trends

Historical data shows that the number of DSL days has decreased since the mid-1980's, while the number of LSL days throughout the year has increased, and the number of winter LSL days has held fairly steady.

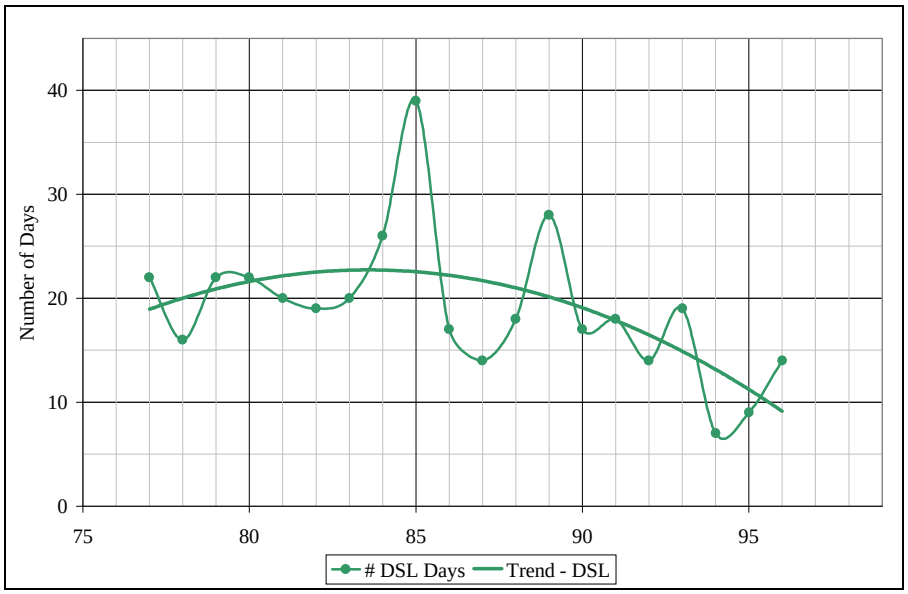


Figure 3. Number of DSL Days; 1977-1996

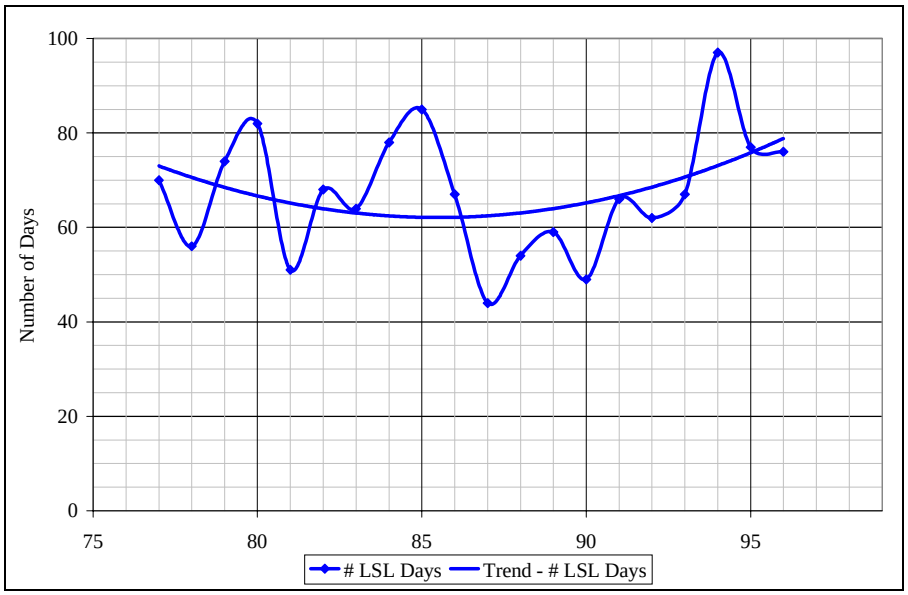


Figure 4. Number of LSL Days; 1977-1996

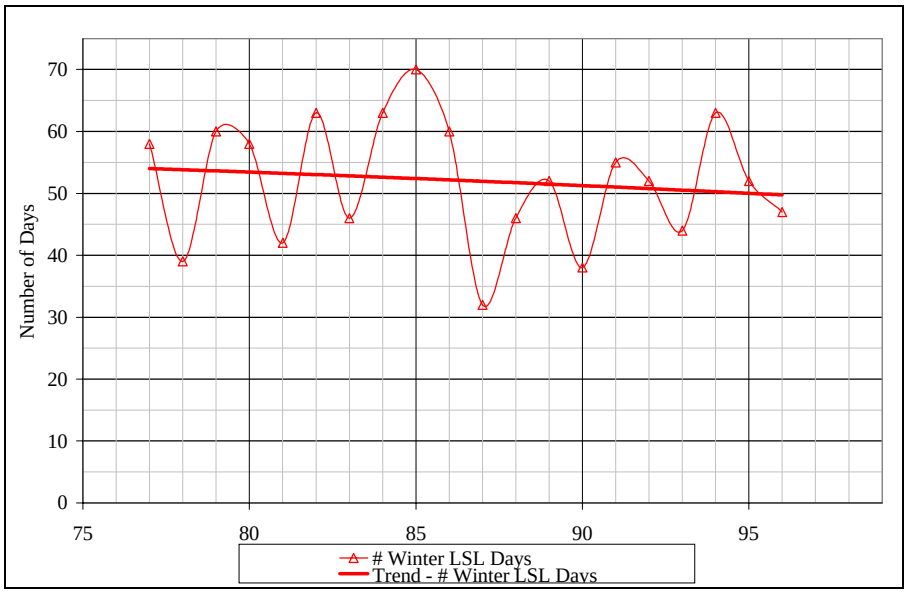


Figure 5. Number of Winter LSL Days; 1977-1996

3. Correlation: Number of Days with Elevated CO and Number of Days with Stagnation Conditions

A comparison of measured CO concentrations, number of days with higher CO concentrations, and number of days with stagnation conditions (DSL or LSL) shows no obvious correlation between stagnation conditions and CO levels.

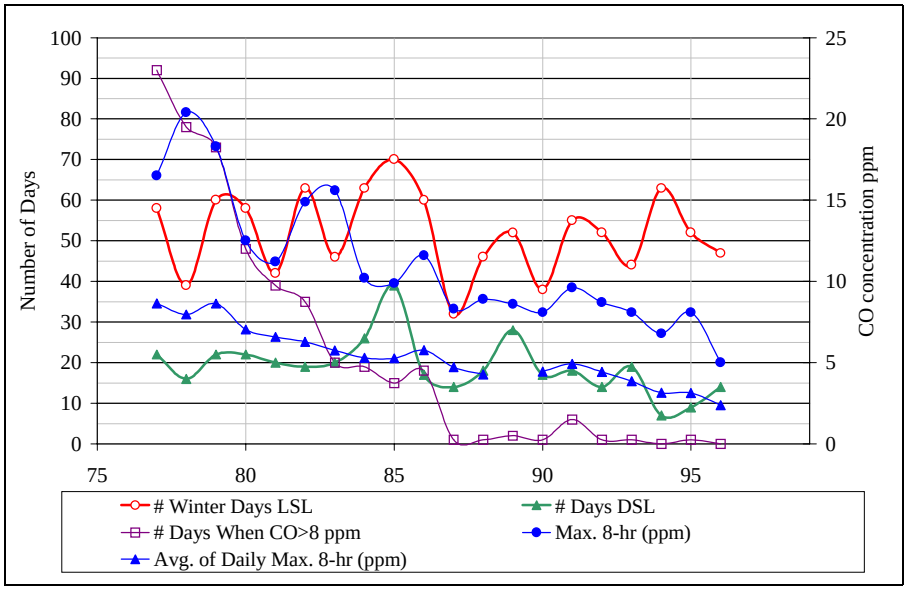


Figure 6. Trends In CO Concentrations & Stagnation Conditions; 1976-1997

While there appears to be no connection between high CO concentrations and the frequency of stagnation conditions, a comparison of conditions that depart from expected values can provide additional information. For example, it would be expected, based on the trends, that in 1988 there would be 52 winter days with LSL conditions. However, there were actually 46, which departs from the expected by 6 days. (See Figure 5.)

This analysis shows that low mixing height and the presence of LSL correlate most closely to high CO levels, while the presence of DSL conditions does not appear to have significant impact on CO concentrations. The difference between the expected and the actual number of winter days with LSL conditions, in comparison to the difference between the expected and the actual number of days with high CO concentrations (8 ppm or greater), shows a positive correlation coefficient of +0.47.

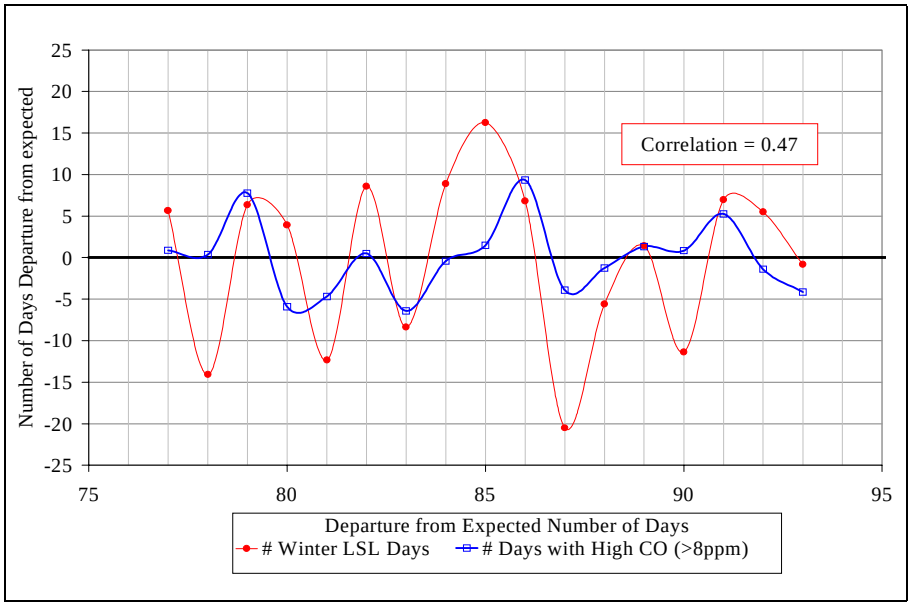


Figure 7. Difference Between Expected & Actual Number Of Days; Winter LSL Days, High CO Days (CO > 8 ppm)

DSL conditions, while having a critical role in accumulation of PM_{10} pollution, has less impact on CO accumulation. The same comparison on DSL conditions results in a correlation of only +0.11.

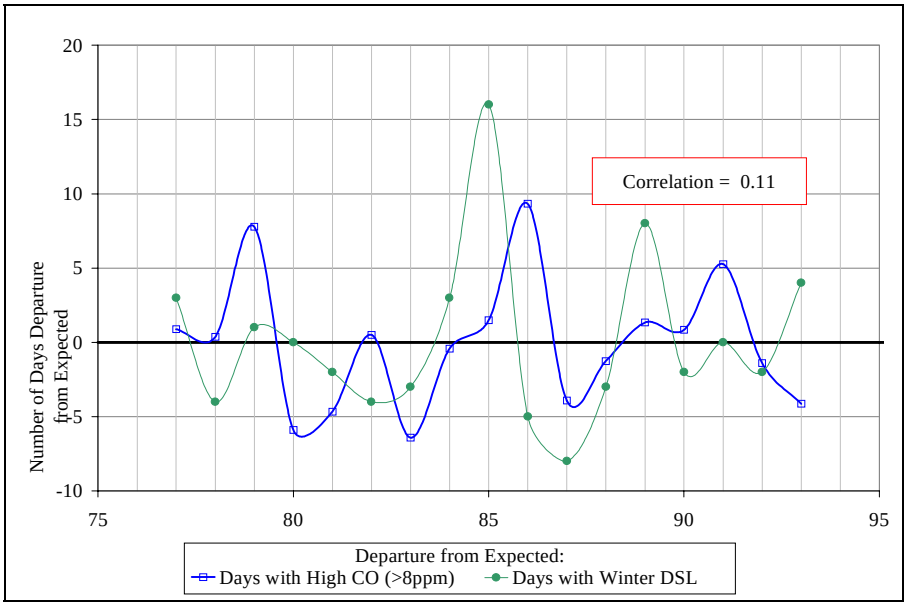


Figure 8. Difference Between Expected & Actual Number Of Days; Winter DSL Days, High CO Days (CO > 8 ppm)

4. Comparison of Meteorological Factors & 12 Selected Days With High Carbon Monoxide Concentrations

While long term weather trends are less predictive of potential high CO levels, day to day weather variations do effect the accumulation of CO. An analysis was conducted comparing the meteorological conditions on the days with elevated CO concentrations (eight-hour concentrations of 8.0 ppm or greater).

The ten days with the highest CO concentrations between 1993 and 1996 were chosen. In order to extend the time period of the analysis to cover the time period over which the design value for CO was determined for Ada County (1995-1996), two additional days in 1996 were also added since no days in 1996 were a part of this group. Neither of the 1996 days had particularly high CO concentrations (5.0 ppm), nor did the meteorological conditions match those typically associated with elevated CO levels.

Of the 12 days included in the analysis, all but one peak concentration was recorded during later afternoon or evening hours. The day in which the peak concentration occurred in the early morning hours (11/10/96) was one of the 1996-days, included to expand the time period of the study, and was not a particularly high CO concentration. The temperatures in most cases were lower than normal, particularly the minimum temperature. Winds were generally light. The mixing heights at 4:00 p.m. were close to, or lower than, 400 meters in all cases. Nine of the twelve days had 4:00 p.m. mixing heights that were significantly lower than 400 meters. Of the days analyzed, only one was not an LSL day (January 18, 1993), and one could not be determined due to inadequate data (January 10, 1994).

Table 1. Meteorological Conditions On 12 Days; 10 Days With Highest CO Levels In 1993 To 1995 and Two Highest Days From 1996

Date	**CO**	**Max Temp.**	**Min Temp.**	**8 hr. Avg. Temp.**	**Time of peak conc.**	**LSL**	**Mixing Height 4:00 a.m.**	**Mixing Height 4:00 p.m.**	**Surface Wind Speed 4:00 p.m.**
	(ppm)	(F)	(F)	(F)	(Hour)		(m)	(m)	(m/s)
Normal	--	**38**	**27**	**32.7**	--	--	--	--	--
11/17/95	8.1	**59**	**36**	**51.0**	8:00 p.m.	Yes	323	112	2
01/13/93	8.1	31	6	24.5	6:00 p.m.	Yes	676	260	5
01/12/93	7.3	24	2	16.0	6:00 p.m.	Yes	200	129	4
01/14/93	7.2	**39**	17	**33.8**	10:00 p.m.	Yes	314	13	3
01/10/94	6.8	**40**	**30**	**33.5**	6:00 p.m.	n/d	129	104	3
01/15/93	6.7	30	22	24.8	6:00 p.m.	Yes	183	360	3
11/29/93	6.7	**44**	24	**33.5**	7:00 p.m.	Yes	347	266	2
01/06/95	6.4	35	21	30.0	10:00 p.m.	Yes	481	134	2
01/08/93	6.4	25	19	22.8	6:00 p.m.	Yes	n/d	222	**9**
01/18/93	6.4	31	16	25.8	7:00 p.m.	**NO**	301	406	3
11/10/96	5.0	**56**	**33**	**38.0**	**3:00 a.m.**	Yes	266	325	2
11/12/96	5.0	**52**	**32**	**35.0**	11:00 p.m.	Yes	251	66	4

Bold Type indicates conditions outside of norm, or outside of typical stagnation or DSL parameters.

5. Temperature

Based on the average of the historical values, calendar year 1993 had a higher than normal number of heating-degree-days in the winter months, meaning it was colder than normal. Calendar year 1994 would be considered to have a normal number of heating-degree-days. 1995 and 1996 were warmer than normal, with fewer heating-degree-days. There is no corresponding fluctuation in the number of days with higher CO concentrations for these years.

Table 2. Heating-Degree-Days by Month (winter)

Year	Nov	Dec	Jan	Feb	Total
1993	960	975	1,239	1,004	4,178
1994	967	1,066	993	839	3,865
1995	610	984	887	652	3,133
1996	1,000	859	703	883	3,445
Normal	**753**	**1,082**	**1,116**	**815**	**3,766**

However, CO emissions may increase due to reduced efficiency in fossil fuel burning and emissions control equipment under colder conditions. Therefore, even in a year when the winter is warmer than normal overall, the occurrence of several days with colder-than-normal temperatures could result in higher CO concentrations on those days.

6. CO Trends

Daily CO Concentration Trends

Similar to many other areas, hourly CO concentrations in Boise exhibit a bi-modal, diurnal trend. In general, there are two peaks in the one-hour average concentrations each day, both associated with increased traffic periods (morning and afternoon rush hours). The largest peak generally occurs in the late afternoon hours, consistent with surveys of vehicle-miles-traveled that indicate traffic levels are highest at this time.

The maximum eight-hour concentration usually coincides with afternoon rush hours. The concentration drops considerably after midnight, attributed to reduced driving activity. This pattern of CO levels has remained similar since the mid-1970's, although concentration levels have been significantly reduced.

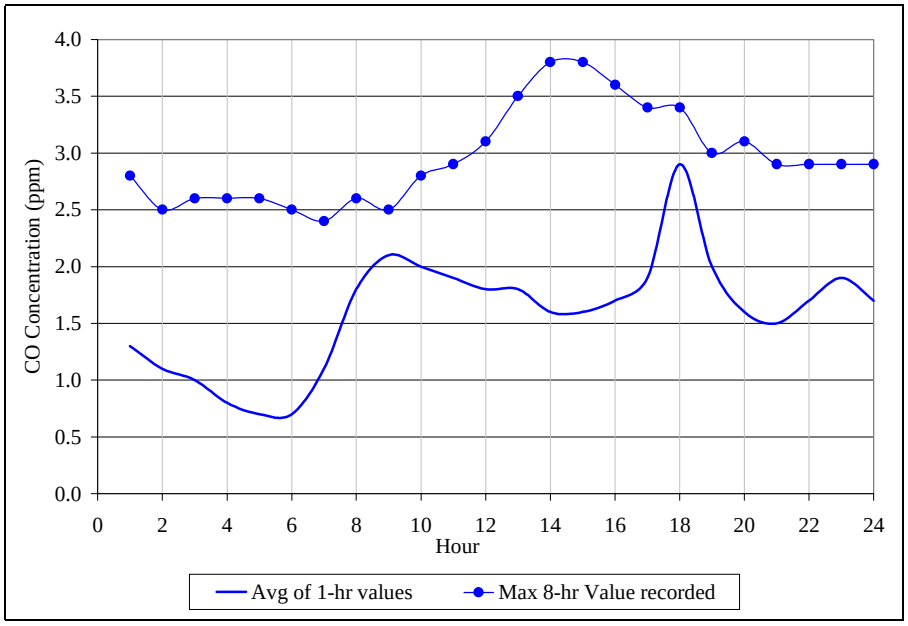


Figure 9. Diurnal Trends Of CO Concentrations; January 1998

*Note: The one-hour average represents the **mean value** of all measurements taken for each hour during the month. The maximum eight-hour concentration represents the **highest** eight-hour value recorded at each hour during the month.*

Weekly CO Concentration Trends

Based on historical data, the probability of a high CO concentration is greatest on Friday, and lowest on Sunday, closely mirroring driving activity levels. Overall concentrations have declined in recent years, with very few days registering higher than 8 ppm since 1992.

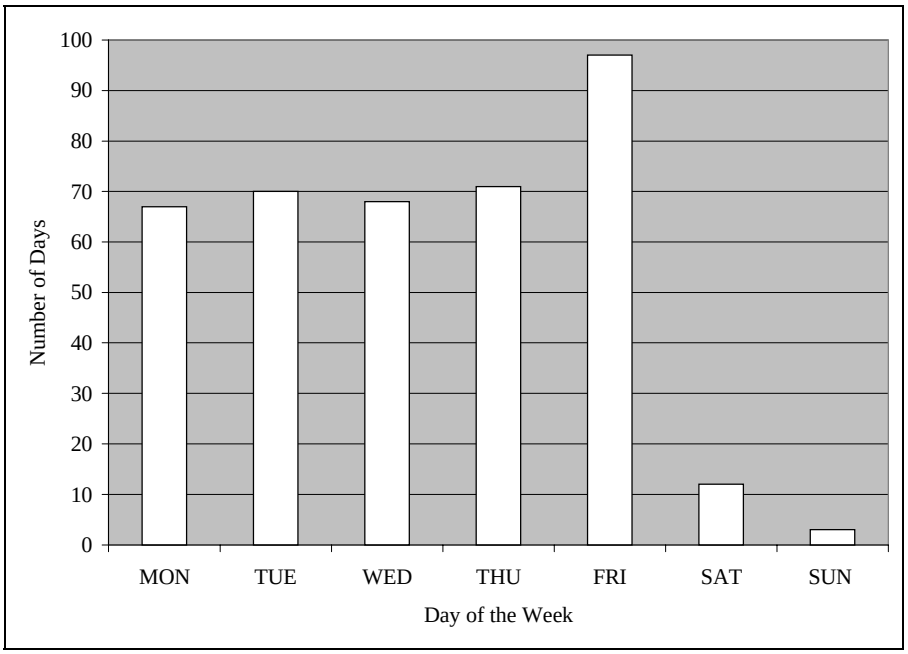


Figure 10. Number Of High CO Days (> 8 ppm) Versus Days Of The Week; 1977-1992.

Summary

The overall CO levels in Ada County have decreased significantly since the mid-1970's. This trend is expected to continue in the near future. The dominating factor controlling CO levels appears to be emissions from motor vehicles. Low level, short term stable meteorological conditions termed LSL conditions play a role in CO accumulation when it occurs in conjunction with high emissions periods. These meteorological conditions usually occur on late afternoons in winter, and happen to coincide with rush hour traffic patterns.

Assuming that CO emissions continue on the current trend and remain below the 1995 level, an estimated eight-hour maximum of 8.7 ppm could occur under these LSL conditions. In the future, this estimated maximum eight-hour value drops to about 7 ppm. Although the possibility of exceedances cannot be excluded due to the complicated nature of emission and weather variations, the probability of exceedances is low, assuming the CO emissions rate remains at or below the 1995 level.

Evidence shows that elevated CO concentrations are more related to low level temperature inversions that coincide with peak emissions periods. The occurrence of such low level temperature inversions were within the norm during 1995 and1996. Therefore these years are considered to have representative meteorology for the purposes of analyzing CO.

Appendix E.
Legal Description for Ada County Carbon Monoxide Nonattainment Area

Appendix E. Legal Description for Ada County CO Nonattainment Area

The Northern Ada County CO Nonattainment Area encompasses the portion of Ada County that is north of the Boise Baseline. South of the baseline, the county is largely unpopulated.

The legal description of the area boundaries is as follows:

- Beginning at a point in the center of the channel of the Boise River where the section line between Sections 15 and 16 of Township 3 North, Range 4 East, crosses the Boise River.

Northern Boundary:
- Thence down the center of the channel of the Boise River to a point opposite the mouth of Mores Creek.
- Thence in a straight-line going 44 degrees north and 38 minutes west until said line intersects the north line of Township 5 North in Range 1 East.
- Thence west to the northwest corner of Section 6, Township 5 North, Range 1 West.

Western Boundary:
- Thence south to the northwest corner of Section 6, Township 3 North, Range 1 West.
- Thence east to the northeast corner of Section 5, Township 3 North, Range 1 West.
- Thence south to the southeast corner of Section 32, Township 2 North, Range 1 West.
- Thence west to the northwest corner of Section 6, Township 1 North, Range 1 West.
- Thence south to the southwest corner of Section 31, Township 1 North, Range 1 West.

Southern Boundary:
- Thence east to the southeast corner of Section 33, Township 1 North, Range 4 East.

Eastern Boundary:
- Thence north to the point of beginning.

Appendix E.
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- Thence east to the northeast corner of Section 5, Township 3 North, Range 1 West.
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- Thence south to the southwest corner of Section 31, Township 1 North, Range 1 West.

Southern Boundary:
- Thence east to the southeast corner of Section 33, Township 1 North, Range 4 East.

Eastern Boundary:
- Thence north to the point of beginning.

Appendix F.
Rules Establishing State Authority

F-1 IDAPA 58.01.01 Rules for the Control of Air Pollution in Idaho

F-2 IDAPA 04.11.01 Rules for Administrative Procedures

F-3 Idaho Administrative Code

Appendix F-1
IDAPA 58.01.01 Rules for the Control of Air Pollution in Idaho

IDAPA 58.01.01 Rules for the Control of Air Pollution in Idaho

122. INFORMATION ORDERS BY THE DEPARTMENT.
The Department may issue information orders as follows: (5-1-94)

01. Purpose. For the purpose of: (5-1-94)

a. Developing or assisting in the development of any implementation plan, any standard of performance, any emission standard or any rule; (5-1-94)

b. Determining whether any person is in violation of any standard of performance, any emission standard, any implementation plan or any rule; or (5-1-94)

c. Carrying out any air quality provisions of the Act, any air quality order issued or entered in accordance with the Act or rules, or any of these rules. (5-1-94)

02. Persons. The Department may issue an information order to any person who: (5-1-94)

a. Owns or operates any emission source; (5-1-94)

b. Manufactures emission control equipment; (5-1-94)

c. The Department believes may have information necessary to meet the intent of these rules; or (5-1-94)

d. Is subject to any requirement of these rules. (5-1-94)

03. Requirements. The information order may require the person to perform the following on a one- time, periodic or continuous basis: (5-1-94)

a. Establish, maintain and submit records; (5-1-94)

b. Make reports; (5-1-94)

c. Install, use, and maintain monitoring equipment, and use audit procedures, or methods; (5-1-94)

d. Sample emissions in accordance with procedures or methods, at such locations, at such intervals, during such periods and in such manner as the Department shall prescribe; (5-1-94)

e. Keep records on control equipment parameters, production variables or other indirect data when the Department determines that direct monitoring of emissions is impractical; (5-1-94)

f. Submit compliance certifications including: (5-1-94)

i. Identification of the applicable requirement that is the basis of the certification; (5-1-94)

ii. The method(s) or other means used by the owner or operator for determining the compliance status for each applicable requirement, and whether such methods or other means provide continuous or intermittent data; and (4-5-00)

iii. The status of compliance with each applicable requirement, based on the method or means designated in Subsection 122.03.f.ii. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and (4-5-00)

g. Provide such other information as the Department may require. (5-1-94)

123. CERTIFICATION OF DOCUMENTS.

All documents, including but not limited to, application forms for permits to construct, application forms for operating permits, progress reports, records, monitoring data, supporting information, requests for confidential treatment, testing reports or compliance certifications submitted to the Department shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (5-1-94)

200. PROCEDURES AND REQUIREMENTS FOR PERMITS TO CONSTRUCT.
The purposes of Sections 200 through 223 is to establish uniform procedures and requirements for the issuance of "Permits to Construct." (4-5-00)

201. PERMIT TO CONSTRUCT REQUIRED.
No owner or operator may commence construction or modification of any stationary source, facility, major facility, or major modification without first obtaining a permit to construct from the Department which satisfies the requirements of Sections 200 through 223 unless the source is exempted in any of Sections 220 through 223, or the owner or operator complies with Section 213 and obtains the required permit to construct. (6-23-00)T

202. APPLICATION PROCEDURES.
Application for a permit to construct must be made using forms furnished by the Department, or by other means prescribed by the Department. The application shall be certified by the responsible official in accordance with Section 123 and shall be accompanied by all information necessary to perform any analysis or make any determination required under Sections 200 through 223. (4-5-00)

01. Required Information. Depending upon the proposed size and location of the new or modified stationary source or facility, the application for a permit to construct shall include all of the information required by one or more of the following provisions: (5-1-94)

a. For any new or modified stationary source or facility: (5-1-94)

i. Site information, plans, descriptions, specifications, and drawings showing the design of the stationary source, facility, or modification, the nature and amount of emissions (including secondary emissions), and the manner in which it will be operated and controlled. (5-1-94)

ii. A schedule for construction of the stationary source, facility, or modification. (5-1-94)

b. For any new major facility or major modification in a nonattainment area which would be major for the nonattainment regulated air pollutant(s): (4-5-00)

i. A description of the system of continuous emission control proposed for the new major facility or major modification, emission estimates, and other information as necessary to determine that the lowest achievable emission rate would be applied. (5-1-94)

ii. A description of the emission offsets proposed for the new major facility or major modification, including information on the stationary sources, mobile sources, or facilities providing the offsets, emission estimates, and other information necessary to determine that a net air quality benefit would result. (4-5-00)

iii. Certification that all other facilities in Idaho, owned or operated by (or under common ownership of) the proposed new major facility or major modification, are in compliance with all local, state or federal requirements or are on a schedule for compliance with such. (5-1-94)

iv. An analysis of alternative sites, sizes, production processes, and environmental control techniques which demonstrates that the benefits of the proposed major facility or major modification significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification. (5-1-94)

v. An analysis of the impairment to visibility of any federal Class I area, Class I area designated by the Department, or integral vista of any mandatory federal Class I area that the new major facility or major modification would impact (including the monitoring of visibility in any Class I area near the new major facility or major modification, if requested by the Department), except for those new major facilities and major modifications exempted by Subsection 204.04. (5-1-94)

c. For any new major facility or major modification in an attainment or unclassifiable area for any regulated air pollutant, except for those new major facilities and major modifications exempted under Subsection 205.04. (4-5-00)

i. A description of the system of continuous emission control proposed for the new major facility or major modification, emission estimates, and other information as necessary to determine that the best available control technology would be applied. (5-1-94)

ii. An analysis of the effect on air quality by the new major facility or major modification, including meteorological and topographical data necessary to estimate such effects. (5-1-94)

iii. An analysis of the effect on air quality projected for the area as a result of general commercial, residential, industrial, and other growth associated with the new major facility or major modification. (5-1-94)

iv. A description of the nature, extent, and air quality effects of any or all general commercial, residential, industrial, and other growth which has occurred since August 7, 1977, in the area the new major facility or major modification would affect. (5-1-94)

v. An analysis of the impairment to visibility, soils, and vegetation that would occur as a result of the new major facility or major modification and general commercial, residential, industrial, and other growth associated with establishment of the new major facility or major modification. The owner or operator need not provide an analysis of the impact on vegetation or soils having no significant commercial or recreational value. (5-1-94)

vi. An analysis of the impairment to visibility of any federal Class I area, Class I area designated by the Department, or integral vista of any mandatory federal Class I area that the new major facility or major modification would affect. (5-1-94)

vii. An analysis of the existing ambient air quality in the area that the new major facility or major modification would affect for each regulated air pollutant that a new major facility would emit in significant amounts or for which a major modification would result in a significant net emissions increase. (4-5-00)

viii. Ambient analyses as specified in Subsections 202.01c.vii., 202.01c.ix., 202.01c.x., and 202.01c.xii., may not be required if the projected increases in ambient concentrations or existing ambient concentrations of a particular regulated air pollutant in any area that the new major facility or major modification would affect are less than the following amounts, or the regulated air pollutant is not listed herein: carbon monoxide - five hundred and seventy-five (575) micrograms per cubic meter, eight (8) hour average; nitrogen dioxide - fourteen (14) micrograms per cubic meter, annual average; PM-10 - ten (10) micrograms per cubic meter, twenty-four (24) hour average; sulfur dioxide - thirteen (13) micrograms per cubic meter, twenty-four (24) hour average; ozone - any net increase of one hundred (100) tons per year or more of volatile organic compounds, as a measure of ozone; lead - one-tenth (0.1) of a microgram per cubic meter, calendar quarterly average; mercury - twenty-five hundredths (0.25) of a microgram per cubic meter, twenty-four (24) hour average; beryllium - one-thousandth (0.001) of a microgram per cubic meter, twenty-four (24) hour average; fluorides - twenty-five hundredths (0.25) of a microgram per cubic meter, twenty-four (24) hour average; vinyl chloride - fifteen (15) micrograms per

cubic meter, twenty-four (24) hour average; hydrogen sulfide - two-tenths (0.2) of a microgram per cubic meter, one (1) hour average. (4-5-00)

ix. For any regulated air pollutant which has an ambient air quality standard, the analysis shall include continuous air monitoring data, gathered over the year preceding the submittal of the application, unless the Department determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one (1) year, but not less than four (4) months, which is adequate for determining whether the emissions of that regulated air pollutant would cause or contribute to a violation of the ambient air quality standard or any prevention of significant deterioration (PSD) increment. (4-5-00)

x. For any regulated air pollutant which does not have an ambient air quality standard, the analysis shall contain such air quality monitoring data that the Department determines is necessary to assess ambient air quality for that air pollutant in any area that the emissions of that air pollutant would affect. (4-5-00)

xi. If requested by the Department, monitoring of visibility in any Class I area the proposed new major facility or major modification would affect. (5-1-94)

xii. Operation of monitoring stations shall meet the requirements of Appendix B to 40 CFR Part 58 or such other requirements as extensive as those set forth in Appendix B as may be approved by the Department. (5-1-94)

02. Estimates Of Ambient Concentrations. All estimates of ambient concentrations shall be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR 51, Appendix W (Guideline on Air Quality Models). (4-5-00)

a. Where an air quality model specified in the “Guideline on Air Quality Models”, is inappropriate, the model may be modified or another model substituted, subject to written approval of the Administrator of the U.S. Environmental Protection Agency and public comment pursuant to Subsection 209.01.c.; provided that modifications and substitutions of models used for toxic air pollutants will be reviewed by the Department. (4-5-00)

b. Methods like those outlined in the U.S. Environmental Protection Agency's "Interim Procedures for Evaluating Air Quality Models (Revised)" (September 1984) should be used to determine the comparability of air quality models. (5-1-94)

03. Additional Information. Any additional information, plans, specifications, evidence or documents that the Department may require to make the determinations required under Sections 200 through 225 shall be furnished upon request. (5-1-94)

203. PERMIT REQUIREMENTS FOR NEW AND MODIFIED STATIONARY SOURCES.

No permit to construct shall be granted for a new or modified stationary source unless the applicant shows to the satisfaction of the Department all of the following: (5-1-94)

01. Emission Standards. The stationary source or modification would comply with all applicable local, state or federal emission standards. (5-1-94)

02. NAAQS. The stationary source or modification would not cause or significantly contribute to a violation of any ambient air quality standard. (5-1-94)

03. Toxic Air Pollutants. Using the methods provided in Section 210, the emissions of toxic air pollutants from the stationary source or modification would not injure or unreasonably affect human or animal life or vegetation as required by Section 161. Compliance with all applicable toxic air pollutant carcinogenic increments and toxic air pollutant non-carcinogenic increments will also demonstrate preconstruction compliance with Section 161 with regards to the pollutants listed in Sections 585 and 586. (6-30-95)

204. PERMIT REQUIREMENTS FOR NEW MAJOR FACILITIES OR MAJOR MODIFICATIONS IN NONATTAINMENT AREAS.

No permit to construct shall be granted for a new major facility or major modification which is proposed for location in a nonattainment area and which would be major for the nonattainment regulated air pollutant(s) unless the applicant shows to the satisfaction of the Department all of the following: (4-5-00)

01. LAER. The new major facility or major modification would be operated at the lowest achievable emission rate (LAER) for the nonattainment regulated air pollutant, specifically: (4-5-00)

a. A new major facility would meet the lowest achievable emission rate at each new emissions unit which emits the nonattainment regulated air pollutant; and (4-5-00)

b. A major modification would meet the lowest achievable emission rate at each new or modified emissions unit which has a net emissions increase of the nonattainment regulated air pollutant. (4-5-00)

02. Required Offsets. Allowable emissions from the new major facility or major modification are offset by reductions in actual emissions from stationary sources, facilities, and/or mobile sources in the nonattainment area so as to represent reasonable further progress. All offsetting emission reductions must satisfy the requirements for emission reduction credits (Section 460) and provide for a net air quality benefit which satisfies the requirements of Section 208. If the offsets are provided by other stationary sources or facilities, a permit to construct shall not be issued for the new major facility or major modification until the offsetting reductions are made enforceable through the issuance of operating permits. The new major facility or major modification may not commence operation, and an operating permit for the new major facility or major modification shall not be effective before the date the offsetting reductions are achieved. (4-5-00)

03. Compliance Status. All other sources in the State owned or operated by the applicant, or by any entity controlling, controlled by or under common control with such person, are in compliance with all applicable emission limitations and standards or subject to an enforceable compliance schedule. (5-1-94)

04. Effect On Visibility. The effect on visibility of any federal Class I area, Class I area designated by the Department, or integral vista of a mandatory federal Class I area, by the new major facility or major modification is consistent with making reasonable progress toward remedying existing and preventing future visibility impairment, except that: (5-1-94)

a. New major facilities, or major modifications to major facilities, which are not designated facilities and which do not emit or have the potential to emit two-hundred fifty (250) tons per year, or more, of any regulated air pollutant are exempt. (4-5-00)

b. Any integral vista which the Federal Land Manager has not identified at least six (6) months prior to the submittal of a complete application, or which the Department determines was not identified in accordance with the criteria adopted pursuant to 40 CFR Part 51.304(a), may be exempted by the Department. (5-1-94)

205. PERMIT REQUIREMENTS FOR NEW MAJOR FACILITIES OR MAJOR MODIFICATIONS IN ATTAINMENT OR UNCLASSIFIABLE AREAS.

01. Requirements For Issuance Of Permit. No permit to construct shall be granted for a new major facility or major modification which is proposed for location in an attainment or unclassifiable area for any regulated air pollutant, unless the applicant shows to the satisfaction of the Department that: (4-5-00)

a. The new major facility or major modification would use the best available control technology (BACT): (5-1-94)

i. For each regulated air pollutant for which a new major facility would have the potential to emit in excess of the significant rates as defined in Section 006; and (4-5-00)

ii. At each new or modified emissions unit which has a net emissions increase of each regulated air pollutant for which a major modification has a significant net emissions increase. (4-5-00)

b. The allowable emission increases from the new major facility or major modification, in conjunction with all other applicable emissions increases or reductions, including secondary emissions, would not: (5-1-94)

i. Cause or significantly contribute to violations of any ambient air quality standard; and (5-1-94)

ii. Cause or contribute to violations of any applicable prevention of significant deterioration (PSD) increment; (5-1-94)

c. The emission increases from the new major facility or major modification would not have an adverse impact on the air quality related values, including visibility, of any federal Class I area or Class I area designated by the Department, and any effect on visibility of any integral vista of a mandatory federal Class I area would be consistent with making reasonable progress toward remedying existing and preventing future visibility impairment. However, any integral vista which the Federal Land Manager has not identified at least six (6) months prior to the submittal of a complete application, or which the Department determines was not identified in accordance with the required identification criteria, may be exempted by the Department. (4-5-00)

02. Phased Construction Projects. For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at least eighteen (18) months prior to commencement of each independent phase of the project. (5-1-94)

03. Innovative Control Technology. If requested by the owner or operator of the new major facility or major modification, the Department may, with the consent of the Governor of any other affected state, approve a system of innovative control technology. (5-1-94)

a. A proposed system of innovative control technology may be approved if: (5-1-94)

i. The proposed control system would not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation or function; (5-1-94)

ii. The owner or operator agrees to achieve a level of continuous emissions control equivalent to that which would have been required for BACT by a date specified by the Department, but not later than four (4) years from the time of start-up or seven (7) years from permit issuance; (5-1-94)

iii. The allowable emissions from the facility employing the system of innovative control technology satisfy all other applicable requirements; (4-5-00)

iv. Prior to the date established pursuant to Subsection 205.03.a.ii., the new major facility or major modification would not cause or significantly contribute to any violation of an ambient air quality standard, impact any Class I area, or impact any area where a prevention of significant deterioration (PSD) increment is known to be violated. (4-5-00)

b. The Department shall withdraw its approval to employ a system of innovative control technology if: (5-1-94)

i. The proposed system fails by the specified date to achieve the required continuous emission control; (5-1-94)

ii. The proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare, or safety; or (5-1-94)

iii. The Department decides that the proposed system is unlikely to achieve the required level of control or to protect the public health, welfare, or safety. (5-1-94)

c. If the system of innovative control technology fails to meet the required level of continuous emission control or if approval for the system is withdrawn by the Department, the Department may allow the new major facility or major modification up to three (3) years from the date of withdrawal to meet the requirement for the application of BACT through the use of a demonstrated system of control. (5-1-94)

04. Exemptions. (5-1-94)

a. New major facilities, or major modifications to major facilities, which are not designated facilities and which do not emit or have the potential to emit two hundred fifty (250) tons per year, or more, of any regulated air pollutant are exempt from complying with the conditions of Subsections 205.01.a., 205.01.b.ii., and 205.01.c., for obtaining a permit to construct. (4-5-00)

b. Temporary emissions (one (1) year or less in duration unless otherwise approved by the Department) from a new major facility or major modification that would not impact a Class I area or area where an applicable prevention of significant deterioration (PSD) increment is known to be violated are exempt from complying with the conditions of Subsections 205.01.b. and 205.01.c. for obtaining a permit to construct. (4-5-00)

206. OPTIONAL OFFSETS FOR PERMITS TO CONSTRUCT.
The owner or operator of any proposed new or modified stationary source, new major facility, or major modification, which cannot meet the requirements of Subsections 203.02, 203.03, 204.04, 205.01.b. or 205.01.c., may propose the use of an emission offset in order to meet those requirements and thereby obtain a permit to construct. Any proposed emission offset must satisfy the requirements for emission reduction credits, Section 460, and demonstrate, through appropriate dispersion modeling, that the offset will reduce ambient concentrations sufficiently to meet the requirements at all modeled receptors which could not otherwise have met the requirements. (6-30-95)

207. REQUIREMENTS FOR EMISSION REDUCTION CREDIT.
In order to be credited in a permit to construct, any emission reduction credit must satisfy the requirements of Section 460. (5-1-94)

208. DEMONSTRATION OF NET AIR QUALITY BENEFIT.
The demonstration of net air quality benefit shall: (5-1-94)

01. VOCs. For trades involving volatile organic compounds, show that total emissions are reduced for the air basin in which the stationary source or facility is located; (5-1-94)

02. Other Regulated Air Pollutants. For trades involving any other regulated air pollutant, show through appropriate dispersion modeling that the trade will not cause an increase in ambient concentrations at any modeled receptor; (4-5-00)

03. Mobile Sources. For trades involving mobile sources, show a reduction in the ambient impact of emissions upon air quality by obtaining sufficient emission reductions to, at a minimum, compensate for adverse ambient impact where the major facility or major modification would otherwise cause or significantly contribute to a violation of any national ambient air quality standard. (4-5-00)

209. PROCEDURE FOR ISSUING PERMITS.

01. General Procedures. General procedures for permits to construct. (5-1-94)

a. Within thirty (30) days after receipt of the application for a permit to construct, the Department shall determine whether the application is complete or whether more information must be submitted and shall notify the applicant of its findings in writing. (5-1-94)

b. Within sixty (60) days after the application is determined to be complete the Department shall: (5-1-94)

i. Upon written request of the applicant, provide a draft permit for applicant review. Agency action on the permit under this Section may be delayed if deemed necessary to respond to applicant comments. (4-5-00)

ii. Notify the applicant in writing of the approval, conditional approval, or denial of the application if an opportunity for public comment is not required pursuant to Subsection 209.01.c. The Department shall set forth reasons for any denial; or (5-1-94)

iii. Issue a proposed approval, proposed conditional approval, or proposed denial. (5-1-94)

c. An opportunity for public comment will be provided on all applications requiring a permit to construct. Public comment shall be provided on an application for any new major facility or major modification, any new facility or modification which would affect any Class I area, any application which uses fluid modeling or a field study to establish a good engineering practice stack height pursuant to Sections 510 through 516, any application which uses an inter-pollutant trade pursuant to Subsection 210.17, any application for a permit with a particulate matter emission standard requested pursuant to Subsection 710.10, any application which the Director determines an opportunity for public comment should be provided, and any application upon which the applicant so requests. (6-23-00)T

i. The Department's proposed action, together with the information submitted by the applicant and the Department's analysis of the information, shall be made available to the public in at least one (1) location in the region in which the stationary source or facility is to be located. (5-1-94)

ii. The availability of such materials shall be made known by notice published in a newspaper of general circulation in the county(ies) in which the stationary source or facility is to be located. (5-1-94)

iii. A copy of such notice shall be sent to the applicant and to appropriate federal, state and local agencies. (5-1-94)

iv. There shall be a thirty (30) day period after initial publication for comment on the Department's proposed action, such comment to be made in writing to the Department. (5-1-94)

v. After consideration of comments and any additional information submitted during the comment period, and within forty-five (45) days after initial publication of the notice, or notice of public hearing if one is requested under Subsections 209.02.b.iv. or 209.02.a.ii., unless the Director deems that additional time is required to evaluate comments and information received, the Department shall notify the applicant in writing of approval, conditional approval, or denial of the permit. The Department shall set forth the reasons for any denial. (5-1-94)

vi. All comments and additional information received during the comment period, together with the Department's final determination, shall be made available to the public at the same location as the preliminary determination. (5-1-94)

d. A copy of each permit will be sent to the U.S. Environmental Protection Agency. (5-1-94)

02. Additional Procedures For Specified Sources. (5-1-94)

a. For any new major facility or major modification in an attainment or unclassifiable area for any regulated air pollutant, except for those new major facilities and major modifications exempted under Subsection 205.04. (4-5-00)

i. The public notice issued pursuant to Subsection 209.01.c.ii. shall indicate the degree of increment consumption that is expected from the new major facility or major modification; and (5-1-94)

ii. The public notice issued pursuant to Subsection 209.01.c.ii. shall indicate the opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality effects of the new major facility or major modification, alternatives to it, the control technology required, and other appropriate considerations. All requests for public hearings during a comment period with an opportunity for a hearing must be requested in writing by interested persons within fourteen (14) days of the publication of the legal notice of the proposed permit to construct or within fourteen (14) days prior to the end of the comment period, whichever is later. (3-23-98)

b. For any new major facility or major modification which would affect a federal Class I area or an integral vista of a mandatory federal Class I area. (5-1-94)

i. If the Department is notified of the intent to apply for a permit to construct, it shall notify the appropriate Federal Land Manager within thirty (30) days; (5-1-94)

ii. A copy of the permit application and all relevant information, including an analysis of the anticipated effects on visibility in any federal Class I area, shall be sent to the Administrator of the U.S. Environmental Protection Agency and the Federal Land Manager within thirty (30) days of receipt of a complete application and at least sixty (60) days prior to any public hearing on the application; (5-1-94)

iii. Notice of every action related to the consideration of the permit shall be sent to the Administrator of the U.S. Environmental Protection Agency; (5-1-94)

iv. The public notice issued pursuant to Subsection 209.01.c.ii. shall indicate the opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality effect of the new major facility or major modification, alternatives to it, the control technology required, and other appropriate considerations. All requests for public hearings during a comment period with an opportunity for a hearing must be requested in writing by interested persons within fourteen (14) days of the publication of the legal notice of the proposed permit to construct or within fourteen (14) days prior to the end of the comment period, whichever is later. (3-23-98)

v. The notice of public hearing, if required, shall explain any differences between the Department's preliminary determination and any visibility analysis

performed by the Federal Land Manager and provided to the Department within thirty (30) days of the notification pursuant to Subsection 209.02.b.ii. (5-1-94)

vi. Upon a sufficient showing by the Federal Land Manager that a proposed new major facility or major modification will have an adverse impact upon the air quality related values (including visibility) of any federal mandatory Class I area, the Director may deny the application notwithstanding the fact that the concentrations of regulated air pollutants would not exceed the maximum allowable increases for a Class I area. (4-5-00)

03. Establishing A Good Engineering Stack Height. The Department will notify the public of the availability of any fluid model or field study used to establish a good engineering practice stack height and provide an opportunity for a public hearing before issuing a permit or setting an emission standard based thereon. (5-1-94)

04. Revisions Of Permits To Construct. The Director may approve a revision of any permit to construct provided the stationary source or facility continues to meet all applicable requirements of Sections 200 through 223. Revised permits will be issued pursuant to procedures for issuing permits (Section 209), except that the requirements of Subsections 209.01.c., 209.02.a., and 209.02.b., shall only apply if the permit revision results in an increase in emissions authorized by the permit or if deemed appropriate by the Director. (4-5-00)

05. Permit To Construct Procedures For Tier I Sources. For Tier I sources that require a permit to construct, the owner or operator shall either: (5-1-94)

a. Submit only the information required by Sections 200 through 219 for a permit to construct, in which case: (3-23-98)

i. A permit to construct or denial will be issued in accordance with Subsections 209.01.a. and 209.01.b. (5-1-94)

ii. The owner or operator may construct the source after permit to construct issuance or in accordance with Subsection 213.02.c. (3-23-98)

iii. The owner or operator may operate the source after permit to construct issuance so long as it does not violate any terms or conditions of the existing Tier I operating permit and complies with Subsection 380.02. (4-5-00)

iv. Unless a different time is prescribed by these rules, the applicable requirements contained in a permit to construct will be incorporated into the Tier I

operating permit during renewal (Section 269). Where an existing Tier I permit would prohibit such construction or change in operation, the source must obtain a permit revision before commencing operation. Tier I sources required to meet the requirements under Section 112(g) of the Clean Air Act (Section 214), or to have a permit under the preconstruction review program approved into the applicable implementation plan under Part C (Section 205) or Part D (Section 204) of Title I of the Clean Air Act, shall file a complete application to obtain a Tier I permit revision within twelve (12) months after commencing operation. (3-19-99)

v. The application or minor or significant permit modification request shall be processed in accordance with timelines: Section 361 and Subsections 367.02 through 367.05. (3-19-99)

vi. The final Tier I operating permit action shall incorporate the relevant terms and conditions from the permit to construct; or (4-5-00)

b. Submit all information required by Sections 200 through 219 for a permit to construct and Sections 300 through 386 for a Tier I operating permit, or Tier I operating permit modification, in which case: (4-5-00)

i. Completeness of the application shall be determined within thirty (30) days. (5-1-94)

ii. The Department shall prepare a proposed permit to construct or denial in accordance with Sections 200 through 219 and a draft Tier I operating permit or Tier I operating permit modification in accordance with Sections 300 through 386 within sixty (60) days. (4-5-00)

iii. The Department shall provide for public comment and affected state review in accordance with Sections 209, 364 and 365 on the proposed permit to construct or denial and draft Tier I operating permit or Tier I operating permit modification. (4-5-00)

iv. Except as otherwise provided by these rules, the Department shall prepare and issue to the owner or operator a final permit to construct or denial within fifteen (15) days of the close of the public comment period. The owner or operator may construct the source after permit to construct issuance or in accordance with Subsection 213.02.c. (4-5-00)

v. The final permit to construct will be sent to EPA, along with the proposed Tier I operating permit or modification. The proposed Tier I operating permit or modification shall be sent for review in accordance with Section 366. (4-5-00)

vi. The Tier I operating permit, or Tier I operating permit modification, will be issued in accordance with Section 367. The owner or operator may operate the source after permit to construct issuance so long as it does not violate any terms or conditions of the existing Tier I operating permit and complies with Subsection 380.02; or (4-5-00)

c. Submit all information required by Sections 200 through 219 for a permit to construct and Sections 300 through 381 for a Tier I operating permit, or Tier I operating permit modification, in which case: (4-5-00)

i. Completeness of the application shall be determined within thirty (30) days. (4-5-00)

ii. The Department shall prepare a draft permit to construct or denial in accordance with Sections 200 through 219 and that also meets the requirements of Sections 300 through 381 within sixty (60) days. (4-5-00)

iii. The Department shall provide for public comment and affected state review in accordance with Sections 209, 364, and 365 on the draft permit to construct or denial. (4-5-00)

iv. The Department shall prepare and send a proposed permit to construct or denial to EPA for review in accordance with Section 366. EPA review of the proposed permit to construct or denial in accordance with Section 366 can occur concurrently with public comment and affected state review of the draft permit, as provided in Subsection 209.05.c.iii. above, except that if the draft permit or denial is revised in response to public comment or affected state review, the Department must send the revised proposed permit to construct or denial to EPA for review in accordance with Section 366. (4-5-00)

v. Except as otherwise provided by these rules, the Department shall prepare and issue to the owner or operator a final permit to construct or denial in accordance with Section 367. The owner or operator may construct the source after permit to construct issuance or in accordance with Subsection 213.02.c. (4-5-00)

vi. The permittee may, at any time after issuance, request that the permit to construct requirements be incorporated into the Tier I operating permit through an administrative amendment in accordance with Section 381. The owner or operator may operate the source or modification upon submittal of the request for an administrative amendment. (4-5-00)

210. DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE WITH TOXIC STANDARDS.

In accordance with Subsection 203.03, the applicant shall demonstrate preconstruction compliance with Section 161 to the satisfaction of the Department. The accuracy, completeness, execution and results of the demonstration are all subject to review and approval by the Department. (6-30-95)

01. Identification Of Toxic Air Pollutants. The applicant may use process knowledge, raw materials inputs, EPA and Department references and commonly available references approved by EPA or the Department to identify the toxic air pollutants emitted by the stationary source or modification. (6-30-95)

02. Quantification Of Emission Rates. (6-30-95)

a. The applicant may use standard scientific and engineering principles and practices to estimate the emission rate of any toxic air pollutant at the point(s) of emission. (6-30-95)

i. Screening engineering analyses use unrefined conservative data. (6-30-95)

ii. Refined engineering analyses utilize refined and less conservative data including, but not limited to, emission factors requiring detailed input and actual emissions testing at a comparable emissions unit using EPA or Department approved methods. (6-30-95)

b. The uncontrolled emissions rate of a toxic air pollutant from a source or modification is calculated using the maximum capacity of the source or modification under its physical and operational design without the effect of any physical or operational limitations. (6-30-95)

i. Examples of physical and operational design include but are not limited to: the amount of time equipment operates during batch operations and the quantity of raw materials utilized in a batch process. (6-30-95)

ii. Examples of physical or operational limitations include but are not limited to: shortened hours of operation, use of control equipment, and restrictions on production which are less than design capacity. (6-30-95)

c. The controlled emissions rate of a toxic air pollutant from a source or modification is calculated using the maximum capacity of the source or modification under its physical and operational design with the effect of any physical or operational limitation that has been specifically described in a written and certified submission to the Department.(6-30-95)

d. The T-RACT emissions rate of a toxic air pollutant from a source or modification is calculated using the maximum capacity of the source or modification under its physical and operational design with the effect of: (6-30-95)

i. Any physical or operational limitation other than control equipment that has been specifically described in a written and certified submission to the Department; and (6-30-95)

ii. An emission standard that is T-RACT. (6-30-95)

03. Quantification Of Ambient Concentrations. (6-30-95)

a. The applicant may use the modeling methods provided in Subsection 202.02 to estimate the ambient concentrations at specified receptor sites for any toxic air pollutant emitted from the point(s) of emission. (6-30-95)

i. For screening modeling, the models use arbitrary meteorological data and predict maximum one (1) hour concentrations for all specified receptor sites. For toxic air pollutants listed in Section 586, multiply the maximum hourly concentration output from the model by a persistence factor of one hundred twenty five one- thousandths (0.125) to convert the hourly average to an annual average. For toxic air pollutants listed in Section 585, multiply the maximum hourly concentration output from the model by a persistence factor of four tenths (0.4) to convert the hourly concentration to a twenty-four (24) hour average. (6-30-95)

ii. For refined modeling, the models use site specific information. If actual meteorological data is used and the model predicts annual averages for toxic air pollutants listed in Section 586 and twenty-four (24) hour averages for toxic air pollutants listed in Section 585, persistence factors need not be used. (6-30-95)

b. The point of compliance is the receptor site that is estimated to have the highest ambient concentration of the toxic air pollutant of all the receptor sites that are located either at or beyond the facility property boundary or at a point of public access; provided that, if the toxic air pollutant is listed in Section 586, the receptor site is not considered to be at a point of public access if the receptor site is located on or within a road, highway or other transportation corridor transecting the facility. (6-30-95)

c. The uncontrolled ambient concentration of the source or modification is estimated by modeling the uncontrolled emission rate. (6-30-95)

d. The controlled ambient concentration of the source or modification is estimated by modeling the controlled emission rate. (6-30-95)

e. The approved net ambient concentration from a modification for a toxic air pollutant at each receptor is calculated by subtracting the estimated decreases in ambient concentrations for all sources at the facility contributing an approved creditable decrease at the receptor site from the estimated ambient concentration from the modification at the receptor. (6-30-95)

f. The approved offset ambient concentration from a source or modification for a toxic air pollutant at each receptor is calculated by subtracting the estimated decreases in ambient concentrations for all sources contributing an approved offset at the receptor from the estimated ambient concentration for the source or modification at the receptor.(6-30-95)

g. The T-RACT ambient concentration of the source or modification is estimated by using refined modeling and the T-RACT emission rate. (6-30-95)

h. The approved interpollutant ambient concentration from a source or modification for a toxic air pollutant at each receptor is calculated as follows: (6-30-95)

i. Step 1: Calculate the estimated decrease in ambient concentrations for each toxic air pollutant from each source contributing an approved interpollutant trade at the receptor by multiplying the approved interpollutant ratio by the overall decrease in the ambient concentration of the toxic air pollutant at the receptor site. (6-30-95)

ii. Step 2: Calculate the total estimated decrease at the receptor by summing all of the individual estimated decreases calculated in Subsection 210.03.h.i. for that receptor. (6-30-95)

iii. Step 3: Calculate the approved interpollutant ambient concentration by subtracting the total estimated decrease at the receptor from the estimated ambient concentration for the source or modification at the receptor. (6-30-95)

04. Preconstruction Compliance Demonstration. The applicant may use any of the Department approved standard methods described in Subsections 210.05 through 210.08, and may use any applicable specialized method described in Subsections 210.09 through 210.12 to demonstrate preconstruction compliance for each identified toxic air pollutant. (6-30-95)

05. Uncontrolled Emissions. (6-30-95)

a. Compare the source's or modification's uncontrolled emissions rate for the toxic air pollutant to the applicable screening emission level listed in Sections 585 or 586.(6-30-95)

b. If the source's or modification's uncontrolled emission rate is less than or equal to the applicable screening emission level, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

06. Uncontrolled Ambient Concentration. (6-30-95)

a. Compare the source's or modification's uncontrolled ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

b. If the source's or modification's uncontrolled ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

07. Controlled Emissions And Uncontrolled Ambient Concentration. (6-30-95)

a. Compare the source's or modification's controlled emissions rate for the toxic air pollutant to the applicable screening emission level listed in Sections 585 or 586 and compare the source's or modification's uncontrolled ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

b. If the source's or modification's controlled emission rate is less than or equal to the applicable screening emission level and if the source's or modification's uncontrolled

ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

08. Controlled Ambient Concentration. (6-30-95)

a. Compare the source's or modification's controlled ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

b. If the source's or modification's controlled ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

c. The Department shall include an emission limit for the toxic air pollutant in the permit to construct that is equal to or, if requested by the applicant, less than the emission rate that was used in the modeling. (6-30-95)

09. Net Emissions. (6-30-95)

a. As provided in Section 007 (definition of net emissions increase) and Sections 460 and 461, the owner or operator may net emissions to demonstrate preconstruction compliance. (4-5-00)

b. Compare the modification's approved net emissions increase (expressed as an emission rate) for the toxic air pollutant to the applicable screening emission level listed in Sections 585 or 586. (6-30-95)

c. If the modification's approved net emissions increase is less than or equal to the applicable screening emission level, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

10. Net Ambient Concentration. (6-30-95)

a. As provided in Section 007 (definition of net emission increase) and Sections 460 and 461, the owner or operator may net ambient concentrations to demonstrate preconstruction compliance. (4-5-00)

b. Compare the modification's approved net ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

c. If the modification's approved net ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

11. Toxic Air Pollutant Offset Ambient Concentration. (6-30-95)

a. As provided in Sections 206 and 460, the owner or operator may use offsets to demonstrate preconstruction compliance. (6-30-95)

b. Compare the source's or modification's approved offset ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

c. If the source's or modification's approved offset ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

12. T-RACT Ambient Concentration For Carcinogens. (6-30-95)

a. As provided in Subsections 210.12 and 210.13, the owner or operator may use T-RACT to demonstrate preconstruction compliance for toxic air pollutants listed in Section 586. (6-30-95)

i. This method may be used in conjunction with netting (Subsection 210.09), and offsets (Subsection 210.11). (6-30-95)

ii. This method is not to be used to demonstrate preconstruction compliance for toxic air pollutants listed in Section 585. (6-30-95)

b. Compare the source's or modification's approved T-RACT ambient concentration at the point of compliance for the toxic air pollutant to the amount of the toxic air pollutant that would contribute an ambient air cancer risk probability of less than one to one hundred thousand (1:100,000) (which amount is equivalent to ten (10) times the applicable acceptable ambient concentration listed in Section 586). (6-30-95)

c. If the source's or modification's approved T-RACT ambient concentration at the point of compliance is less than or equal to the amount of the toxic air pollutant that would contribute an ambient air cancer risk probability of less than one to one hundred thousand (1:100,000), no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

13. T-RACT Determination Processing. (6-30-95)

a. The applicant may submit all information necessary to the demonstration at the time the applicant submits the complete initial application or the applicant may request the Department to review a complete initial application to determine if Subsection 210.12 may be applicable to the source or modification. (6-30-95)

b. Notwithstanding Subsections 209.01.a. and 209.01.b., if the applicant requests the Department to review a complete initial application and Subsection 210.12 is determined to be applicable, the completeness determination for the initial application will be revoked until a supplemental application is submitted and determined complete. When

the supplemental application is determined complete, the timeline for agency action shall be reinitiated. (6-30-95)

14. T-RACT Determination. T-RACT shall be determined on a case-by-case basis by the Department as follows: (6-30-95)

a. The applicant shall submit information to the Department identifying and documenting which control technologies or other requirements the applicant believes to be T-RACT. (5-1-94)

b. The Department shall review the information submitted by the applicant and determine whether the applicant has proposed T-RACT. (5-1-94)

c. The technological feasibility of a control technology or other requirements for a particular source shall be determined considering several factors including, but not limited to: (5-1-94)

i. Process and operating procedures, raw materials and physical plant layout. (5-1-94)

ii. The environmental impacts caused by the control technology that cannot be mitigated, including, but not limited to, water pollution and the production of solid wastes. (5-1-94)

iii. The energy requirements of the control technology. (5-1-94)

d. The economic feasibility of a control technology or other requirement, including the costs of necessary mitigation measures, for a particular source shall be determined considering several factors including, but not limited to: (5-1-94)

i. Capital costs. (5-1-94)

ii. Cost effectiveness, which is the annualized cost of the control technology divided by the amount of emission reduction. (5-1-94)

iii. The difference in costs between the particular source and other similar sources, if any, that have implemented emissions reductions. (5-1-94)

e. If the Department determines that the applicant has proposed T-RACT, the Department shall determine which of the options, or combination of options, will result in the lowest emission of toxic air pollutants, develop the emission standards constituting T-RACT and incorporate the emission standards into the permit to construct. (5-1-94)

f. If the Department determines that the applicant has not proposed T-RACT, the Department shall disapprove the submittal. If the submittal is disapproved, the applicant may supplement its submittal or demonstrate preconstruction compliance through a different method provided in Section 210. If the applicant does not supplement its submittal or demonstrate preconstruction compliance through a different method provided in Section 210, the Department shall deny the permit. (6-30-95)

15. Short Term Source Factor. For short term sources, the applicant may utilize a short term adjustment factor of ten (10). For a carcinogen, multiply either the applicable acceptable ambient concentration (AACC) or the screening emission rate, but not both, by ten (10), to demonstrate preconstruction compliance. This method may be used for TAPs listed in Section 586 only and may be utilized in conjunction with standard methods for quantification of emission rates (Subsections 210.05 through 210.08). (4-5-00)

16. Environmental Remediation Source. (6-30-95)

a. For Remediation sources subject to or regulated by the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901-6992k) and the "Idaho Rules and Standards for Hazardous Waste," (IDAPA 58.01.05.000 et seq.) or the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 6901-6992k) or a consent order, if the estimated ambient concentration at the point of impact is greater than the acceptable ambient impacts listed in Sections 585 and 586, Best Available Control Technology shall be applied and operated until the estimated uncontrolled emissions from the remediation source are below the acceptable ambient concentration. (6-30-95)

b. For Remediation sources not subject to or regulated by the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901-6992k) and the "Idaho Rules and Standards for Hazardous Waste," (IDAPA 58.01.05.000 et seq.) or the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 6901-6992k) or a consent order, shall, for the purposes of these rules, be considered the same as any other new or modified source of toxic air pollution. (6-30-95)

c. For an environmental remediation source that functions to remediate or recover any release, spill, leak, discharge or disposal of any petroleum product or petroleum substance, the Department may waive the requirements of Section 513 of these rules. (11-10-00)T

17. Interpollutant Trading Ambient Concentration. (6-30-95)

a. As provided in Subsections 209.01.c., 210.17 through 210.19, the owner or operator may use interpollutant trading to demonstrate preconstruction compliance. This method may be used in conjunction with netting (Subsection 210.10), and offsets (Subsection 210.11) (6-30-95)

b. Compare the source's or modification's approved interpollutant ambient concentration at the point of compliance for the toxic air pollutant emitted by the source or modification to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

c. If the source's or modification's approved interpollutant ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration listed in Sections 585 or 586, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits for all of the toxic air pollutants involved in the trade in the permit to construct. The Department shall also include other permit terms in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

18. Interpollutant Trading Determination Processing. (6-30-95)

a. The applicant may submit all information necessary to the demonstration at the time the applicant submits the complete initial application or the applicant may request the Department to review a complete initial application to determine if Subsection 210.17 may be applicable to the source or modification. (6-30-95)

b. Notwithstanding Subsections 209.01.a. and 209.01.b., if the applicant requests the Department to review a complete initial application and Subsection 210.17 is determined to be applicable, the completeness determination for the initial application will be revoked until a supplemental application is submitted and determined complete. When the supplemental application is determined complete, the timeline for agency action shall be reinitiated. (6-30-95)

19. Interpollutant Determination. (6-30-95)

a. The applicant may request an interpollutant trade if the Department determines that: (6-30-95)

i. The facility complies with an emission standard at least as stringent as best available control technology (BACT); and (6-30-95)

ii. The owner or operator has instituted all known and available methods of pollution prevention at the facility to reduce, avoid or eliminate toxic air pollution prior to its generation including, but not limited to, recycling, chemical substitution, and process modification provided that such pollution prevention methods are compatible with each other and the product or service being produced; and (6-30-95)

iii. The owner or operator has taken all available offsets; and (6-30-95)

iv. The owner or operator has identified all geographical areas and populations that may be impacted by the proposed interpollutant trade. (6-30-95)

b. Interpollutant trades shall be approved or denied on a case-by-case basis by the Department. Denials shall be within the discretion of the Department. Approvals shall be granted only if: (6-30-95)

i. The Department of Health and Welfare's Division of Health approves the interpollutant trade; and (6-30-95)

ii. The Department of Environmental Quality determines that the interpollutant trade will result in a overall benefit to the environment; and (6-30-95)

iii. An EPA approved database or other EPA approved reference provides relative potency factors, or comparable factors, or other data that is sufficient to allow for adequate review and approval of the proposed trade by the Department and the Department of Health and Welfare's Division of Health is submitted for all of the toxic air pollutants being traded; and (6-30-95)

iv. The reductions occur at the same facility where the proposed source or modification will be constructed; and (6-30-95)

v. The interpollutant trade will not cause an increase in sum of the ambient concentrations of the carcinogenic toxic air pollutants involved in the particular interpollutant trade at any receptor site; and (6-30-95)

vi. The total cancer risk with the interpollutant trade will be less than the total cancer risk without the interpollutant trade; and (6-30-95)

vii. The total non-cancer health risk with the interpollutant trade will be less than the total non-cancer health risk without the interpollutant trade. (6-30-95)

20. NSPS And NESHAP Sources. (6-30-95)

a. If the owner or operator demonstrates that the toxic air pollutant from the source or modification is regulated by the Department at the time of permit issuance under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63, no further procedures for demonstrating preconstruction compliance will be required under Section 210 for that toxic air pollutant as part of the application process. (6-30-95)

b. If the owner or operator demonstrates that the toxic air pollutant from the source or modification is regulated by the EPA at the time of permit issuance under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63 and the permit to construct issued by the Department contains adequate provisions implementing the federal standard, no further procedures for demonstrating preconstruction compliance will be required under Section 210 for that toxic air pollutant as part of the application process. (6-30-95)

21. Permit Compliance Demonstration. Additional procedures and requirements to demonstrate and ensure actual and continuing compliance may be required by the Department in the permit to construct. (5-1-94)

22. Interpretation And Implementation Of Other Sections. Except as specifically provided in other sections of these rules, the provisions of Section 210 are not to be utilized in the interpretation or implementation of any other section of these rules. (6-30-95)

210. CONDITIONS FOR PERMITS TO CONSTRUCT.

01. Reasonable Conditions. The Department may impose any reasonable conditions upon an approval, including conditions requiring the stationary source or facility to be provided with: (5-1-94)

a. Sampling ports of a size, number, and location as the Department may require; (5-1-94)

b. Safe access to each port; (5-1-94)

c. Instrumentation to monitor and record emissions data; (5-1-94)

d. Instrumentation for ambient monitoring to determine the effect emissions from the stationary source or facility may have, or are having, on the air quality in any area affected by the stationary source or facility; and

e. Any other sampling and testing facilities as may be deemed reasonably necessary. (5-1-94)

02. Cancellation. The Department may cancel a permit to construct if the construction is not begun within two (2) years from the date of issuance, or if during the construction, work is suspended for one (1) year. (5-1-94)

03. Notification To The Department. Any owner or operator of a stationary source or facility subject to a permit to construct shall furnish the Department written notifications as follows: (5-1-94)

a. A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty (60) days or less than thirty (30) days prior to such date; and (5-1-94)

b. A notification of the actual date of initial start-up of the stationary source or facility within fifteen (15) days after such date. (5-1-94)

04. Performance Test. Within sixty (60) days after achieving the maximum production rate at which the stationary source or facility will be operated but not later than one hundred eighty (180) days after initial start-up of such stationary source or facility, the owner or operator of such stationary source or facility may be required to conduct a performance test in accordance with methods and under operating conditions approved by the Department and furnish the Department a written report of the results of such performance test. (5-1-94)

a. Such test shall be at the expense of the owner or operator. (5-1-94)

b. The Department may monitor such test and may also conduct performance tests. (5-1-94)

c. The owner or operator of a stationary source or facility shall provide the Department fifteen (15) days prior notice of the performance test to afford the Department the opportunity to have an observer present. (5-1-94)

211. OBLIGATION TO COMPLY.

01. Responsibility To Comply With All Requirements. Receiving a permit to construct shall not relieve any owner or operator of the responsibility to comply with all applicable local, state and federal statutes, rules and regulations. (5-1-94)

02. Relaxation Of Standards Or Restrictions. At such time that a particular facility or modification becomes a major facility or major modification solely by virtue of a relaxation in any enforceable emission standard or restriction on the operating rate, hours of operation or on the type or amount of material combusted, stored or processed, which was used to exempt the facility or modification from certain requirements for a permit to construct, the requirements for new major facilities or major modifications shall apply to the facility or modification as though construction had not yet commenced. (5-1-94)

213. PRE-PERMIT CONSTRUCTION.
This section describes how owners or operators may commence construction or modification of certain stationary sources before obtaining the required permit to construct. (3-23-98)

01. Pre-Permit Construction Eligibility. Pre-permit construction approval is available for non-major sources and non-major modifications and for new sources or modifications proposed in accordance with Subsection 213.01.d. Pre-permit construction is not available for any new source or modification that: uses emissions netting to stay below major source levels; uses optional offsets pursuant to Section 206; or would have an adverse impact on the air quality related values of any Class I area. Owners or operators may ask the Department for the ability to commence construction or modification of qualifying sources under Section 213 before receiving the required permit to construct. To obtain the Department's pre-permit construction approval, the owner or operator shall satisfy the following requirements: (4-5-00)

a. The owner or operator shall apply for a permit to construct in accordance with Subsections 202.01.a., 202.02, and 202.03 of this chapter. (3-23-98)

b. The owner or operator shall consult with Department representatives prior to submitting a pre- permit construction approval application. (3-23-98)

c. The owner or operator shall submit a pre-permit construction approval application which must contain, but not be limited to: a letter requesting the ability to construct before obtaining the required permit to construct, a copy of the notice referenced in Subsection 213.02; proof of eligibility; process description(s); equipment list(s); proposed emission limits and modeled ambient concentrations for all regulated air pollutants, such that they demonstrate compliance with all applicable air quality rules and

regulations. The models shall be conducted in accordance with Subsection 202.02 and with written Department approved protocol and submitted with sufficient detail so that modeling can be duplicated by the Department. (4-5-00)

d. Owners or operators seeking limitations on a source's potential to emit such that permitted emissions will be either below major source levels or below a significant increase must describe in detail in the pre- permit construction application the proposed restrictions and certify in accordance with Section 123 that they will comply with the restrictions, including any applicable monitoring and reporting requirements. (3-23-98)

02. Permit To Construct Procedures For Pre-Permit Construction. (3-23-98)

a. Within ten (10) days after the submittal of the pre-permit construction approval application, the owner or operator shall hold an informational meeting in at least one (1) location in the region in which the stationary source or facility is to be located. The informational meeting shall be made known by notice published at least ten (10) days before the meeting in a newspaper of general circulation in the county(ies) in which the stationary source or facility is to be located. A copy of such notice shall be included in the application. (3-23-98)

b. Within fifteen (15) days after the receipt of the pre-permit construction approval application, the Department shall notify the owner or operator in writing of pre-permit construction approval or denial. The Department may deny the pre-permit construction approval application for any reason it deems valid. (3-23-98)

c. Upon receipt of the pre-permit construction approval letter issued by the Department, the owner or operator may begin construction at their own risk as identified in Subsection 231.02.d. Upon issuance of the pre- permit construction approval letter, any and all potential to emit limitations addressed in the pre-permit construction application pursuant to Subsection 213.01.d. shall become enforceable. The owner or operator shall not operate those emissions units subject to permit to construct requirements in accordance with Section 200 unless and until issued a permit pursuant to Section 209. (3-23-98)

d. If the pre-permit construction approval application is determined incomplete or the permit to construct is denied, the Department shall issue an incompleteness or denial letter pursuant to Section 209. If the Department denies the permit to construct, then the owner or operator shall have violated Section 201 on the date it commenced construction as defined in Section 006. The owner or operator shall not contest the final permit to construct decision based on the fact that they have already begun construction. (3-23-98)

214. DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE FOR NEW AND RECONSTRUCTED MAJOR SOURCES OF HAZARDOUS AIR POLLUTANTS.

01. Permitting Authority. For purposes of this section, Sections 112(g) and (j) of the Clean Air Act, and 40 CFR Part 63, the permitting authority shall be the Department. (3-19-99)

02. Definitions. Unless specifically provided otherwise, the definitions for terms set forth in this section shall be the definitions set forth in Section 112 of the Clean Air Act and 40 CFR Part 63 as incorporated by reference into these rules at Section 107. For purposes of determining if a source is a major source of hazardous air pollutants, the definition of potential to emit at Section 006 of these rules shall apply. (3-19-99)

03. Compliance With Federal MACT. All owners or operators of major sources of hazardous air pollutants which are subject to an applicable Maximum Available Control Technology (MACT) standard promulgated by EPA pursuant to Section 112 of the Clean Air Act and 40 CFR Part 63 shall comply with the applicable MACT standard and such owners or operators are not subject to Subsections 214.04 and 214.05. (3-19-99)

04. Requirement To Obtain Preconstruction Mact Determination From The Director. No owner or operator may construct or reconstruct a major source of hazardous air pollutants unless such owner or operator has obtained a MACT standard determination from the Director. The Director shall make the MACT standard determination on a case by case basis and in accordance with Section 112(g)(2)(B) of the Clean Air Act and 40 CFR 63.40 through 63.44 as incorporated by reference into these rules at Section 107. (3-19-99)

05. Development Of Mact By The Director After EPA Deadline. In the event that EPA fails to promulgate a MACT standard for a category or subcategory of major sources of hazardous air pollutants identified by the EPA under the Clean Air Act by the date established under Section 112(e) of the Clean Air Act, the owner or operator of any major source of hazardous air pollutants in such category or subcategory shall submit an application to the Director for a MACT standard determination. The Director shall make the MACT standard determination on a case by case basis and in accordance with Section 112(j) of the Clean Air Act and 40 CFR 63.50 through 63.56 as incorporated by reference into these rules at Section 107.(3-19-99)

215. -- 219. (RESERVED).

220. GENERAL EXEMPTION CRITERIA FOR PERMIT TO CONSTRUCT EXEMPTIONS.

01. General Exemption Criteria. Sections 220 through 223 may be used by owners or operators to exempt certain sources from the requirement to obtain a permit to construct. Nothing in these sections shall preclude an owner or operator from choosing to obtain a permit to construct. For purposes of Sections 220 through 223, the term source means the equipment or activity being exempted. No permit to construct is required for a source that satisfies all of the following criteria, in addition to the criteria set forth at Sections 221, 222, or 223: (4-5-00)

a. The maximum capacity of a source to emit an air pollutant under its physical and operational design without consideration of limitations on emission such as air pollution control equipment, restrictions on hours of operation and restrictions on the type and amount of material combusted, stored or processed would not: (4-5-00)

i. Equal or exceed one hundred (100) tons per year of any regulated air pollutant. (4-5-00)

ii. Cause an increase in the emissions of a major facility that equals or exceeds the significant emissions rates set out in the definition of significant at Section 006. (4-5-00)

iii. Cause or significantly contribute to a violation of an ambient air quality standard, based upon the applicable air quality models, data bases, and other requirements of 40 CFR Part 51, Appendix W (Guideline on Air Quality Models). No demonstration under this subsection is required for those sources listed at Subsection 222.02. (4-5-00)

b. Combination. The source is not part of a proposed new major facility or part of a proposed major modification. (4-5-00)

02. Record Retention. Unless the source is subject to and the owner or operator complies with Section 385, the owner or operator of the source, except for those sources listed in Subsections 222.02.a. through 222.02.g., shall maintain documentation on site which shall identify the exemption determined to apply to the source and verify that the source qualifies for the identified exemption. The records and documentation shall be kept for a period of time not less than five (5) years from the date the exemption determination has been made or for the life of the source for which the exemption has been determined to apply, which ever is greater, or until such time as a permit to construct or an operating permit is issued which covers the

operation of the source. The owner or operator shall submit the documentation to the Department upon request. (4-5-00)

221. CATEGORY I EXEMPTION.
No permit to construct is required for a source that satisfies the criteria set forth in Section 220 and the following: (4-5-00)

01. Below Regulatory Concern. The maximum capacity of a source to emit an air pollutant under its physical and operational design considering limitations on emissions such as air pollution control equipment, restrictions on hours of operation and restrictions on the type and amount of material combusted, stored or processed shall be less than ten percent (10%) of the significant emission rates set out in the definition of significant at Section 006. (4-5-00)

02. Radionucleides. The source shall have potential emissions that are less than one percent (1%) of the applicable Radionucleides standard in 40 CFR Part 61, Subpart H. (4-5-00)

03. Toxic Air Pollutants. The source shall comply with Section 223. (4-5-00)

222. CATEGORY II EXEMPTION.
No permit to construct is required for the following sources. (4-5-00)

01. Exempt Source. A source that satisfies the criteria set forth in Section 220 and that is specified below: (4-5-00)

a. Laboratory equipment used exclusively for chemical and physical analyses, research or education, including, but not limited to, ventilating and exhaust systems for laboratory hoods. To qualify for this exemption, the source shall: (5-1-94)

i. Comply with Section 223. (4-5-00)

ii. Have potential emissions that are less than one percent (1%) of the applicable Radionucleides standard in 40 CFR Part 61, Subpart H. (4-5-00)

b. Environmental characterization activities including emplacement and operation of field instruments, drilling of sampling and monitoring wells, sampling activities, and environmental characterization activities. (4-5-00)

c. Stationary internal combustion engines of less than or equal to six hundred (600) horsepower and which are fueled by natural gas, propane gas, liquefied petroleum gas, distillate fuel oils, residual fuel oils, and diesel fuel; waste oil, gasoline, or refined

gasoline shall not be used. To qualify for this exemption, the source must be operated in accordance with the following: (5-1-94)

i. One hundred (100) horsepower or less -- unlimited hours of operation. (5-1-94)

ii. One hundred one (101) to two hundred (200) horsepower -- less than four hundred fifty (450) hours per month. (5-1-94)

iii. Two hundred one (201) to four hundred (400) horsepower -- less than two hundred twenty-five (225) hours per month. (5-1-94)

iv. Four hundred one (401) to six hundred (600) horsepower -- less than one hundred fifty (150) hours per month. (5-1-94)

d. Stationary internal combustion engines used exclusively for emergency purposes which are operated less than two hundred (200) hours per year and are fueled by natural gas, propane gas, liquefied petroleum gas, distillate fuel oils, residual fuel oils, and diesel fuel; waste oil, gasoline, or refined gasoline shall not be used. (4-5-00)

e. A pilot plant that uses a slip stream from an existing process stream not to exceed ten percent (10%) of that existing process stream or which satisfies the following: (4-5-00)

i. The source shall comply with Section 223. For carcinogen emissions, the owner or operator may utilize a short term adjustment factor of ten (10) by multiplying either the acceptable ambient concentration or the screening emissions level, but not both, by ten (10). (4-5-00)

ii. The source shall have uncontrolled potential emissions that are less than one percent (1%) of the applicable Radionucleides standard in 40 CFR Part 61, Subpart H. (4-5-00)

iii. The exemption for a pilot plant shall terminate one (1) year after the commencement of operations and shall not be renewed. (4-5-00)

f. Any other source specifically exempted by the Department. A list of those sources unconditionally exempted by the Department will be maintained by the Department and made available upon written request. (4-5-00)

02. Other Exempt Sources. A source that satisfies the criteria set forth in Section 220 and that is specified below: (4-5-00)

a. Air conditioning or ventilating equipment not designed to remove air pollutants generated by or released from equipment. (5-1-94)

b. Air pollutant detectors or recorders, combustion controllers, or combustion shutoffs. (5-1-94)

c. Fuel burning equipment for indirect heating and for heating and reheating furnaces using natural gas, propane gas, liquefied petroleum gas exclusively with a capacity of less than fifty (50) million btu's per hour input. (5-1-94)

d. Other fuel burning equipment for indirect heating with a capacity of less than one million (1,000,000) btu's per hour input. (5-1-94)

e. Mobile internal combustion engines, marine installations and locomotives. (5-1-94)

f. Agricultural activities and services. (5-1-94)

g. Retail gasoline, natural gas, propane gas, liquified petroleum gas, distillate fuel oils and diesel fuel sales. (5-1-94)

h. Used Oil Fired Space Heaters which comply with all the following requirements: (7-1-97)

i. The used oil fired space heater burns only used oil that the owner or operator generates on site, that is derived from households, such as used oil generated by individuals maintaining their personal vehicles, or on- specification used oil that is derived from commercial generators provided that the generator, transporter and owner or operator burning the oil for energy recovery comply fully with IDAPA 58.01.05.015, “Rules and Standards for Hazardous Waste”; (7-1-97)

(1) For the purposes of Subsection 222.02.h., “used oil” refers to any oil that has been refined from crude oil or any synthetic oil that has been used and, as a result of such use, is contaminated by physical or chemical impurities. (4-5-00)

(2) For the purposes of Subsection 222.02.h., “used oil fired space heater” refers to any furnace or apparatus and all appurtenances thereto, designed, constructed and used for combusting used oil for energy recovery to directly heat an enclosed space. (4-5-00)

ii. Any used oil burned is not contaminated by added toxic substances such as solvents, antifreeze or other household and industrial chemicals; (7-1-97)

iii. The used oil fired space heater is designed to have a maximum capacity of not more than one half (0.5) million BTU per hour; (4-5-00)

iv. The combustion gases from the used oil fired space heater are vented to the ambient air through a stack equivalent to the type and design specified by the manufacturer of the heater and installed to minimize down wash and maximize dispersion; and (7-1-97)

v. The used oil fired space heater is of modern commercial design and manufacture, except that a homemade used oil fired space heater may be used if, prior to the operation of the homemade unit, the owner or operator submits documentation to the Department demonstrating, to the satisfaction of the Department, that emissions from the homemade unit are no greater than those from modern commercially available units. (7-1-97)

03. Any Other Source Specifically Exempted By The Department. A list of those sources unconditionally exempted by the Department will be maintained by the Department and made available upon written request. All sources exempted by the Department shall: (4-5-00)

a. Be analyzed by the Department and determined to meet the requirements of Subsections 220.01.a.i. and 220.01.a.ii. (4-5-00)

b. Be analyzed by the Department and determined not to cause or significantly contribute to a violation of any ambient air quality standard. (4-5-00)

223. EXEMPTION CRITERIA AND REPORTING REQUIREMENTS FOR TOXIC AIR POLLUTANT EMISSIONS.

No permit to construct for toxic air pollutants is required for a source that satisfies any of the exemption criteria below, the record keeping requirements at Subsection 220.02, and reporting requirements as follows: (4-5-00)

01. Below Regulatory Concern (BRC) Exemption. The source qualifies for a BRC exemption if the uncontrolled emission rate (refer to Section 210) for all toxic air pollutants emitted by the source is less than or equal to ten percent (10%) of all applicable screening emission levels listed in Sections 585 and 586. (4-5-00)

02. Level I Exemption. To obtain a Level I exemption, the source shall satisfy the following criteria: (4-5-00)

a. The uncontrolled emission rate (refer to Section 210) for all toxic air pollutants shall be less than or equal to all applicable screening emission levels listed in Sections 585 and 586; or (4-5-00)

b. The uncontrolled ambient concentration (refer to Section 210) for all toxic air pollutants at the point of compliance shall be less than or equal to all applicable acceptable ambient concentrations listed in Sections 585 and 586. (4-5-00)

03. Level II Exemption. To obtain a Level II exemption, the source shall satisfy the following criteria: (4-5-00)

a. The uncontrolled ambient concentration at the point of compliance (refer to Section 210) for all toxic air pollutants emitted by the source shall be less than or equal to all applicable acceptable ambient concentrations listed in Sections 585 and 586; and (4-5-00)

b. If the owner or operator installs and operates control equipment that is not otherwise required to qualify for an exemption and the controlled emission rate (refer to Section 210) of the source for all toxic air pollutants is less than or equal to ten percent (10%) of all applicable screening emission levels listed in Sections 585 and 586. (4-5-00)

04. Level III Exemption. To obtain a Level III exemption, the source shall satisfy the following criteria: (4-5-00)

a. The uncontrolled ambient concentration at the point of compliance (refer to Section 210) for all toxic air pollutants emitted by the source shall be less than or equal to all applicable acceptable ambient concentrations listed in Sections 585 and 586; and (4-5-00)

b. The controlled emission rate (refer to Section 210) for all toxic air pollutants emitted by the source shall be less than or equal to all applicable screening emission levels listed in Sections 585 and 586. (4-5-00)

05. Annual Report For Toxic Air Pollutant Exemption. Commencing on May 1, 1996, and annually thereafter, the owner or operator of a source claiming a Level I, II, or III exemption shall submit a certified report for the previous calendar year to the Department for each Level I, II, or III exemption determination. The report shall be labeled "Toxic Air Pollutant Exemption Report" and shall state the date construction has or will commence and shall include copies of all exemption determinations completed by the owner or operator for each Level I, II, and III exemption. (4-5-00)

400. PROCEDURES AND REQUIREMENTS FOR TIER II OPERATING PERMITS. The purpose of Sections 400 through 406 is to establish uniform procedures for the issuance of "Tier II Operating Permits". (5-1-94)

401. TIER II OPERATING PERMIT.

01. Optional Tier II Operating Permits. The owner or operator of any stationary source or facility which is not subject to (or wishes to accept limitations on the facility's potential to emit so as to not be subject to) Sections 300 through 386 may apply to the Department for an operating permit to: (4-5-00)

a. Authorize the use of alternative emission limits (bubbles) pursuant to Section 440; (5-1-94)

b. Authorize the use of an emission offset pursuant to Sections 204 or 206; (5-1-94)

c. Authorize the use of a potential to emit limitation, an emission reduction or netting transaction to exempt a facility or modification from certain requirements for a permit to construct; (4-5-00)

d. Authorize the use of a potential to emit limitation to exempt the facility from Tier I permitting requirements. (4-5-00)

e. Bank an emission reduction credit pursuant to Section 461; (5-1-94)

02. Required Tier II Operating Permits. A Tier II operating permit is required for any stationary source or facility which is not subject to Sections 300 through 386 with a permit to construct which establishes any emission standard different from those in these rules. (3-19-99)

03. Tier II Operating Permits Required By The Department. The Director may require or revise a Tier II operating permit for any stationary source or facility whenever the Department determines that: (5-1-94)

a. Emission rate reductions are necessary to attain or maintain any ambient air quality standard or applicable prevention of significant deterioration (PSD) increment; or (4-5-00)

b. Specific emission standards, or requirements on operation or maintenance are necessary to ensure compliance with any applicable emission standard or rule. (5-1-94)

04. Multiple Tier II Operating Permits. Subject to approval by EPA, the Director may issue one (1) or more Tier II operating permits to a facility which allow any specific stationary source or emissions unit within that facility a future compliance date of up to three (3) years beyond the compliance date of any provision of these rules, provided the Director has reasonable cause to believe such a future compliance date is warranted. (4-5-00)

402. APPLICATION PROCEDURES.
Application for a Tier II operating permit must be made using forms furnished by the Department, or by other means prescribed by the Department. The application shall be certified by the responsible official and shall be accompanied by all information necessary to perform any analysis or make any determination required under Sections 400 through 406. (5-1-94)

01. Required Information. Site information, plans, description, specifications, and drawings showing the design of the stationary source, facility, or modification, the nature and amount of emissions (including secondary emissions), and the manner in which it will be operated and controlled. (5-1-94)

02. Additional Specific Information. (5-1-94)

a. For emission reduction credits, a description of the emission reduction credits proposed for use, including descriptions of the stationary sources or facilities providing the reductions, a description of the system of continuous emission control which provides the emission reduction credits, emission estimates, and other information necessary to determine that the emission reductions satisfy the requirements for emission reduction credits (Section 460); and (4-5-00)

b. For alternative emission limits (bubbles) or emission offsets, information on the air quality impacts of the traded emissions as necessary to determine the change in ambient air quality that would occur. (5-1-94)

c. For restrictions on potential to emit, a description of the proposed potential to emit limitations including the proposed monitoring and record-keeping requirements that will be used to verify compliance with the limitations. (4-5-00)

03. Estimates Of Ambient Concentrations. All estimates of ambient concentrations shall be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR 51 Appendix W (Guideline on Air Quality Models). (4-5-00)

a. Where an air quality model specified in the "Guideline on Air Quality Models" is inappropriate, the model may be modified or another model substituted, subject to written

approval of the Administrator of the U.S. Environmental Protection Agency and public comment pursuant to Subsection 404.01.c. (4-5-00)

b. Methods like those outlined in the U.S. Environmental Protection Agency's "Interim Procedures for Evaluating Air Quality Models (revised)" (1984) should be used to determine the comparability of air quality models. (5-1-94)

04. Additional Information. Any additional information, plans, specifications, evidence or documents that the Department may require to make the determinations required under Sections 400 through 406 shall be furnished upon request. (5-1-94)

403. PERMIT REQUIREMENTS FOR TIER II SOURCES.
No Tier II operating permit shall be granted unless the applicant shows to the satisfaction of the Department that: (5-1-94)

01. Emission Standards. The stationary source would comply with all applicable local, state or federal emission standards. (5-1-94)

02. NAAQS. The stationary source would not cause or significantly contribute to a violation of any ambient air quality standard. (5-1-94)

404. PROCEDURE FOR ISSUING PERMITS.

01. General Procedures. General procedures for Tier II operating permits. (5-1-94)

a. Within thirty (30) days after receipt of the application for a Tier II operating permit, the Department shall determine whether the application is complete or whether more information must be submitted and shall notify the applicant of its findings in writing. (5-1-94)

b. Within sixty (60) days after the application is determined to be complete the Department shall: (5-1-94)

i. Notify the applicant in writing of the approval, conditional approval, or denial of the application if an opportunity for public comment is not required pursuant to Subsection 404.01.c. The Department shall set forth reasons for any denial; or 5-1-94)

ii. Issue a proposed approval, proposed conditional approval, or proposed denial. (5-1-94)

c. An opportunity for public comment shall be provided on an application for any Tier II operating permit pursuant to Subsection 401.01, any application which uses fluid modeling or a field study to establish a good engineering practice stack height pursuant to Sections 510 through 516 and any other application which the Director determines an opportunity for public comment should be provided. (5-1-94)

i. The Department's proposed action, together with the information submitted by the applicant and the Department's analysis of the information, shall be made available to the public in at least one (1) location in the region in which the stationary source or facility is to be located. (5-1-94)

ii. The availability of such materials shall be made known by notice published in a newspaper of general circulation in the county(ies) in which the stationary source or facility is to be located. (5-1-94)

iii. A copy of such notice shall be sent to the applicant and to appropriate federal, state and local agencies. (5-1-94)

iv. There shall be a thirty (30) day period after initial publication for comment on the Department's proposed action, such comment to be made in writing to the Department. (5-1-94)

v. After consideration of comments and any additional information submitted during the comment period, and within forty-five (45) days after initial publication of the notice, unless the Director deems that additional time is required to evaluate comments and information received, the Department shall notify the applicant in writing of approval, conditional approval, or denial of the permit. The Department shall set forth the reasons for any denial. 5-1-94)

vi. All comments and additional information received during the comment period, together with the Department's final determination, shall be made available to the public at the same location as the preliminary determination. (5-1-94)

d. A copy of each proposed and final permit will be sent to the U.S. Environmental Protection Agency. (4-5-00)

02. Specific Procedures. Procedures for Tier II operating permits required by the Department under Subsection 401.03. (5-1-94)

a. The Director shall send a notification to the proposed permittee by registered mail of his intention to issue a Tier II operating permit for the facility concerned. The notification shall contain a copy of the proposed permit in draft form stating the proposed emission standards and any required action, with corresponding dates, which must be taken by the proposed permittee in order to achieve or maintain compliance with the proposed Tier II operating permit. (5-1-94)

b. The Department's proposed Tier II operating permit shall be made available to the public in at least one (1) location in the region in which the facility is located. The availability of such materials shall be made known by notice published in a newspaper of general circulation in the county(ies) in which the facility is located. A copy of such notice shall be sent to the applicant. There shall be a thirty (30) day period after publication for comment on the Department's proposed Tier II operating permit. Such comment shall be made in writing to the Department. (5-1-94)

c. A public hearing will be scheduled to consider the standards and limitations contained in the proposed Tier II operating permit if the proposed permittee files a request therefor with the Department within ten (10) days of receipt of the notification, or if the Director determines that there is good cause to hold a hearing. 5-1-94)

d. After consideration of comments and any additional information submitted during the comment period or at any public hearing, the Director shall render a final decision upon the proposed Tier II operating permit within thirty (30) days of the close of the comment period or hearing. At this time the Director may adopt the entire Tier II operating permit as originally proposed or any part or modification thereof. (5-1-94)

e. All comments and additional information received during the comment period, together with the Department's final permit, shall be made available to the public at the same location as the proposed Tier II operating permit. (5-1-94)

03. Availability Of Fluid Models And Field Studies. The Department will notify the public of the availability of any fluid model or field study used to establish a good engineering practice stack height and provide an opportunity for a public hearing before issuing a permit or setting an emission standard based thereon. (5-1-94)

04. Permit Revision Or Renewal. The Director may approve a revision of any Tier II operating permit or renewal of any Tier II operating permit provided the stationary source or facility continues to meet all applicable requirements of Sections 400 through 406. Revised permits will be issued pursuant to procedures for issuing permits (Section 404), except that the requirements of Subsection 404.01.c. shall only apply if the permit revision results in an increase

in allowable emissions or if deemed appropriate by the Director. Renewed Tier II operating permits will be issued pursuant to procedures for issuing permits (Section 404), except that the requirements of Subsections 404.01.c., and 404.02.b. through 404.02.e. shall only apply if the permit revision results in an increase in allowable emissions or if deemed appropriate by the Director. The expiration of a permit will not affect the operation of a stationary source or a facility during the administrative procedure period associated with the permit renewal process. (5-1-94)

405. CONDITIONS FOR TIER II OPERATING PERMITS.

01. Reasonable Conditions. The Department may impose any reasonable conditions upon an approval, including conditions requiring the stationary source or facility to be provided with: (5-1-94)

a. Sampling ports of a size, number, and location as the Department may require; (5-1-94)

b. Safe access to each port; (5-1-94)

c. Instrumentation to monitor and record emissions data; (5-1-94)

d. Instrumentation for ambient monitoring to determine the effect emissions from the stationary source or facility may have, or are having, on the air quality in any area affected by the stationary source or facility; and (5-1-94)

e. Any other sampling and testing facilities as may be deemed reasonably necessary. (5-1-94)

02. Performance Tests. Any performance tests required by the permit shall be performed in accordance with methods and under operating conditions approved by the Department. The owner or operator shall furnish to the Department a written report of the results of such performance test. (5-1-94)

a. Such test shall be at the expense of the owner or operator. (5-1-94)

b. The Department may monitor such test and may also conduct performance tests. (5-1-94)

c. The owner or operator of a stationary source or facility shall provide the Department fifteen (15) days prior notice of the performance test to afford the Department the opportunity to have an observer present. (5-1-94)

03. Permit Term. Tier II operating permits shall be issued for a period not to exceed five (5) years. This five (5) year operating permit restriction does not apply to the provisions contained in Section 461.02 (banked emission reduction credits). (5-1-94)

04. Single Tier II Operating Permit. When a facility includes more than one (1) stationary source or emissions unit, a single Tier II operating permit may be issued including all stationary sources and emissions units located at that facility. Such Tier II operating permit shall separately identify each stationary source and emissions unit to which the Tier II operating permit applies. When a single stationary source or facility is subject to permit modification, suspension or revocation, such action by the Director shall only affect that individual stationary source or emissions unit without thereby affecting any other stationary source or emissions unit subject to that Tier II operating permit. (5-1-94)

406. OBLIGATION TO COMPLY.

Receiving a Tier II operating permit shall not relieve any owner or operator of the responsibility to comply with all applicable local, state and federal rules and regulations. (5-1-94)

470. PERMIT APPLICATION FEES FOR TIER II PERMITS.

Any person applying for a Tier II permit shall pay a permit application fee of five hundred dollars ($500) for each permit requested or amended. (3-7-95)L

525. REGISTRATION AND REGISTRATION FEES.
The purpose of Sections 525 through 538 is to establish criteria for the registration of emissions and the payment of fees for Tier I permits. (3-7-95)L

526. APPLICABILITY.
In any given year, Sections 525 through 538 shall apply to all major facilities, as defined in Section 008. Facilities, sources and emissions exempt under Section 301 are not required to register or pay fees. (4-5-00)

527. REGISTRATION.
Any person owning or operating a facility or source for which Sections 525 through 538 applies shall, by May 1, 1993 and each May 1 thereafter register with the Department and submit the following: (5-1-94)

01. Facility Information. The name, address, telephone number and location of the facility; (5-1-94)

02. Owner/Operator Information. The name, address and telephone numbers of the owners and operators; (5-1-94)

03. Facility Emission Units. The number and type of emission units present at the facility or the Tier I permit number for the facility; (3-19-99)

04. Pollutant Registration. The emissions from the previous calendar year, or other twelve (12) month period requested by the registrant and approved by the Department for oxides of sulfur (SOx), oxides of nitrogen (NOx), particulate matter and volatile organic compounds (VOC) based on one (1) or more of the following methods chosen by the registrant: (3-19-99)

a. Actual annual emissions; (3-19-99)

b. An estimate of the actual annual emissions calculated using the unit's actual operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year; (3-19-99)

c. Allowable emissions based on permit limitations. (3-19-99)

05. Radionucleide Registration. The amount of radionucleides from facilities regulated under 40 CFR Part 61, Subpart H, for which the registrant wishes to be registered to emit from each source in curies per year except that no amount in excess of or less than an existing permit, consent order, or judicial order will be allowed. (5-1-94)

06. Regulated Air Pollutant Registration Fee. A registration fee of thirty dollars ($30) per ton for all regulated air pollutants listed in Subsection 527.04. The registration fee may be paid in two (2) installments as provided in Subsection 532.01. (4-5-00)

07. Radionuclide Registration Fee. A registration fee of five dollars per curie per year ($5/curie/year) for facilities regulated under 40 CFR Part 61, Subpart H. The registration fee may be paid in two (2) installments as provided in Subsection 532.01. (5-1-94)

528. REQUEST FOR INFORMATION.
Any additional information, plans, specifications, evidence or documents that the Department may require to make the determinations required under Sections 525 through 538 shall be furnished on request. (5-1-94)

529. (RESERVED).

530. REGISTRATION FEE.
All facilities to which this Section 530 applies shall pay to the Department an annual registration fee as required by Subsections 527.06 and 527.07. The Department shall determine the fee based on the information supplied by the registrant and the Department's analysis and engineering and technical practice. In the event of a failure of a facility to submit pertinent registration information, the Department may calculate the fee and shall assess the facility the fee and the costs of calculating the fee. The Department may employ private contractors to determine the registration fee. (3-7-95)L

531. REGISTRATION BY THE DEPARTMENT.
Upon receiving registration materials from a facility, the Department shall: (5-1-94)

01. Completeness Review. Review the material for accuracy and thoroughness; (5-1-94)

02. Additional Information. Require the facility to submit additional information, if needed; and (5-1-94)

03. Fee Assessment. Send to the registrant, by certified mail, an assessment of the fee and a receipt showing the amount of payment received by the Department. (5-1-94)

532. PAYMENT DUE.
The registration fee shall be paid to and received by the Department: (5-1-94)

01. Annual Registration Payments. Payment by May 1 of each year of at least fifty percent (50%) of the annual registration fee for the following twelve (12) months, the balance of the fee to be paid by August 1. (5-1-94)

02. Amendments In Registrations Fees. Payment within forty-five (45) days of assessment or notification by the Department. (5-1-94)

533. EFFECT OF DELINQUENCY ON APPLICATIONS.
No permit to construct or operate, other than those issued at the discretion of the Director, shall be accepted for processing, processed, or issued by the Department for any facility or to any person having fees delinquent in full or in part. (5-1-94)

534. APPEALS.
Persons may file an appeal within thirty (30) days of the date the person received the assessment and receipt issued under Subsection 531.03, or within thirty (30) days of the date the person received an assessment issued under Sections 530 or 535. The appeal shall be filed in accordance with the Idaho Department of Health and Welfare Rules, IDAPA 16.05.03, "Rules Governing Contested Case Proceedings and Declaratory Rulings". (5-1-94)

535. AMENDING REGISTRATION.
Registrations may be subject to amendment and additional or reduced fees: (5-1-94)

01. Department Or Owner Or Operator. By the Department, or at the request of the owner or operator, should the Department determine that the emissions and fees do not accurately reflect the operation of the facility; or (5-1-94)

02. Board Of Environmental Quality. By Action of the Board of Environmental Quality.(5-1-94)

536. CHECKS SHOULD BE MADE OUT TO "DEPARTMENT OF ENVIRONMENTAL QUALITY-AQ REGISTRATION FEE".

All registration and fee materials should be sent to:
Air Quality Registration Fees
Idaho Department of Environmental Quality
1410 N. Hilton, Boise, Idaho 83706-1255 (5-1-94)

537. EXEMPTIONS.

01. Registration Fees. The following facilities or sources are exempt from paying registration fees under Sections 525 through 538: (5-1-94)

a. Facilities and sources specified by the Department, after public notice, as exempt from the payment of registration fees; and (5-1-94)

b. Country grain elevators. (5-1-94)

02. Registering And Paying Fees. The following facilities or sources are exempt from registering and paying registration fees under Sections 525 through 538: (5-1-94)

a. Facilities and sources specified by the Department, after public notice, as exempt from registration and the payment of registration fees; (3-19-99)

b. Confined animal feeding operations; and (3-19-99)

c. Insignificant activities identified in Subsection 317.01. (3-19-99)

03. Paying Fees. The following emissions are exempt from registering and paying registration fees under Section 525 through 538: (3-7-95)L

a. Fugitive emissions from wood products. (3-7-95)L

b. Fugitive dust emissions, except facilities listed in Subsections 008.10.c.i. and 008.10.c.ii. Facilities listed in that section shall not be required to pay fees for fugitive dust emission in excess of one hundred (100) tons. (4-5-00)

538. LUMP SUM PAYMENTS OF REGISTRATION FEES.

01. Agreement. The Department may, in its discretion, enter an agreement with any person for the lump sum payment of all, or any portion of, the registration fees required by Section 527. (5-1-94)

02. Minimum Amount. The minimum amount for any lump sum agreement shall be three hundred thousand dollars ($300,000). (5-1-94)

03. Payment Waiver. Upon the execution and full performance of the agreement by the person, the Department shall waive the payment requirements of Section 527. All other provisions of Section 527 shall remain applicable to the person. (5-1-94)

539. -- 549. (RESERVED).

550. AIR POLLUTION EMERGENCY RULE.
The purpose of Sections 550 through 562 is to define criteria for an air pollution emergency, to formulate a plan for preventing or alleviating such an emergency, and to specify rules for carrying out the plan. The procedures for implementing Sections 550 through 562 are delineated in Chapter VI of the SIP. (5-1-94)

551. EPISODE CRITERIA.
The purpose of Sections 551 through 556 is to establish criteria for stages of atmospheric stagnation and/or degraded air quality. (5-1-94)

552. STAGES.
The Department has defined four (4) stages of atmospheric stagnation and/or degraded air quality. (5-1-94)

01. Stage 1 - Air Pollution Forecast and Caution. An internal watch by the Department shall be actuated by a National Weather Service report that an Atmospheric Stagnation Advisory has been issued, or the equivalent local forecast of stagnant atmospheric conditions. (11-10-00)T

02. Stage 2 - Alert. This is the first stage at which air pollution control actions by industrial sources are to begin. (5-1-94)

03. Stage 3 - Warning. The warning stage indicates that air quality is further degraded and that control actions are necessary to maintain or improve air quality. (5-1-94)

04. Stage 4 - Emergency. The emergency stage indicates that air quality has degraded to a level that will substantially endanger the public health and that the most stringent control actions are necessary. (5-1-94)

553. EFFECT OF STAGES.
Once an episode stage is reached or the Department determines that reaching a particular stage is imminent, emergency action corresponding to that stage will remain in effect until air quality measurements indicate that another stage (either lower or higher) has been attained. At such time, actions corresponding to the next stage will go into effect. This procedure will continue until the episode is terminated. The air quality criteria used to define each of the episode stages for carbon monoxide, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide are specified in Section 556. The levels will be determined by the Department through its analysis of meteorological and ambient air quality monitoring data. (11-10-00)T

554. -- 555. (RESERVED).

556. CRITERIA FOR DEFINING LEVELS WITHIN STAGES.
The air quality criteria defining each of these levels for carbon monoxide (CO), nitrogen dioxide (NO2), ozone (03), particles with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM-10), particles with an aerodynamic diameter less than or equal to a nominal (2.5) micrometers (PM-2.5), and sulfur dioxide (SO_2) are: (11-10-00)T

01. Stage 1 - Forecast and Caution. A Stage 1 Forecast and Caution shall be declared by the Department when particulate concentrations or visibility attributable to particulate matter reaches, or is forecasted to reach, and continue, at or above the levels listed below. The Department may call a Stage 1 Forecast and Caution, if it determines, after evaluating the pertinent meteorology and weather conditions and source parameters such as source type, strength and projected duration, that a Stage 1 Forecast and Caution is required to protect the public health. (11-10-00)T

a. Pollutant Levels.

CO	NA
NO_2	NA
O_3	NA
SO_2	NA
PM-2.5	100 ug/m3 1 hour average
PM-2.5	50 ug/m3 24 hour average
PM-10	385 ug/m3 1 hour average
PM-10	150 ug/m3 24 hour average

b. Visibility. When PM-10 or PM 2.5 monitoring readings are not available, the Department may declare a Stage 1 - Forecast and Caution: based on visibility readings according to the following scale: (11-10-00)T

CO	NA
NO_2	NA
O_3	NA
SO_2	NA
PM	2.75 - 4.50 miles visibility

02. Stage 2 - Alert.

CO	17 mg/m3 (15 ppm)	8-hour average
NO_2	1130 ug/m3 (0.6 ppm)	1-hour average
NO_2	282 ug/m3 (0.15 ppm)	24-hour average
O_3	400 ug/m3 (0.2 ppm)	1-hour average
PM_{10}	350 ug/m3	24-hour average
SO_2	800 ug/m3 (0.3 ppm)	24-hour average

(4-5-00)

03. Stage 3 - Warning.

CO	34 mg/m3 (30 ppm)	8-hour average
NO_2	2260 ug/m3 (1.2 ppm)	1-hour average
NO_2	565 ug/m3 (0.3 ppm)	24-hour average
O_3	800 ug/m3 (0.4 ppm)	1-hour average
PM_{10}	420 ug/m3	24-hour average
SO_2	1600 ug/m3 (0.6 ppm)	24-hour average

(4-5-00)

04. Stage 4 - Emergency.

CO	46 mg/m3 (40 ppm)	8-hour average
NO_2	3000 ug/m3 (1.6 ppm)	1-hour average
NO_2	750 ug/m3 (0.4 ppm)	24-hour average
O_3	1000 ug/m3 (0.5 ppm)	1-hour average
PM_{10}	500 ug.m3	24-hour average
SO_2	2100 ug/m3 (0.8 ppm)	24-hour average

(4-5-00)

557. PUBLIC NOTIFICATION.

The purpose of Sections 557 through 560 is to establish requirements for public notification regarding atmospheric stagnation and/or degraded air quality. (5-1-94)

558. INFORMATION TO BE GIVEN.

01. Information To Be Given. On the basis of degrading air quality as determined by the Director, and the criteria for emergency episode stages as shown in Section 556, the Director will utilize appropriate news media to insure that the following information is announced to the public: (5-1-94)

a. Definition of the extent of the problem; (5-1-94)

b. Indication of the action taken by the Director; (5-1-94)

c. Air pollution forecast for next few days; (5-1-94)

d. Notice of when the next statement from the Department will be issued; (5-1-94)

e. Listing of all general procedures which the public, commercial, institutional and industrial sectors are required to follow; (5-1-94)

f. Specific warnings and advice to those persons who because of acute or chronic health problems, may be most susceptible to the effects of the episode. (11-10-00)T

559. MANNER AND FREQUENCY OF NOTIFICATION.
Such announcements will be made by the news media during regularly scheduled television and radio news broadcasts and in all editions of specified newspapers. In addition, when the stage 4 emergency level is reached, television and radio stations designated by the Department will repeat these announcements at one (1) hour intervals during normal broadcasting hours. (5-1-94)

560. NOTIFICATION TO SOURCES.
The Department will assure that all significant sources of regulated air pollutant(s) are notified of the emergency stage by telephone or other appropriate means. (4-5-00)

561. GENERAL RULES.
All persons in the designated stricken area shall be governed by the following rules for each emergency episode stage. The Director may waive one (1) or more of the required measures at each episode stage if, on the basis of information available to him, he judges that a measure is an inappropriate response to the specific episode conditions which then exist. (5-1-94)

01. Stage 1 - Air Pollution Forecast and Caution. There shall be no open burning of any kind. (11-10-00)T

02. Stage 2 - Alert. (5-1-94)

a. There shall be no open burning of any kind. (5-1-94)

b. The use of burners and incinerators for the disposal of any form of solid waste shall be prohibited. (11-10-00)T

c. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12:00 pm (noon) and 4:00 p.m. (5-1-94)

d. Commercial, industrial and institutional facilities utilizing coal or residual fuel oil are required to switch to natural gas or distillate oil if available. (5-1-94)

03. Stage 3 - Warning. (5-1-94)

a. There shall be no open burning of any kind. (5-1-94)

b. The use of burners and incinerators for the disposal of any form of solid waste or liquid waste shall be prohibited. (11-10-00)T

c. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12:00 p.m. (noon) and 4:00 p.m. (5-1-94)

d. Commercial, industrial and institutional facilities utilizing coal or residual fuel are required to either: (5-1-94)

i. Switch completely to natural gas or distillate oil; or (5-1-94)

ii. If these low sulfur fuels are not available, curtail the use of existing fuels to the extent possible without causing injury to persons or damage to equipment. (5-1-94)

04. Stage 4 - Emergency. This will be called only with specific concurrence of Governor. (5-1-94)

a. There shall be no open burning of any kind. (5-1-94)

b. The use of burners and incinerators for the disposal of any form of solid or liquid waste shall be prohibited. (11-10-00)T

c. All places of employment described below shall immediately cease operations: (5-1-94)

i. All mining and quarrying operations; (5-1-94)

ii. All construction work except that which must proceed to avoid injury to persons; (5-1-94)

iii. All manufacturing establishments except those required to have in force an air pollution emergency plan; (5-1-94)

iv. All wholesale trade establishments, i.e. places of business primarily engaged in selling merchandise to retailers or industrial, commercial, institutional or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies except those engaged in the distribution of drugs, surgical supplies and food; (5-1-94)

v. All offices of local, county and State government including authorities, joint meetings, and other public bodies excepting such agencies which are determined by the chief administrative officer of local, county, or State government authorities, joint meetings and other public bodies to be vital for public safety and welfare and the enforcement of the provisions of this order; (5-1-94)

vi. All retail trade establishments except pharmacies, surgical supply distributors, and stores primarily engaged in the sale of food; (5-1-94)

vii. Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services; offices of insurance carriers, agents and brokers, real estate offices; (5-1-94)

viii. Wholesale and retail laundries, laundry services and cleaning and dyeing establishments; photographic studios; beauty shops, barber shops, shoe repair shops; (5-1-94)

ix. Advertising offices, consumer credit reporting, adjustment and collection agencies; duplicating, addressing, blueprinting; photocopying, mailing, mailing list and stenographic services; equipment rental services, commercial testing laboratories; (5-1-94)

x. Automobile repair, automobile services, garages except those located adjacent to state or interstate highways; (5-1-94)

xi. Establishments rendering amusement and recreational services including motion picture theaters; (5-1-94)

xii. Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries. (5-1-94)

d. All commercial and manufacturing establishments not included in this order will institute such actions as will result in maximum reduction of regulated air pollutant(s) from their operation by ceasing, curtailing, or postponing operations which emit regulated air pollutants to the extent possible without causing injury to persons or damage to equipment. These actions include limiting boiler lancing or soot blowing operations for fuel burning equipment to between the hours of 12:00 p.m. (noon) and 4:00 p.m. (4-5-00)

e. When the emergency episode is declared for carbon monoxide, the use of motor vehicles is prohibited except in emergencies or with the approval of local or state police or the Department. (5-1-94)

562. SPECIFIC EMERGENCY EPISODE ABATEMENT PLANS FOR POINT SOURCES.

In addition to the general rules presented in Section 561, the Department shall require that specific point sources adopt and implement their own Emergency Episode Abatement Plans in accordance with the criteria set forth in Sections 551 through 556. An individual plan can be revised periodically by the Department after consultation between the Department and the owners and/or operators of the source. (5-1-94)

563. TRANSPORTATION CONFORMITY.
The purpose of Sections 563 through 574 is to adopt and implement Section 176(c) of the Clean Air Act (CAA), as amended [42 U.S.C. 7401 et seq.], and the related requirements of 23 U.S.C. 109(j), with respect to the conformity of transportation plans, programs, and projects developed, funded, or approved by the United States Department of Transportation (USDOT), and by metropolitan planning organizations (MPOs) or other recipients of funds under Title 23 U.S.C. or the Federal Transit Laws (49 U.S.C. Chapter 53). These sections set forth policy, criteria, and procedures for demonstrating and assuring conformity of such activities to an applicable implementation plan developed pursuant to Section 110 and Part D of the CAA. The publications referred to or incorporated by reference in Sections 563 through 574 are available from the IDEQ. (3-30-01)

564. INCORPORATION BY REFERENCE.
With the exception of Sections 93.102(c), 93.104(d), 93.104(e)(2), 93.105, 93.109(c)-(f), 93.118(e), 93.119(f)(3), 93.120(a)(2), 93.121(a)(1), and 93.124(b), 40 CFR Part 93, Subpart A, Sections 93.100-93.129, are incorporated by reference into these rules at Section 107 of these rules. (3-30-01)

565. ABBREVIATIONS.

01. CAA. Clean Air Act, as amended. (3-30-01)

02. CFR. Code of Federal Regulations. (3-30-01)

03. CO. Carbon Monoxide. (3-30-01)

04. EPA. Environmental Protection Agency. (3-30-01)

05. FHWA. Federal Highway Administration of USDOT. (3-30-01)

06. FTA. Federal Transit Administration of USDOT. (3-30-01)

07. HPMS. Highway Performance Monitoring System. (3-30-01)

08. ICC. Interagency Consultation Committee. (3-30-01)

09. IDEQ. Idaho Department of Environmental Quality. (3-30-01)

10. ITD. Idaho Transportation Department. (3-30-01)

11. LHTAC Local Highway Technical Assistance Council. (3-30-01)

12. LRTP. Long Range Transportation Plan. (3-30-01)

13. MPO. Metropolitan Planning Organization. (3-30-01)

14. NAAQS. National Ambient Air Quality Standards. (3-30-01)

15. NEPA. National Environmental Policy Act, as amended. (3-30-01)

16. O3. Ozone. (3-30-01)

17. PM. Particulate matter. (3-30-01)

18. PMx. Particles with an aerodynamic diameter less than or equal to a nominal X micrometers, where X denotes any size fraction number regulated by the NAAQs (e.g.: 10, 2.5).(3-30-01)

19. STIP. Statewide Transportation Improvement Program. (3-30-01)

20. TCM. Transportation Control Measure. (3-30-01)

21. TIP. Transportation Improvement Program. (3-30-01)

22. USDOT. United States Department of Transportation. (3-30-01)

23. VMT. Vehicle Miles Traveled.(3-30-01)

566. DEFINITIONS FOR THE PURPOSE OF SECTIONS 563 THROUGH 574 AND 582. Terms used but not defined in Sections 563 through 574 and 582 shall have the meaning given them by the CAA, Titles 23 and 49 U.S.C., other Environmental Protection Agency (EPA) regulations, or other USDOT regulations, in that order of priority. For the purpose of Sections 563 through 574 and 582: (3-30-01)

01. Applicable Implementation Plan. Applicable Implementation Plan is defined in Section 302(q) of the CAA and means the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under Section 110 of the CAA, or promulgated under Section 110(c) of the CAA, or promulgated or approved pursuant to regulations promulgated under Section 301(d) of the CAA and which implements the relevant requirements of the CAA. (3-30-01)

02. Consult Or Consultation. The lead agency confers with other ICC members and persons on the distribution list and considers their views prior to taking actions relating to transportation conformity. The lead agency shall distribute all appropriate information necessary to make a conformity determination and, prior to making a conformity determination, shall consider the views of such parties and shall provide a timely, written response to those views. Such views and written responses shall be included in the record of decision or action. Consultation shall not occur with respect to a transportation plan or transportation improvement program (TIP) revision that merely adds or exempts projects listed in 40 CFR 93.126. (3-30-01)

03. Distribute. Make available relevant documents and information by electronic and manual means, whichever is more appropriate, to all ICC members and persons on the distribution list. Electronic distribution may include existing and future technological applications, such as electronic mail, internet web-site posting including downloadable files, or the use of an electronic mail reply system based on the distribution list. Manual distribution may include the United States Postal Service, the state internal mail system, a facsimile machine, or any commercially available mail service provider. (3-30-01)

04. Distribution List. A list containing the names and addresses of ICC members and any person(s) expressing an interest in receiving information and material pertaining to ICC meetings. To express interest, a person may contact the lead agency by postal mail, electronic mail, telephone or in person, and inform the ICC member of their interest in being on the distribution list for information and material pertaining to ICC meetings. (3-30-01)

05. Exempt Projects. Projects exempt from conformity requirements based on the general criteria of safety, mass transit, and other factors, as described in 40 CFR 93.126. (3-30-01)

06. Lead Agency. The transportation or air quality agency responsible for conducting the consultation process, as identified in Subsections 568.01 through 568.03. (3-30-01)

07. Lead Air Quality Agency. An agency designated pursuant to Section 174 of the CAA as responsible for developing an applicable implementation plan, or alternatively the agency designated by the Governor as the lead air quality agency for a county, region, or any jurisdiction. (3-30-01)

08. Local Highway Jurisdiction. A county with jurisdiction over a highway system, a city with jurisdiction over a highway system, or a highway district, as defined by Section 40-113(3), Idaho Code. (3-30-01)

09. Local Highway Technical Assistance Council (LHTAC). The public agency created in Chapter24, Title 40, Idaho Code. (3-30-01)

10. Maximum Priority. (3-30-01)

a. All possible actions must be taken to shorten the time periods necessary to complete essential steps in TCM implementation - for example, by increasing the funding rate - even though timing of other projects may be affected. It is not permissible to have prospective discrepancies with the applicable implementation plan's TCM implementation schedule due to: (3-30-01)

i. Lack of funding in the TIP; (3-30-01)

ii. Lack of commitment to the project by the sponsoring agency; (3-30-01)

iii. Unreasonably long periods to complete future work due to lack of staff or other agency resources;(3-30-01)

iv. Lack of approval or consent by local governmental bodies; or (3-30-01)

v. Failure to have applied for a permit where necessary work preliminary to such application has been completed. (3-30-01)

b. Where statewide and metropolitan funding resources, planning, and management capabilities are fully consumed within the flexibility of the Transportation Equity Act of 1998 (TEA-21), Pub. L. No. 105-178, 112 Stat 107, as amended by Pub. L. No. 105-206, 112 Stat 685, or future federal omnibus transportation funding bills, with responding to damage from natural disasters, civil unrest, or terrorist acts, TCM implementation can be determined to be timely without regard to the above, provided reasonable efforts are being made. (3-30-01)

11. Metropolitan Planning Organization (MPO). The organization designated as being responsible, together with the State, for conducting the continuing cooperative and comprehensive transportation planning process under 23 U.S.C. 134 and 49 U.S.C. 5303 and 23 CFR 450. It is the forum for cooperative transportation decision-making. (3-30-01)

12. Public Notice. Distribution of the meeting times, location, duration and agenda, to all the ICC members and persons on the distribution list. (3-30-01)

13. Recipient Of Funds Designated Under Title 23 U.S.C. Or The Federal Transit Laws. Any agency at any level of state, county, city, or regional government that routinely receives Title 23 U.S.C. or Federal Transit Laws funds to construct FHWA/FTA projects, operate FHWA/FTA projects or equipment, purchase equipment, or undertake other services or operations via contracts or agreements. This definition does not include private landowners, developers, contractors, or entities that are only paid for services or products created by their own employees. (3-30-01)

14. Regionally Significant Project. A transportation project, other than an exempt project, that is on a facility which serves regional transportation needs (such as access to and from the area outside the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including, at a minimum: (3-30-01)

a. All principal arterial highways; (3-30-01)

b. All fixed guideway transit facilities that offer an alternative to regional highway travel; and (3-30-01)

c. Any other facilities determined to be regionally significant through Section 570, interagency consultation. (3-30-01)

15. Transportation Agency. The public agency responsible for one (1) or more of the following transportation modes: (3-30-01)

a. Air; (3-30-01)

b. Rail; (3-30-01)

c. Water; (3-30-01)

d. Highway; (3-30-01)

e. Bicycle and pedestrian paths; and (3-30-01)

f. Transit. (3-30-01)

16. Transit Agency. Any agency involved in providing mass transportation services by bus, rail, or other conveyance providing general or special service to the public on a regular and continuing basis. The term "Transit Agency" does not include school buses or charter or sightseeing services. (3-30-01)

567. AGENCIES AFFECTED BY CONSULTATION.
This Section identifies those agencies and other entities (federal, tribal, state and local) involved in the consultation process and those general actions requiring consultation. (3-30-01)

01. Interagency Consultation Committee. A committee of representatives shall be formed in each nonattainment or maintenance area of the state, to convene on conformity determinations, as necessary, and shall be called the Interagency Consultation Committee (ICC) for that nonattainment or maintenance area. The ICC shall undertake consultation procedures, as applicable, in preparing for and before making conformity determinations in developing long-range transportation plans (LRTP), transportation improvement programs (TIP), and applicable implementation plans. (3-30-01)

02. ICC Members. The ICC shall consist of the following agencies or entities, as applicable: (3-30-01)

a. A Metropolitan Planning Organization (MPO) where one exists; (3-30-01)

b. The Idaho Transportation Department (ITD); (3-30-01)

c. The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) divisional office; (3-30-01)

d. The Idaho Department of Environmental Quality (IDEQ); (3-30-01)

e. Affected Local Highway Jurisdictions involved in transportation, (3-30-01)

f. Affected Transit agency(ies); (3-30-01)

g. The Local Highway Technical Assistance Council (LHTAC); (3-30-01)

h. Indian Tribal governments with transportation planning responsibilities; and (3-30-01)

i. The United States Environmental Protection Agency (EPA). (3-30-01)

03. Agencies Entitled To Participate. Agencies which may be affected by the consultation process and which are entitled to participate in the consultation process include: (3-30-01)

a. Any local transit agency or provider, local highway jurisdiction, and any city or county transportation or air quality board or agency where the nonattainment or maintenance area is located; and (3-30-01)

b. Any other state or federal or tribal organization in the state responsible under state or federal law for developing, submitting or implementing transportation related provisions of an implementation plan. (3-30-01)

04. More Than One Pollutant. Areas that are nonattainment for more than one (1) pollutant may conduct consultation, as specified in this section, through a single committee for all pollutants. (3-30-01)

05. Open To The Public. All meetings of the ICC shall be open to the public. (3-30-01)

06. Delegation. An ICC member may delegate its role or responsibility in the consultation process to another entity pursuant to applicable state law. An ICC member making such delegation shall notify all other ICC members in writing when the delegation occurs. The written notice shall provide the name, address, and telephone number of one (1) or more contact persons representing the entity accepting the delegated role or responsibility. (3-30-01)

07. General Actions Requiring Consultation. The ICC shall undertake the consultation process prior to the development of the following: (3-30-01)

a. The implementation plan(s), including the emission budget and list of TCMs in the applicable implementation plan(s), prepared by the lead air quality agency in a nonattainment or maintenance area; (3-30-01)

b. All other conformity determinations for transportation plans, projects, and programs; and (3-30-01)

c. Revisions to the preceding documents which may directly or indirectly affect conformity determinations. (3-30-01)

568. ICC MEMBER ROLES IN CONSULTATION.
The lead agency as identified in this section is the ICC member responsible for initiating the consultation process, preparing the initial and final drafts of the document or decision, and assuring the adequacy of the consultation process for all conformity processes and procedures. (3-30-01)

01. **Designated Lead Air Quality Agenc**y. IDEQ or the MPO, as the designated lead air quality agency, shall be the lead agency for the development of the implementation plan, the associated emission budgets, and the list of Transportation Control Measures (TCMs) in the plan. The concurrence of IDEQ on each applicable implementation plan is required before IDEQ adopts the plan and submits it to EPA for inclusion in the applicable implementation plan. (3-30-01)

02. **Areas With An MP**O. For areas in which an MPO has been established, the designated MPO shall be the lead agency responsible for conformity determinations, development of the LRTP, development of the TIP, and project level documentation under 23 CFR 450. (3-30-01)

03. **Areas Without An MP**O. For areas in which an MPO has not been established, ITD shall be the lead agency for preparing the final document on conformity determinations, the development of the statewide transportation plan, the development of the STIP, and project level documentation under 23 CFR 450. (3-30-01)

569. ICC Member Responsibilities In Consultation.
This Section identifies the specific responsibilities of ICC members. (3-30-01)

01. **Designated Lead Air Quality Agency Responsibilitie**s. The designated lead air quality agency shall be responsible for developing or providing and distributing draft and final documentation, data and analyses for: (3-30-01)

a. Air emission inventories; (3-30-01)

b. Emission budgets; (3-30-01)

c. Attainment and maintenance demonstrations; (3-30-01)

d. Control strategy implementation plan revisions; (3-30-01)

e. Updated motor vehicle emission factors; (3-30-01)

f. Proposal and evaluation of TCMs; and (3-30-01)

g. Public outreach on draft air quality plans pursuant to 40 CFR Part 51. (3-30-01)

02. Designated MPO Responsibilities. The designated MPO shall be responsible for: (3-30-01)

a. Conformity determinations corresponding to LRTPs and TIPs; (3-30-01)

b. Making conformity determinations for the entire nonattainment or maintenance area, including areas beyond the boundaries of the MPO, where no agreement is in effect as required by 23 CFR 450.310(f); (3-30-01)

c. Identify regionally significant projects through the consultation process; (3-30-01)

d. Implementing TCMs in air quality nonattainment and/or maintenance areas, as applicable; (3-30-01)

e. Providing technical and policy input on emissions budgets; (3-30-01)

f. Performing transportation modeling, regional emissions analyses, and project level analysis, as necessary; (3-30-01)

g. Documenting timely implementation of TCMs, as required, for determining conformity; and (3-30-01)

h. Distributing relevant draft and final project environmental documents to ICC members and persons on the distribution list per the schedule in Subsection 570.01.c. (3-30-01)

03. Non-MPO Area Responsibilities. In areas without an established MPO, ITD shall be responsible for: (3-30-01)

a. Conformity determinations corresponding to STIPs and project-level analyses; (3-30-01)

b. Providing technical and policy input on proposed revisions to motor vehicle emissions factors and to emission budgets; (3-30-01)

c. Distributing relevant draft and final project environmental documentation prepared by, or for ITD, to ICC members and persons on the distribution list per the schedule in Subsection 570.01.c.; (3-30-01)

d. Convening air quality technical review meetings on specific projects when requested by other ICC members, or as needed; (3-30-01)

e. Convening interagency consultation meetings required for purposes of making conformity determinations in nonattainment or maintenance areas, outside of MPO boundaries, as necessary; (3-30-01)

f. Making conformity determinations in nonattainment or maintenance areas, outside of MPO boundaries, as necessary; and (3-30-01)

g. Implementing TCMs in air quality nonattainment and/or maintenance areas, as applicable. (3-30-01)

04. FHWA And FTA Responsibilities. FHWA and FTA shall be responsible for: (3-30-01)

a. Assuring timely action on final findings of conformity for transportation plans, TIPs, and federally funded projects, including the basis for those findings after consultation with other agencies as provided in Section 569 and 40 CFR 93.105; and (3-30-01)

b. Providing guidance on conformity and the transportation planning process to ICC members. FHWA and FTA may rely solely on the consultation process initiated by ITD or the MPO, where one exists, and shall not be required to duplicate that process. (3-30-01)

05. EPA Responsibilities. EPA shall be responsible for providing policy and technical guidance on conformity criteria to ICC members. (3-30-01)

06. Responsibility To Disclose Potentially Regionally Significant Projects. ITD, the local highway jurisdiction, transit agency, or transportation project sponsor shall be responsible for disclosing potentially regionally significant projects within air quality nonattainment and maintenance areas to the ICC in a timely manner. (3-30-01)

a. Local Highway Jurisdictions shall disclose of potentially regionally significant projects upon written request of ITD within fourteen (14) days of such request, or

when annual local and MPO project lists are due to ITD District Offices as part of the annual STIP development process; (3-30-01)

b. In an MPO area, to help assure timely disclosure, the sponsor of any potentially regionally significant project shall disclose such projects to the MPO annually on or before March 1 of that calendar year; and (3-30-01)

c. In MPO nonattainment and maintenance areas, the TIP and associated conformity demonstration shall be deemed to be incomplete if any regionally significant project has not been disclosed to the ICC in a timely manner. Therefore, such a TIP shall be considered to be non-conforming to applicable implementation plan(s). (3-30-01)

570. GENERAL CONSULTATION PROCESS.
Section 570 provides the general procedures for interagency consultation (federal, tribal, state, and local) and public participation for transportation conformity determinations in air quality nonattainment and maintenance areas in the state of Idaho. (3-30-01)

01. Lead Agency In Consultation. The following are the responsibilities of the lead agency at each stage of the consultation process: (3-30-01)

a. Initiating the consultation process by notifying other ICC members of the document or decision that must undergo the consultation process and by scheduling and convening consultation meetings and agendas; (3-30-01)

b. Developing and maintaining a distribution list of all ICC members and any other persons expressing an interest in receiving information and materials pertaining to ICC meetings; (3-30-01)

c. Distributing an agenda and all supporting material, including minutes of ICC meetings, to ICC members and persons on the distribution list as follows: (3-30-01)

i. Fourteen (14) days in advance of an ICC meeting if there are non-technical issues to be resolved by the ICC; (3-30-01)

ii. Thirty (30) days in advance of an ICC meeting if there are technical issues to be resolved by the ICC; or (3-30-01)

iii. If distribution of technical material pursuant to Subsection 570.01.c.ii. is not feasible thirty (30) days prior to an ICC meeting, then the lead agency shall

notify the ICC members and persons on the distribution list in writing at least thirty (30) days prior to the ICC meeting. Together with the notification, the lead agency shall distribute and disclose all available material and documentation to the ICC members and persons on the distribution list, informing them of the nature, purpose, and details of possible program changes that are expected to occur from earlier analyses of the actions. All technical material and documentation shall be distributed at a minimum of fourteen (14) days prior to the ICC meeting. (3-30-01)

d. Conferring with other agencies and persons not on the distribution list that have expressed an interest in the document or decision to be developed; (3-30-01)

e. Providing ICC members and persons on the distribution list access to all information needed for meaningful input; (3-30-01)

f. Soliciting early and continuing input from other ICC members and persons on the distribution list; (3-30-01)

g. Following the public consultation procedures outlined in Section 574; (3-30-01)

h. Providing an opportunity for informal question and answer on the draft document or proposed decision; (3-30-01)

i. Considering the views of ICC members and persons on the distribution list and responding in writing to significant comments in a timely and substantive manner prior to finalizing or taking any final action on those documents or determinations enumerated in Section 567.07.a. through 567.07.c.; and (3-30-01)

j. Assuring all comments and written responses of ICC members and persons on the distribution list are made part of the record of any action. (3-30-01)

02. Public Comment Period To Satisfy Thirty Day Document Distribution Requirement. A lead agency may use all or any part of another public comment period established for public outreach procedures pursuant to 23 CFR 450 for a transportation plan, program, or project to satisfy the thirty (30) day advance distribution requirement for technical issues, and shall notify all ICC members and other persons on the distribution list when so doing fourteen (14) days prior to commencement of the public comment period. (3-30-01)

03. Separate Times Or In Combination. The above actions may be conducted at separate times or in combination, as required, to enhance the efficiency of the process. (3-30-01)

04. Final Document Distribution. A lead agency, upon completion of a final document subject to the consultation process under Sections 563 through 574 of these rules (including any federal agency), shall distribute each final document to all other ICC members and persons on the distribution list within thirty (30) days of adopting or approving such document or making such determination. (3-30-01)

05. Use Of Checklist For Distribution Of Material. The lead agency may supply a checklist of available supporting information to ICC members and persons on the distribution list to be used to request all or part of the supporting information, in lieu of generally distributing all supporting information. (3-30-01)

06. Use Of Other Meetings For Consultation. A meeting that is scheduled or required for another purpose may be used for the purposes of consultation only if the public notice for the meeting identifies consultation as an agenda item. (3-30-01)

571. CONSULTATION PROCEDURES.
The consultation process among ICC members and persons on the distribution list shall be undertaken for the following specific major activities (federal, tribal, state, and local), specific routine activities and specific air quality related activities, in accordance with the procedures in Section 570. Participating agencies shall be all ICC members unless otherwise specified in Subsections 571.01 through 571.04. (3-30-01)

01. Specific Major Activities. The consultation process shall be undertaken for the following specific major activities. The lead agency for each activity shall be the designated MPO or ITD in the absence of an MPO. (3-30-01)

a. Evaluating and choosing each air quality model and associated methods and assumptions to be used in hot-spot analyses and regional emissions analyses including vehicle miles traveled forecasting. The hot-spot analyses shall be performed consistent with procedures described in 40 CFR 93.116 and 40 CFR 93.123 and regional emissions analysis shall be performed using procedures outlined on 40 CFR 93.122. (3-30-01)

b. Determining which minor arterials and other transportation projects should be considered “regionally significant” for the purposes of regional emissions analysis, in addition to those functionally classified as principal arterial or higher or fixed guideway transit systems or extensions that offer an alternative to regional highway travel. (3-30-01)

c. Evaluating whether projects otherwise exempted from meeting the requirements of Sections 563 through 574 of these rules should be treated as non-exempt in cases where potential adverse emissions impacts may exist for any reason per 40 CFR 93.126 and 127. (3-30-01)

d. Making a determination as to whether past obstacles to implementation of TCMs which are behind the schedule established in the applicable implementation plan have been identified and are being overcome, and whether state and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding for TCMs. This consultation procedure shall also consider whether delays in TCM implementation necessitate revisions to the applicable implementation plan to remove TCMs or substitute TCMs with other emission reduction measures. (3-30-01)

e. Identifying projects located at sites in PM nonattainment or maintenance areas which have vehicle and roadway emission and dispersion characteristics which are essentially identical to those at sites which have violations verified by monitoring, and therefore require quantitative PM hot-spot analysis. In case a method for quantitative hot-spot analysis has not been formally adopted by EPA, a sound qualitative analysis developed in conjunction with FHWA may be used for the same. (3-30-01)

f. Making a determination whether the project is included in the regional emissions analysis supporting the currently conforming TIP's conformity determination, and whether the project's design concept and scope have changed significantly from those which were included in the regional emissions analysis, or in a manner which would significantly impact use of the facility. (3-30-01)

g. For areas in the state with no MPOs, making a determination whether a project has undergone project-level analysis and whether the project’s design concept and scope have changed significantly from those which were included in the project-level analysis, or in a manner which would significantly impact use of the facility. (3-30-01)

h. Establishing appropriate public participation opportunities for project-level conformity determinations, as applicable, in the manner specified by Section 574, to be initiated by the recipient of the funds designated under 23 U.S.C. or the Federal Transit Act. (3-30-01)

i. Choosing conformity tests and methodologies for isolated and rural nonattainment and maintenance areas as required by 40 CFR 93.109(g)(2)(iii). (3-30-01)

02. Specific Routine Activities. The consultation process shall be undertaken for the following specific routine activities. The lead agency shall be the MPO or ITD in the absence of an MPO. (3-30-01)

a. Evaluating events that will trigger new conformity determinations in addition to those triggering events established in 40 CFR 93.104. Participating agencies shall be the MPO and state, tribal, regional, and local air quality planning agencies. (3-30-01)

b. Consulting on emissions analysis for transportation activities that cross the borders of MPOs or nonattainment or maintenance areas. Participating agencies shall be the MPO and state, tribal, regional, and local air quality planning agencies. (3-30-01)

c. Determining whether the project sponsor or MPO has demonstrated that the requirements are satisfied without a particular mitigation, such as emissions offsets or other control measures, or determining that a conforming project approved with mitigation no longer requires mitigation. (3-30-01)

d. Assuring that plans for construction of regionally significant projects that are not FHWA/FTA projects, including projects for which alternative locations, design concept and scope, or the no-build option are still being considered, are disclosed to the MPO or ITD in the absence of an MPO on a regular basis, and assuring that any changes to those plans are immediately disclosed. (3-30-01)

e. Determining whether a project, which was previously found to conform, has or will have a significant change in design concept and scope since the project plan and TIP conformity determination. (3-30-01)

f. Designing, scheduling, and funding of research and data collection effort pertaining to transportation or air quality planning with implications for transportation conformity. (3-30-01)

g. Reviewing and recommending regional transportation model development by the MPO (e.g., household/travel transportation surveys). (3-30-01)

h. Development of transportation improvement programs. (3-30-01)

i. Development of regional transportation plans. (3-30-01)

j. Consulting when the metropolitan planning area does not include the entire nonattainment area or maintenance area, for planning requirements which may fall under the jurisdiction of more than one (1) MPO or the MPO and ITD. (3-30-01)

03. Specific Air Quality Related Activities. The consultation process shall be undertaken when preparing an applicable implementation plan that includes the revision or addition of a motor vehicle emissions inventory and budget activities in accordance with the procedures in Section 570. Consultation is not required for administrative amendments that do not affect conformity. The lead agency for each activity shall be IDEQ or the MPO. In addition to the Section 570 consultation process, the lead agency shall undertake the following: (3-30-01)

a. Scheduling consultation meetings early in the process of decision on the applicable implementation plan, and prior to making a final recommendation to their management, committees, boards or commissions, for a final decision on such documents; (3-30-01)

b. Arranging for technical committees or teams to assist ICC members in reviewing documents provided by the lead agency. The lead agency may convene technical meetings as necessary; and (3-30-01)

c. Scheduling and conducting meetings of the ICC at regularly scheduled intervals, no less frequently than quarterly. (3-30-01)

d. The ICC may appoint subcommittees to address specific issues pertaining to applicable implementation plan development. Any recommendations of a subcommittee shall be considered by the ICC.(3-30-01)

03. Notification Process. The designated MPO, or ITD in the absence of an MPO, shall notify ICC members and persons on the distribution list of a transportation plan or TIP revisions that merely add or delete exempt projects listed in 40 CFR 93.126 early in the process of decision, and by supplying all relevant documents and information to the same. (3-30-01)

572. FINAL CONFORMITY DETERMINATIONS BY USDOT.
Section 572 establishes the process USDOT shall follow when making final determinations on proposed or anticipated transportation actions subject to transportation conformity. (3-30-01)

01. Final Conformity Determination Process. USDOT will make making final determinations on proposed or anticipated STIP or transportation plan or project conformity by: (3-30-01)

a. Distributing a draft conformity determination to EPA for review and comment. USDOT shall allow a maximum of thirty (30) days for EPA to respond; and (3-30-01)

b. USDOT shall respond in writing to any significant comments raised by EPA within fourteen (14) days of receipt in writing before making a final decision. (3-30-01)

02. New Or Revised Information. If USDOT requests any new or revised information to support a STIP, TIP or transportation plan or project conformity determination, then USDOT shall either return the conformity determination for additional consultation pursuant to Section 570, or USDOT shall distribute the new information to the ICC members and persons on the distribution list for review and comment; (3-30-01)

a. When USDOT distributes such new or additional information to ICC members and persons on the distribution list, USDOT shall allow for a maximum of thirty (30) days for the lead agency to respond to any new or revised supporting information; and (3-30-01)

b. USDOT shall distribute a written response within fourteen (14) days of receipt to any significant comments raised by the ICC members and persons on the distribution list on the new or revised supporting information before making a final decision. (3-30-01)

573. RESOLVING CONFLICTS.

Conflicts between state agencies or between state agencies and the MPO regarding a determination of conformity, applicable implementation plan submittal, or other policy decision under Sections 563 through 574, shall be resolved in the following manner. (3-30-01)

01. Conflict Resolution At The Level Of IDEQ Regions And ITD Districts. Every effort shall be made to resolve any conflicts among state agencies or between state agencies and an MPO at the regional level. The regional administrator of IDEQ, the District Engineer of ITD and the other agency managers at the regional level of the affected jurisdictions, or their designated representatives shall be involved in conflict resolution at the regional level. (3-30-01)

02. Conflict Resolution At The Level Of IDEQ And ITD Headquarters. If conflict(s) are not resolved at the regional level, the issue shall be raised to the level of agency directors for resolution. (3-30-01)

03. Conflict Resolution At The Governor's Level. If conflict(s) are not resolved through Subsection 569.02, then IDEQ shall raise the conflict to the Governor, as follows: (3-30-01)

a. The IDEQ administrator shall request in writing that ITD or the MPO provide IDEQ with written notification of resolution of IDEQ's comments. ITD or the MPO shall provide IDEQ with the requested written notification within fourteen (14) days of receipt of IDEQ's written request. (3-30-01)

b. Within fourteen (14) days of its receipt of the requested written notification, IDEQ may appeal the conformity determination in writing to the Governor. If IDEQ appeals to the Governor, then the final conformity determination must have the concurrence of the Governor. If IDEQ does not appeal in writing to the Governor within fourteen (14) days of its receipt of written notification of resolution of it's comments, then the lead transportation agency may proceed with the final conformity determination. (3-30-01)

c. The fourteen (14) days shall start on the date when the IDEQ administrator receives notification of the written resolution of his comments regarding a determination of conformity, applicable implementation plan submittal, or other decision under Sections 563 through 574. (3-30-01)

04. Process For Conflict Resolution At The Governor's Level. The Governor may delegate to another independent official or agency within the state his or her role in this process. The Governor may not delegate his or her role to the head or staff of the state air quality agency or any local air quality agency, ITD, a state transportation commission or board, any agency that has responsibility for any one (1) of these functions, or an MPO. (3-30-01)

574. PUBLIC CONSULTATION PROCEDURES.

Affected agencies making conformity determinations on transportation plans, programs, and projects shall establish a proactive public involvement process which provides opportunity for public review and comment by, at a minimum, providing at the beginning of the public comment period and prior to taking formal action on a conformity determination for all transportation plans and TIPs, reasonable public access to technical and policy information considered by the agency, and consistent with these requirements and those of 23 CFR 450. Any charges imposed

for public inspection and copying should be consistent with the fee schedule contained in 49 CFR 7.95. In addition, these agencies must specifically address, in writing, all public comments relating to known plans for a regionally significant project, which is not receiving FHWA or FTA funding, or approval. This is especially important if the project's emissions have not been properly reflected in the emissions analysis supporting a proposed conformity finding for a transportation plan or TIP. These agencies shall also provide opportunity for public involvement in conformity determinations for projects where otherwise required by law. (3-30-01)

Appendix F-2
IDAPA 04.11.01 Rules for Administrative Procedures

IDAPA 04.11.01 Rules for Administrative Procedures

Subchapter C--Rule-Making
Rules 800 through 860--Rule-Making
Rules 800 through 809—Introduction

800. FORMAL AND INFORMAL RULE-MAKING (Rule 800).
Formal rule-making refers only to rule-making procedures associated with formal notice of proposed rule-making, receipt of and consideration of written or oral comment on the record in response to notice of proposed rule-making, and adoption of rules. Informal rule-making refers to informal procedures for development of, comment upon, or review of rules for later formal consideration. No rule may come into effect solely as a result of informal rule-making. Agreements coming from informal rule-making must be finalized by formal rule-making. (7-1-93)

801. -- 809. (RESERVED).

Rules 810 through 819--
Informal, Negotiated Rule-Making

810. LEGISLATIVE PREFERENCE FOR NEGOTIATED RULE-MAKING PROCEDURES (Rule 810).
This rule addresses informal, negotiated rule-making as described by Section 67-5220, Idaho Code. The agency, when feasible, shall proceed by informal, negotiated rule-making in order to improve the substance of proposed rules by drawing upon shared information, expertise and technical abilities possessed by the affected persons; to arrive at a consensus on the content of the rule; to expedite formal rule-making; and to lessen the likelihood that affected persons will resist enforcement or challenge the rules in court. (7-1-93)

811. PUBLICATION IN IDAHO ADMINISTRATIVE BULLETIN (Rule 811).
If the agency determines that informal, negotiated rule-making is feasible, it shall publish in the Idaho Administrative Bulletin a notice of intent to promulgate a rule. If the agency determines that informal, negotiated rule-making is not feasible, it shall explain in its notice of intent to promulgate rules why informal rule-making is not feasible and shall proceed to formal rule-making as provided in this chapter. Reasons why the agency may find that informal, negotiated rule-making is not feasible include, but are not limited to, the need for temporary rule-making, the simple nature of the proposed rule change, the lack of identifiable representatives of affected interests, or determination that affected interests are not likely to reach a consensus on a

proposed rule. The determination of the agency whether to use informal, negotiated rule-making is not re-viewable. (7-1-93)

812. CONTENTS OF NOTICE OF INTENT TO PROMULGATE RULES (Rule 812).
The notice of intent to promulgate rules shall announce that the agency intends to proceed by way of informal, negotiated rule-making to develop a proposed rule and shall include: (7-1-93)

01. Subject Matter. A brief, non-technical statement of the subject matter to be addressed in the proposed rule-making. (7-1-93)

02. Authority. The statutory authority for the rule-making. (7-1-93)

03. Obtain Copy. An explanation how to obtain a preliminary draft of the proposed rules, if one is available. (7-1-93)

04. Issues. The principal issues involved and the interests which are likely to be significantly affected by the rule. (7-1-93)

05. Agency Contacts. The person(s) designated to represent the agency. (7-1-93)

06. Method Of Participation. An explanation how a person may participate in the informal, negotiated rule-making. (7-1-93)

07. Schedule. A proposed schedule for written comments or for a public meeting of interested persons, and a target date, if one exists, to complete negotiation and to publish a proposed rule for notice and comment. (7-1-93)

813. PUBLIC MEETINGS (Rule 813).
The agency may convene public meetings of interested persons to consider the matter proposed by the agency and to attempt to reach a consensus concerning a proposed rule with respect to the matter and any other matter the parties determine is relevant to the proposed rule. Person(s) representing the agency may participate in the deliberations. (7-1-93)

814. REPORTS TO THE AGENCY (Rule 814).
If the parties reach a consensus on a proposed rule, they shall transmit to the agency a report stating their consensus and, if appropriate, a draft of a proposed rule incorporating that consensus. If the parties are unable to reach a consensus on particular issues, they may transmit to the agency a report specifying those areas on which they reached consensus and those on which they did not, together with arguments for and against positions advocated by various participants. The participants or any individual participant may also include in a report any information, recommendations, or materials considered appropriate. (7-1-93)

815. AGENCY CONSIDERATION OF REPORT (Rule 815).
The agency may accept in whole or in part or reject the consensus reached by the parties in publishing a proposed rule for notice and comment. (7-1-93)

816. -- 819. (RESERVED).

Rules 820 through 829--
Petitions to Initiate Rule-Making

820. FORM AND CONTENTS OF PETITION TO INITIATE RULE-MAKING (Rule 820).
This rule addresses petitions to initiate rule-making as described by Section 67-5230, Idaho Code. (7-1-93)

01. Requirement. Any person petitioning for initiation of rule-making must substantially comply with this rule. (7-1-93)

02. Form And Contents. The petition must be filed with the agency and shall: (7-1-93)

a. Identify the petitioner and state the petitioner's interest(s) in the matter; (7-1-93)

b. Describe the nature of the rule or amendment to the rule urged to be promulgated and the petitioner's suggested rule or amendment; and (7-1-93)

c. Indicate the statute, order, rule, or other controlling law, and the factual allegations upon which the petitioner relies to support the proposed rule-making. Legal assertions in the petition may be accompanied by citations of cases and/or statutory provisions. (7-1-93)

821. AGENCY RESPONSE TO PETITION (Rule 821).

01. Action Of Agency. Within twenty-eight (28) days after the agency has received a petition to initiate rule-making, the agency shall initiate rule-making proceedings in accordance with Sections 67-5220 through 67- 5225, Idaho Code, or deny the petition in writing, stating its reasons for the denial, unless the rulemaking authority is in a multi-member agency board or commission whose members are not full-time officers or employees of the state, in which case the multi-member board or commission shall have until the first regularly scheduled meeting of the multi-member board or commission that takes place seven (7) or more days after submission of the petition to initiate rule-making proceedings in accordance with

Sections 67-5220 through 67-5225, Idaho Code, or deny the petition in writing, stating its reasons for the denial. (7-1-97)

02. Denial. If the petition is denied, the written denial shall state: (7-1-93)

a. The agency has denied your petition to initiate rule-making. This denial is a final agency action within the meaning of Section 67-5230, Idaho Code. (7-1-93)

b. Pursuant to Section 67-5270, Idaho Code, any person aggrieved by this final agency action may seek review of the denial to initiate rule-making by filing a petition in the District Court of the county in which: (7-1-93)

i. The hearing was held, (7-1-93)

ii. This final agency action was taken, (7-1-93)

iii. The party seeking review resides, or operates its principal place of business in Idaho, or (7-1-97)

iv. The real property or personal property that was the subject of the denial of the petition for rule-making is located. (7-1-93)

c. This appeal must be filed within twenty-eight (28) days of the service date of this denial of the petition to initiate rule-making. See Section 67-5273, Idaho Code. (7-1-93)

822. NOTICE OF INTENT TO INITIATE RULE-MAKING CONSTITUTES ACTION ON PETITION (RULE 822).

The agency may initiate rule-making proceedings in response to a petition to initiate rule-making by issuing a notice of intent to promulgate rules in the Idaho Administrative Bulletin on the subject matter of the petition if it wishes to obtain further comment whether a rule should be proposed or what rule should be proposed. Issuance of a notice of intent to promulgate rules satisfies an agency's obligations to take action on the petition and is not a denial of a petition to initiate rule-making. (7-1-93)

823. -- 829. (RESERVED).

Rules 830 through 839--
Procedure on Rule-Making for Pending Rules

830. REQUIREMENTS FOR NOTICE OF PROPOSED RULE-MAKING (Rule 830).

01. Content. Every notice of proposed rule-making shall include: (7-1-93)

a. A statement of the subject matter of the proposed rules; (7-1-93)

b. A statement of the specific statutory authority for the proposed rules, including a citation to a specific federal statute or regulation if that is the basis of authority or requirement for the rule-making; (7-1-97)

c. A statement in non-technical terms of the substance of the proposed rules, and, if the agency intends to take oral testimony on the proposed rule, the location, date and time of the oral presentations; (7-1-97)

d. A statement whether the agency intends to conduct oral presentations concerning the proposed rules, and, if not, what persons must do in order to request an oral presentation; (7-1-93)

e. The address to which written submissions concerning the proposed rules must be mailed, (7-1-93)

f. The name and telephone number of an agency contact to whom questions about the proposed rules may be referred; (7-1-93)

g. The deadline for written comment on the proposed rules and for asking for an opportunity for an oral presentation concerning the proposed rules; (7-1-97)

h. A statement whether negotiated rule-making has been conducted, and if not, why not; (7-1-97)

i. A summary of the proposed rules; and (7-1-97)

j. The name, mailing address and telephone number of an agency contact person for the rule-making. (7-1-97)

02. Availability Of Information. This information will be published in the Idaho Administrative Bulletin and be available directly from the agency. The notice of proposed rule-making must be accompanied by a document showing the text of the proposed rule in legislative format. (7-1-93)

831. INFORMAL PHASES OF FORMAL RULE-MAKING (Rule 831).

In addition to the formal phases of rule-making proceedings, the agency may schedule meetings after the formal proposal of rules to explain the operation of the rules proposed. (7-1-93)

832. COMMENTS ON PROPOSED RULES (Rule 832).
Deadlines for comment upon proposed rules or amendments to proposed rules will be set forth in the Idaho Administrative Bulletin. Comments should be made to the officers listed in the notices of proposed rule-making published in the Idaho Administrative Bulletin. Further information concerning individual rule-making should be directed to the contact person listed for that rule-making in the Idaho Administrative Bulletin. (7-1-93)

833. PETITIONS FOR ORAL PRESENTATION (Rule 833).

01. Requirement. Any person petitioning for an opportunity for an oral presentation in a substantive rule-making must substantially comply with this rule. (7-1-93)

02. Content. The petition shall: (7-1-93)

a. Identify the petitioner and state the petitioner's interests in the matter, (7-1-93)

b. Describe the nature of the opposition to or support of the rule or amendment to the rule proposed to be promulgated by the agency, and (7-1-93)

c. Indicate alternative proposals of the petitioner and any statute, order, rule or other controlling law or factual allegations upon which the petitioner relies to support the request for the opportunity to provide an oral presentation. Legal assertions in the petition may be accompanied by citations of cases and/or statutory provisions. (7-1-93)

03. Oral Presentation. Within fourteen (14) days after receiving a petition for an oral presentation, the agency shall schedule the oral presentation or deny it. The agency shall provide an opportunity for oral presentation if requested by twenty-five (25) persons, a political subdivision, or another agency, but no oral presentation need be provided when the agency has no discretion as the substantive content of a proposed rule because the proposed rule is intended solely to comply with a controlling judicial decision or court order, or with the provisions of a statute or federal rule that has been amended since the adoption of the agency rule. If oral presentation is granted, notice of the oral presentation shall be published in the Idaho Administrative Bulletin. If oral presentation is denied, the denial shall state the grounds for denial. (7-1-93)

834. THE RULE-MAKING RECORD (Rule 834).
The agency shall maintain a record of each rule-making proceeding. (7-1-93)

01. Contents. The record for a rule-making proceeding shall include: (7-1-93)

a. Copies of all publications in the Idaho Administrative Bulletin relating to that rule-making proceeding; (7-1-93)

b. All written petitions, submissions, and comments received by the agency, and the agency's responses to those petitions, submissions and comments; (7-1-93)

c. All written materials considered by the agency in connection with formulating the proposal or adoption of the rule; (7-1-93)

d. A record of any oral presentations, any transcriptions of oral presentations, and any memoranda summarizing the contents of such presentations; and (7-1-93)

e. Any other materials or documents prepared in conjunction with the rule-making, including any summaries prepared for the agency in considering the rule-making. (7-1-93)

02. Recording Or Reporting. All oral presentations shall be recorded on audio-tape or videotape or may be taken by a qualified court reporter at the agency's expense. The agency may provide for a transcript of the proceeding at its own expense. Persons may have a transcript of an oral presentation prepared at their own expense. (7-1-97)

835. ADOPTION AND PUBLICATION OF PENDING RULES FOLLOWING COMMENT OR ORAL PRESENTATION (Rule 835).

01. Adoption. After the expiration of the written comment period for rule-making and following any oral presentation on the rule-making, but no sooner than seven (7) days after the expiration of the comment period, the agency shall consider fully all issues presented by the written and oral submissions respecting the proposed rule before adopting a pending rule. (7-1-97)

02. Publication. Upon the agency's adoption of a pending rule, the agency shall publish the text of the pending rule in the bulletin, except that with the permission of the coordinator, the agency need not publish the full text of the pending rule if no significant changes have been made from the text of the proposed rule as published in the bulletin, but the notice of adoption of the pending rule must cite the volume of the bulletin where the text is available and must note all changes that have been made. In addition, the agency must publish in the bulletin a concise explanatory statement containing: (7-1-97)

a. The reasons for adopting the pending rule; (7-1-97)

b. A statement of any change between the text of the proposed rule and the text of the pending rule with an explanation of the reasons for any changes; (7-1-97)

c. The date on which the pending rule will become final and effective pursuant to Section 67-5224(5), Idaho Code; (7-1-97)

d. A statement that the pending rule may be rejected, amended or modified by concurrent resolution of the Legislature; (7-1-97)

e. An identification of any portion of the pending rule imposing or increasing a fee or charge and stating that this portion of the pending rule shall not become final and effective unless affirmatively approved by concurrent resolution of the Legislature; and (7-1-97)

f. A statement how to obtain a copy of the agency's written review of and written responses to the written and oral submissions respecting the proposed rule. (7-1-97)

03. Rule Imposing Or Increasing Fees. When any pending rule imposes a new fee or charge or increases an existing fee or charge, the agency shall provide the coordinator with a description of that portion of the rule imposing a new fee or charge or increasing an existing fee or charge, along with a citation of the specific statute authorizing the imposition or increase of the fee or charge. (7-1-97)

836. FINAL RULES (Rule 836).
Pending rules may become final rules, or may be rejected, amended or modified by concurrent resolution of the Legislature, as provided in Section 67-5224, Idaho Code. (7-1-97)

837. -- 839. (RESERVED).

840. PROCEDURE FOR ADOPTION OF TEMPORARY RULES (Rule 840).

01. Gubernatorial Finding. The agency may adopt temporary rules upon the Governor's finding that protection of the public health, safety, or welfare, compliance with deadlines in amendments to governing law or federal programs, or conferring a benefit requires a rule to become effective before it has been submitted to the Legislature for review. No temporary rule imposing a fee or charge may become effective before it has been approved, amended or modified by concurrent resolution of the Legislature unless the Governor finds that the fee or charge is necessary to avoid immediate danger that justifies the imposition of the fee or charge. (7-1-97)

02. Effective Date. Temporary rules take effect according to the effective date specified in the rules. Temporary rules may be immediately effective. (7-1-97)

03. Expiration. In no case may a temporary rule remain in effect beyond the conclusion of the next succeeding regular session of the Legislature unless the rule is approved, amended or modified by concurrent resolution, in which case the rule may remain in effect until the time specified in the resolution or until the rule has been replaced by a final rule that has become effective pursuant to Section 67-5224(5), Idaho Code. (7-1-97)

04. Notice And Publication. Agencies shall give such notice as is practicable in connection with adoption of a temporary rule. Temporary rules will be published in the first available issue of the Idaho Administrative Bulletin. (7-1-97)

05. Associated Proposed Rule. Concurrently with promulgation of a temporary rule, or as soon as reasonably possible thereafter, an agency must begin rule-making procedures by issuing a proposed rule on the same subject matter as the temporary rule, unless the temporary rule will expire by its own terms or by operation of law before a proposed rule could become final. (7-1-97)

841. -- 849. (RESERVED).

850. CORRECTION OF TYPOGRAPHICAL, TRANSCRIPTION OR CLERICAL ERRORS IN PENDING RULES (Rule 850).
The agency may amend pending rules to correct typographical errors, transcription errors, or clerical errors, in the manner approved by the Administrative Rules Coordinator. These amendments will be incorporated into the pending rule upon their publication in the Idaho Administrative Bulletin. (7-1-97)

851. -- 859. (RESERVED).

860. PERSONS WHO MAY SEEK JUDICIAL REVIEW (Rule 860).
Pursuant to Section 67-5270, Idaho Code, any person aggrieved by an agency rule (either temporary or final) may seek judicial review in district court. (7-1-93)

01. Filing. The petition for judicial review must be filed with the agency and with the district court and served on all parties. Pursuant to Section 67-5272, Idaho Code, petitions for review may be filed in the District Court of the county in which: (7-1-93)

a. The hearing was held; (7-1-93)

b. The final agency action was taken; (7-1-93)

c. The party seeking review of the agency action resides, or operates its principal place of business in Idaho; or (7-1-97)

d. The real property or personal property that was the subject of the agency is located. (7-1-93)

02. Time. Pursuant to Section 67-5273, Idaho Code, a petition for judicial review of a final rule (except for a challenge to procedures used in promulgating the rule) may be filed at any time. (7-1-93)

Appendix F-3
Idaho Administrative Code

TITLE 67 STATE GOVERNMENT AND STATE AFFAIRS
CHAPTER 52 IDAHO ADMINISTRATIVE PROCEDURE ACT

67-5201. DEFINITIONS. As used in this act

(1) "Administrative code" means the Idaho administrative code established in this chapter.

(2) "Agency" means each state board, commission, department or officer authorized by law to make rules or to determine contested cases, but does not include the legislative or judicial branches, executive officers listed in section 1, article IV, of the constitution of the state of Idaho in the exercise of powers derived directly and exclusively from the constitution, the state militia or the state board of correction.

(3) "Agency action" means
(a) the whole or part of a rule or order;
(b) the failure to issue a rule or order; or
(c) an agency's performance of, or failure to perform, any duty placed on it by law.

(4) "Agency head" means an individual or body of individuals in whom the ultimate legal authority of the agency is vested by any provision of law.

(5) "Bulletin" means the Idaho administrative bulletin established in this chapter.

(6) "Contested case" means a proceeding which results in the issuance of an order.

(7) "Coordinator" means the administrative rules coordinator prescribed in section 67-5202, Idaho Code.

(8) "Document" means any executive order, notice, rule or statement of policy of an agency.

(9) "Final rule" means a rule that has been adopted by an agency under the regular rulemaking process and is in effect.

(10) "License" means the whole or part of any agency permit, certificate, approval, registration, charter, or similar form of authorization required by law, but does not include a license required solely for revenue purposes.

(11) "Official text" means the text of a document issued, prescribed, or promulgated by an agency in accordance with this chapter, and is the only legally enforceable text of such

document. Judicial notice shall be taken of all documents issued, prescribed, or promulgated in accordance with this chapter.

(12) "Order" means an agency action of particular applicability that determines the legal rights, duties, privileges, immunities, or other legal interests of one(1) or more specific persons.

(13) "Party" means each person or agency named or admitted as a party, or properly seeking and entitled as of right to be admitted as a party.

(14) "Pending rule" means a rule that has been adopted by an agency under the regular rulemaking process and remains subject to legislative review.

(15) "Person" means any individual, partnership, corporation, association, governmental subdivision or agency, or public or private organization or entity of any character.

(16) "Proposed rule" means a rule published in the bulletin as provided in section 67-5221, Idaho Code.

(17) "Provision of law" means the whole or a part of the state or federal constitution, or of any state or federal

(a) statute; or

(b) rule or decision of court.

(18) "Publish" means to bring before the public by publication in the bulletin or administrative code, or as otherwise specifically provided by law.

(19) "Rule" means the whole or a part of an agency statement of general applicability that has been promulgated in compliance with the provisions of this chapter and that implements, interprets, or prescribes

(a) law or policy; or

(b) the procedure or practice requirements of an agency. The term includes the amendment, repeal, or suspension of an existing rule, but does not include

(i) statements concerning only the internal management or internal personnel policies of an agency and not affecting private rights of the public or procedures available to the public; or

(ii) declaratory rulings issued pursuant to section 67-5232, Idaho Code; or

(iii) intra-agency memoranda; or

(iv) any written statements given by an agency which pertain to an interpretation of a rule or to the documentation of compliance with a rule.

(20) "Rulemaking" means the process for formulation, adoption, amendment or repeal of a rule.

(21) "Standard" means a manual, guideline, criterion, specification, requirement, measurement or other authoritative principle providing a model or pattern in comparison with which the correctness or appropriateness of specified actions, practices or procedures may be determined.

(22) "Submitted for review" means that a rule has been provided to the legislature for review at a regular or special legislative session as provided in section 67-5291, Idaho Code.

(23) "Temporary rule" means a rule authorized by the governor to become effective before it has been submitted to the legislature for review and which expires by its own terms or by operation of law no later than the conclusion of the next succeeding regular legislative session unless extended or replaced by a final rule as provided in section 67-5226, Idaho Code.

67-5202. OFFICE OF ADMINISTRATIVE RULES COORDINATOR.
There is hereby established the office of administrative rules coordinator in the department of administration. The coordinator shall be a non-classified employee and shall be appointed by and serve at the pleasure of the director of the department of administration. All other employees of the office of administrative rules employed on July 1, 1996, shall be classified employees, but upon their termination their positions and any positions vacant upon July 1, 1996 shall be non-classified positions and any persons employed to fill positions in the office of administrative rules thereafter shall be exempt from the provisions of chapter 53, title 67, Idaho Code. The coordinator shall receive all notices and rules required in this chapter to be published in the bulletin or the administrative code.

The coordinator shall prescribe a uniform style, form, and numbering system which shall apply to all rules adopted by all agencies. The coordinator shall review all submitted rules for style, form, and numbering, and may return a rule that is not in proper style, form, or number.

67-5203. PUBLICATION OF ADMINISTRATIVE BULLETIN.

(1) All documents required or authorized in this chapter or by other provision of law to be

published shall initially be published in the bulletin. The bulletin shall be published by the administrative rules coordinator not less frequently than the first Wednesday of each calendar month, but not more frequently than every other week.

(2) The bulletin shall contain all previously unpublished documents filed with the coordinator in compliance with a publication schedule established by the coordinator.

(3) Each issue of the bulletin shall contain a table of contents. A cumulative index shall be published at least every three(3) months.

(4) The following documents, if not required to be otherwise published, shall be published in the bulletin:

(a) all executive orders of the governor;

(b) agency notices of intent to promulgate rules, notices of proposed rules, and the text of all proposed and pending rules, together with any explanatory material supplied by the agency;

(b) all agency documents required by law to be published in the bulletin; and

(d) any legislative documents affecting a final agency rule.

(5) The text of all documents published in the bulletin shall be the official text of that document until the document has been published in the administrative code. Judicial notice shall be taken of all documents published in the bulletin.

(6) The coordinator shall provide a process for access to the contents of the bulletin and to the administrative code by electronic means.

67-5204. PUBLICATION OF ADMINISTRATIVE CODE.

(1) The administrative rules coordinator shall annually publish a publication to be known as the "Idaho Administrative Code."

(2) The administrative code shall be a codification of:

(a) all executive orders of the governor that have been published in the bulletin and have not been rescinded;
(b) the text of all final rules;

(c) any legislative documents affecting a final agency rule; and

(d) all documents required by law to be published in the administrative code.

(3) The text of all documents published in the administrative code shall be the official text of that document. Judicial notice shall be taken of all documents published in the administrative code.

67-5205. FORMAT -- COSTS -- DISTRIBUTION -- FUNDS.

(1) The administrative code and the permanent supplements thereto shall be published in such a manner that every agency has an opportunity to procure at reasonable cost from the coordinator, individual printed pamphlet copies of the rules and statements of policy of such agency published by authority of this chapter. No administrative rule or statement of policy published in the administrative code or the permanent supplements shall be reset or otherwise reprinted at public expense upon a format distinct from that of the administrative code without a certification by the coordinator that such special format is necessary for the effective performance by the agency of its functions.

(2) The prices to be charged for individual copies of and subscriptions to the administrative code, the permanent supplements thereto and the bulletin, for reprints and bound volumes thereof and for pamphlet rules and statements of policy, which prices may be fixed without reference to the restrictions placed upon and fixed for the sale of other publications of the state, and the number of copies which shall be distributed free for official use, in addition to those free copies required to be as provided in this section, shall be set by rules promulgated by the coordinator. The coordinator may set prices without reference to the restrictions placed upon the sale of other publications of the state. Free copies shall be distributed by the coordinator, as follows:

(a) One(1) to each county clerk for the use of the county law library.

(b) One(1) each to the senate and the house of representatives.

(c) One(1) to the attorney general.

(d) One(1) to the legislative services office.

(e) One(1) each to the state universities and colleges, and one(1) to each community college.

(f) One(1) to the state law library.

(g) One(1) to the state library.

(h) One(1) each to the following state depository libraries: Boise Public Library, East Bonner County Library, Idaho Falls Public Library, Lewiston City Library, Pocatello Library, Albertson College Library, Ricks College Library and Twin Falls Public Library.

In addition to those free copies required to be distributed by this section, the coordinator shall provide to the legislature free copies of all rules subject to review by the legislature pursuant to section 67-5291, Idaho Code, and may distribute other free copies for official use.

(3) Without limiting the generality of the provisions of subsection(2) of this section, the rules of the coordinator may provide for volume discounts to be available to established law book publishers who agree to incorporate fully administrative rules, the permanent supplements thereto and the bulletin into their general scheme of promotion and distribution, and may provide for the free reciprocal exchange of publications between this state and other states and foreign jurisdictions. The provisions of this section include the authority to exchange, display, access and publish texts through electronic media.

(4) There is hereby created in the state treasury the administrative code fund. All moneys received from the production of rules, the sale of the administrative code, the permanent supplements thereto, or the bulletin, and for providing electronic access, shall be deposited in the fund. All agencies which have any material published in the bulletin, administrative code or supplements thereto, or newspapers, are hereby authorized and directed to pay out of their appropriations to the coordinator their respective shares of the costs of publication and distribution of such material. All moneys placed in the fund may be appropriated to the coordinator for the administration of the provisions of this chapter, and for the publication and distribution of the bulletin, administrative code or supplements thereto, as authorized in this chapter.

The coordinator shall charge an annual fee to each participating agency for each page published in the administrative code not to exceed fifty-six dollars($56.00) per page. In addition, the coordinator shall charge a fee to each participating agency for each page published in the bulletin not to exceed sixty-one dollars($61.00) per page. A fee per page may be charged even though less than a full page of publication is required, and each participating agency shall promptly pay into the administrative code fund such charge.

67-5206. PROMULGATION OF RULES IMPLEMENTING ADMINISTRATIVE PROCEDURE ACT.

(1) In accordance with the rulemaking requirements of this chapter, the administrative rules coordinator shall promulgate rules implementing the provisions of sections 67-5203, 67-5204 and 67-5205, Idaho Code. The rules shall:

(a) establish a uniform numbering system applicable to rules adopted by all agencies;

(b) establish a uniform style and format applicable to rules adopted by all agencies;

(c) establish a publication schedule for the bulletin and the administrative code, including deadlines for the submission of documents to be included within each publication;

(d) establish a uniform indexing system for agency orders; and

(e) include such other rules as the coordinator deems necessary to implement the provisions of sections 67-5203, 67-5204 and 67-5205, Idaho Code, and this section.

(2) In accordance with the rulemaking requirements of this chapter, the attorney general shall promulgate rules of procedure appropriate for use by as many agencies as possible. The rules shall deal with all general functions and duties performed in common by several agencies.

(3) In accordance with the rulemaking requirements of this chapter, the attorney general shall promulgate rules implementing the provisions of sections 67-5220 through 67-5232, Idaho Code. The rules shall specify:

(a) the form and content for petitions requesting an opportunity for an oral presentation in a substantive rulemaking;

(b) procedures for the creation of a record of comments received at any oral presentation;

(c) the standards by which exemptions from regular rulemaking requirements will be authorized to correct typographical errors, transcription errors, or clerical errors;

(d) the form and content for a petition for the adoption of rules and the procedure for its submission, consideration and disposition;

(e) procedures to facilitate negotiated rulemaking;

(f) the form and content of a petition for a declaratory ruling on the applicability of statutes or regulations; and

(g) such other provisions as may be necessary or useful.

(4) In accordance with the rule making [rulemaking] requirements of this chapter, the attorney general shall promulgate rules implementing the provisions of sections 67-5240 through 67-5255, Idaho Code. The rules shall specify:

(a) form and content to be employed in giving notice of a contested case;

(b) procedures and standards required for intervention in a contested case;

(c) procedures for pre-hearing conferences;

(d) format for pleadings, briefs, and motions;

(e) the method by which service shall be made;

(f) procedures for the issuance of subpoenas, discovery orders, and protective orders if authorized by other provisions of law;

(g) qualifications for persons seeking to act as a hearing officer;

(h) qualifications for persons seeking to act as a representative for parties to contested cases;

(i) procedures to facilitate informal settlement of matters;

(j) procedures for placing ex parte contacts on the record; and

(k) such other provisions as may be necessary or useful.

(5)

(a) After July 1, 1993, the rules promulgated by the attorney general under this section shall apply to all agencies that do not affirmatively promulgate alternative procedures after the promulgation of the rules by the attorney general. The rules promulgated by the attorney general shall supersede the procedural rules of any agency in effect on June 30, 1993, unless that agency promulgates its own procedures as provided in paragraph (b) of this subsection.

(b) After July 1, 1993, an agency that promulgates its own procedures shall include in the rule adopting its own procedures a finding that states the reasons why the relevant portion of the attorney general's rules were inapplicable to the agency under the circumstances.

67-5207. SHORT TITLE. This chapter may be cited as the "Idaho Administrative Procedure Act."

67-5220. NOTICE OF INTENT TO PROMULGATE RULES.

(1) An agency may publish in the bulletin a notice of intent to promulgate a rule. The notice shall contain a brief, non-technical statement of the subject matter to be addressed in the proposed rulemaking, and shall include the purpose of the rule, the statutory authority for the rulemaking, citation to a specific federal statute or regulation if that is the basis of authority or requirement for the rulemaking, and the principal issues involved. The notice shall identify an individual to whom comments on the proposal may be sent.

(2) The notice of intent to promulgate a rule is intended to facilitate negotiated rulemaking, a process in which all interested parties and the agency seek consensus on the content of a rule. Agencies are encouraged to proceed through such informal rulemaking whenever it is feasible to do so.

67-5221. PUBLIC NOTICE OF PROPOSED RULEMAKING.

(1) Prior to the adoption, amendment, or repeal of a rule, the agency shall publish notice of proposed rulemaking in the bulletin. The notice of proposed rulemaking shall include:

(a) the specific statutory authority for the rulemaking including a citation to a specific federal statute or regulation if that is the basis of authority or requirement for the rulemaking;

(b) a statement in non-technical language of the substance of the proposed rule, including a specific description of any fee or charge imposed or increased;

(c) the text of the proposed rule prepared in legislative format;

(d) the location, date, and time of any public hearings the agency intends to hold on the proposed rule;

(e) the manner in which persons may make written comments on the proposed rule, including the name and address of a person in the agency to whom comments on the proposal may be sent;
(f) the manner in which persons may request an opportunity for an oral presentation as provided in section 67-5222, Idaho Code; and

(g) the deadline for public comments on the proposed rule.

(2)

(a) Coinciding with each issue of the bulletin, the coordinator shall cause the publication of an abbreviated notice with a brief description of the subject matter, showing any agency's intent to propose a new or changed rule that is a new addition to that issue of the bulletin.

The form of the notice shall be substantially as follows: typefaces used shall measure greater than seven(7) points, and space width shall not be less than two(2) newspaper columns.

The content of the notice shall be substantially as follows: A prominent bold typeface heading designed to alert readers to the rules and information contained in the notice. The notice shall include the agency name and address, rule number, rule subject matter as provided in paragraph(1)(b) of this section, and the comment deadline. A brief statement in a prominent bold typeface that informs citizens where they can view the administrative bulletin in hard copy or electronic form shall be included.

(b) The coordinator shall cause the notice required in paragraph(a) of this subsection to be published in at least the accepting newspaper of largest paid circulation that is published in each county in Idaho or, if no newspaper is published in the county, then in an accepting newspaper of largest paid circulation published in Idaho and circulated in the county. The newspaper of largest circulation shall be established by the sworn statement of average annual paid weekday issue circulation that has been filed by a newspaper with the United States post office for the calendar year immediately preceding the calendar year during which the advertisement in this section is required to be published. The coordinator is authorized to negotiate a rate or rates with any or all newspapers publishing these notices which will provide adequate exposure to the notices by the least expensive means. For the purposes of this section, the provisions of section 60-105, Idaho Code, shall not apply.

67-5222. PUBLIC PARTICIPATION.

(1) Prior to the adoption, amendment, or repeal of a rule, the agency shall afford all interested persons reasonable opportunity to submit data, views and arguments, orally or in writing. The agency shall receive comments for not less than twenty-one(21) days after the date of publication of the notice of proposed rulemaking in the bulletin.

(2) When promulgating substantive rules, the agency shall provide an opportunity for oral presentation if requested by twenty-five(25) persons, a political subdivision, or an agency. The request must be made in writing and be within fourteen(14) days of the date of publication of the

notice of proposed rulemaking in the bulletin, or within fourteen(14) days prior to the end of the comment period, whichever is later. An opportunity for oral presentation need not be provided when the agency has no discretion as to the substantive content of a proposed rule because the proposed rule is intended solely to comply:

(a) with a controlling judicial decision or court order; or

(b) with the provisions of a statute or federal rule that has been amended since the adoption of the agency rule.

67-5223. INTERIM LEGISLATIVE REVIEW -- STATEMENT OF ECONOMIC IMPACT.

(1) At the same time that notice of proposed rulemaking is filed with the coordinator, the agency shall provide the same notice, accompanied by the full text of the rule under consideration in legislative format, as well as a statement of the substance of the intended action, to the director of legislative services. If the proposed rulemaking is based upon a requirement of federal law or regulation, a copy of that specific federal law or regulation shall accompany the submission to the director of legislative services. The director of legislative services shall analyze and refer the material under consideration to the germane joint subcommittee created in section 67-454, Idaho Code.

(2) An agency shall prepare and deliver to the germane joint subcommittee a statement of economic impact with respect to a proposed rule if the germane joint subcommittee files a written request with the agency for such a statement. The statement shall contain an evaluation of the costs and benefits of the rule, including any health, safety, or welfare costs and benefits. The adequacy of the contents of the statement of economic impact is not subject to judicial review.

67-5224. PENDING RULE -- FINAL RULE -- EFFECTIVE DATE.

(1) Prior to the adoption, amendment, or repeal of a rule, the agency shall consider fully all written and oral submissions respecting the proposed rule.

(2) Subject to the provisions of subsection(3) of this section, the agency shall publish the text of a pending rule in the bulletin. In addition, the agency shall publish a concise explanatory statement containing

(a) reasons for adopting the rule;

(b) a statement of any change between the text of the proposed rule and the text of the pending rule with an explanation of the reasons for any changes;

(c) the date on which the pending rule will become final and effective, as provided in subsection(5) of this section, and a statement that the pending rule may be rejected, amended or modified by concurrent resolution of the legislature; and

(d) an identification of any portion of the pending rule imposing or increasing a fee or charge and a statement that this portion of the rule shall not become final and effective unless affirmatively approved by concurrent resolution of the legislature.

(3) With the permission of the coordinator, the agency need not publish in full the text of the pending rule if no significant changes have been made from the text of the proposed rule as published in the bulletin, but the notice of adoption of the pending rule must cite the volume of the bulletin where the text is available and note all changes that have been made.

(4) An agency shall not publish a pending rule until at least seven (7) days after the close of all public comment.

(5)

(a) Except as set forth in sections 67-5226 and 67-5228, Idaho Code, a pending rule shall become final and effective upon the conclusion of the legislative session at which the rule was submitted to the legislature for review, or as provided in the rule, but no pending rule adopted by an
agency shall become final and effective before the conclusion of the regular or special legislative session at which the rule was submitted for review. A rule which is final and effective may be applied retroactively, as provided in the rule.

(b) When the legislature approves, amends or modifies a pending rule pursuant to section 67-5291, Idaho Code, the rule shall become final and effective upon adoption of the concurrent resolution or such other date specified in the concurrent resolution.

(c) Except as set forth in sections 67-5226 and 67-5228, Idaho Code, no pending rule or portion thereof imposing a fee or charge of any kind shall become final and effective until it has been approved, amended or modified by concurrent resolution.

(6) Each agency shall provide the administrative rules coordinator with a description of any pending rule or portion thereof imposing a new fee or charge or increasing an existing fee or charge, along with a citation of the specific statute authorizing the imposition or increase of the fee or charge. The administrative rules coordinator shall provide the legislature with a compilation of the descriptions provided by the agencies.

(7) At the conclusion of the legislative session or as soon thereafter as is practicable, the coordinator shall publish the date upon which the legislature adjourned sine die and rules became effective and a list of final rules becoming effective on a different date, as provided in section 67-5224(5), Idaho Code, and temporary rules remaining in effect as provided in section 67-5226(3), Idaho Code.

67-5225. RULEMAKING RECORD.

(1) Prior to the adoption, amendment, or repeal of a rule, the agency shall prepare a rulemaking record. The record shall be maintained in the main offices of the agency.

(2) The rulemaking record shall be available for public inspection and copying. The rulemaking record must contain:

(a) copies of all publications in the bulletin;

(b) all written petitions, submissions, and comments received by the agency and the agency's response to those petitions, submissions, and comments;

(c) all written materials considered by the agency in connection with the formulation, proposal, or adoption of the rule;

(d) a record of any oral presentations, any transcriptions of oral presentations, and any memorandum prepared by a presiding officer summarizing the contents of the presentations; and

(e) any other materials or documents prepared in conjunction with the rulemaking.

(3) Except as otherwise required by a provision of law, the rulemaking record need not constitute the exclusive basis for agency action on that rule or for judicial review thereof.

(4) The record required in this section shall be maintained by the agency for a period of not less than two(2) years after the effective date of the rule.

67-5226. TEMPORARY RULES.

(1) If the governor finds that

(a) protection of the public health, safety, or welfare; or

(b) compliance with deadlines in amendments to governing law or federal programs; or

(c) conferring a benefit;

requires a rule to become effective before it has been submitted to the legislature for review the agency may proceed with such notice as is practicable and adopt a temporary rule, except as otherwise provided in section 67-5229(1)(d), Idaho Code. The agency may make the temporary rule immediately effective. The agency shall incorporate the required finding and a concise statement of its supporting reasons in each rule adopted in reliance upon the provisions of this subsection.

(2) A rule adopted pursuant to subsection(1) of this section which imposes a fee or charge may become effective under this section before it has been approved, amended or modified by concurrent resolution only if the governor finds that the fee or charge is necessary to avoid immediate danger which justifies the imposition of the fee or charge.

(3) In no case shall a rule adopted pursuant to this section remain in effect beyond the conclusion of the next succeeding regular session of the legislature unless the rule is approved, amended or modified by concurrent resolution, in which case the rule may remain in effect until the time specified in the resolution or until the rule has been replaced by a final rule which has become effective as provided in section 67-5224(5), Idaho Code.

(4) Temporary rules shall be published in the first available issue of the bulletin.

(5) Temporary rules are not subject to the requirements of section 67-5223, Idaho Code.

(6) Concurrently with the promulgation of a rule under this section, or as soon as reasonably possible thereafter, an agency shall commence the promulgation of a proposed rule in accordance with the rulemaking requirements of this chapter, unless the temporary rule adopted by the agency will expire by its own terms or by operation of law before the proposed rule could become final.

67-5227. VARIANCE BETWEEN PENDING RULE AND PROPOSED RULE.
An agency may adopt a pending rule that varies in content from that which was originally proposed if the subject matter of the rule remains the same, the pending rule is a logical outgrowth of the proposed rule, and the original notice was written so as to assure that members of the public were reasonably notified of the subject of agency action and were reasonably able from that notification to determine whether their interests could be affected by agency action on that subject.

67-5228. EXEMPTION FROM REGULAR RULEMAKING PROCEDURES.
An agency may amend a pending rule to correct typographical errors, transcription errors,

or clerical errors without compliance with regular rulemaking procedures when the amendments are approved by the coordinator. Such amendments become incorporated in the pending rule upon publication in the bulletin.

67-5229. INCORPORATION BY REFERENCE.

(1) If the incorporation of its text in the agency rules would be unduly cumbersome, expensive, or otherwise inexpedient an agency may incorporate by reference in its rules and without republication of the incorporated material in full, all or any part of

(a) A code, standard or rule adopted by an agency of the United States;

(b) A code, standard or rule adopted by any nationally recognized organization or association;

(c) A code or standard adopted by Idaho statute or authorized by Idaho statute for adoption by rule; or

(d) A final rule of a state agency; provided however, that a state agency shall not adopt a temporary rule incorporating by reference a rule of that agency that is being or has been repealed unless the rule providing for the incorporation has been reviewed and approved by the legislature.

(2) The agency shall, as part of the rulemaking

(a) Note where copies of the incorporated material may be obtained or electronically accessed; and

(b) If otherwise unavailable, provide one(1) copy of the incorporated material to the Idaho supreme court law library.

(3) The incorporated material shall be identified with specificity and shall include the date when the code, standard or rule was published, approved or became effective. If the agency subsequently wishes to adopt amendments to previously incorporated material, it shall comply with the rulemaking procedures of this chapter.

(4) Unless prohibited by other provisions of law, the incorporated material is subject to legislative review in accordance with the provisions of section 67-5291, Idaho Code, and shall have the same force and effect as a rule.

67-5230. PETITION FOR ADOPTION OF RULES.

(1) Any person may petition an agency requesting the adoption, amendment, or repeal of a rule. The agency shall either:

(a) deny the petition in writing, stating its reasons for the denial, or

(b) initiate rulemaking proceedings in accordance with this chapter.

The agency shall deny the petition or initiate rulemaking proceedings in accordance with this chapter within twenty-eight(28) days after submission of the petition, unless the agency's rules are adopted by a multimember agency board or commission whose members are not full-time officers or employees of the state, in which case the agency shall take action on the petition no later than the first regularly scheduled meeting of that board or commission that takes place seven(7) or more days after submission of the petition.

(2)An agency decision denying a petition is a final agency action.

67-5231. INVALIDITY OF RULES NOT ADOPTED IN COMPLIANCE WITH THIS CHAPTER-- TIME LIMITATION.

(1) Rules may be promulgated by an agency only when specifically authorized by statute. A temporary or final rule adopted and becoming effective after July 1, 1993, is voidable unless adopted in substantial compliance with the requirements of this chapter.

(2) A proceeding, either administrative or judicial, to contest any rule on the ground of noncompliance with the procedural requirements of this chapter must be commenced within two(2) years from the effective date of the rule.

67-5232. DECLARATORY RULINGS BY AGENCIES.

(1) Any person may petition an agency for a declaratory ruling as to the applicability of any statutory provision or of any rule administered by the agency.

(2) A petition for a declaratory ruling does not preclude an agency from initiating a contested case in the matter.

(3) A declaratory ruling issued by an agency under this section is a final agency action.

67-5240. CONTESTED CASES.

A proceeding by an agency, other than the public utilities commission or the industrial commission, that may result in the issuance of an order is a contested case and is governed by the

provisions of this chapter, except as provided by other provisions of law.

67-5241. INFORMAL DISPOSITION.

(1) Unless prohibited by other provisions of law

(a) an agency or a presiding officer may decline to initiate a contested case;

(b) any part of the evidence in a contested case may be received in written form if doing so will expedite the case without substantially prejudicing the interests of any party;

(c) informal disposition may be made of any contested case by negotiation, stipulation, agreed settlement, or consent order. Informal settlement of matters is to be encouraged;

(d) the parties may stipulate as to the facts, reserving the right to appeal to a court of competent jurisdiction on issues of law.

(2) An agency or a presiding officer may request such additional information as required to decide whether to initiate or to decide a contested case as provided in subsection(1) of this section.

(3) If an agency or a presiding officer declines to initiate or decide a contested case under the provisions of this section, the agency or the officer shall furnish a brief statement of the reasons for the decision to all persons involved. This subsection does not apply to investigations or inquiries directed to or performed by law enforcement agencies defined in section 9-337(6), Idaho Code.

(4) The agency may not abdicate its responsibility for any informal disposition of a contested case. Disposition of a contested case as provided in this section is a final agency action.

67-5242. PROCEDURE AT HEARING.

(1) In a contested case, all parties shall receive notice that shall include:

(a) a statement of the time, place, and nature of the hearing;

(b) a statement of the legal authority under which the hearing is to be held; and

(c) a short and plain statement of the matters asserted or the issues involved.

(2) The agency head, one(1) or more members of the agency head, or one (1) or more hearing officers may, in the discretion of the agency head, be the presiding officer at the hearing.

(3) At the hearing, the presiding officer:

(a) Shall regulate the course of the proceedings to assure that there is a full disclosure of all relevant facts and issues, including such cross-examination as may be necessary.

(b) Shall afford all parties the opportunity to respond and present evidence and argument on all issues involved, except as restricted by a limited grant of intervention or by a pre-hearing order.

(c) May give nonparties an opportunity to present oral or written statements. If the presiding officer proposes to consider a statement by a nonparty, the presiding officer shall give all parties an opportunity to challenge or rebut it and, on motion of any party, the presiding officer shall require the statement to be given under oath or affirmation.

(d) Shall cause the hearing to be recorded at the agency's expense. Any party, at that party's expense, may have a transcript prepared or may cause additional recordings to be made during the hearing if the making of the additional recording does not cause distraction or
disruption.

(e) May conduct all or part of the hearing by telephone, television, or other electronic means, if each participant in the hearing has an opportunity to participate in the entire proceeding while it is taking place.

(4) If a party fails to attend any stage of a contested case, the presiding officer may serve upon all parties notice of a proposed default order. The notice shall include a statement of the grounds for the proposed order. Within seven(7) days after service of the proposed order, the party against whom it was issued may file a written petition requesting the proposed order to be vacated. The petition shall state the grounds relied upon. The presiding officer shall either issue or vacate the default order promptly after the expiration of the time within which the party may file a petition. If the presiding officer issues a default order, the officer shall conduct any further proceedings necessary to complete the adjudication without the participation of the party in default and shall determine all issues in the adjudication, including those affecting the defaulting party.

67-5243. ORDERS NOT ISSUED BY AGENCY HEAD.

(1) If the presiding officer is not the agency head, the presiding officer shall issue either:

(a) a recommended order, which becomes a final order only after review by the agency head in accordance with section 67-5244, Idaho Code; or

(b) a preliminary order, which becomes a final order unless reviewed in accordance with section 67-5245, Idaho Code.

(2) The order shall state whether it is a preliminary order or a recommended order.

(3) Unless otherwise provided by statute or rule, any party may file a motion for reconsideration of a recommended order or a preliminary order within fourteen(14) days of the issuance of that order. The presiding officer shall render a written order disposing of the petition. The petition is deemed denied if the presiding officer does not dispose of it within twenty-one(21) days after the filing of the petition.

67-5244. REVIEW OF RECOMMENDED ORDERS.

(1) A recommended order shall include a statement of the schedule for review of that order by the agency head or his designee. The agency head shall allow all parties to file exceptions to the recommended order, to present briefs on the issues, and may allow all parties to participate in oral argument.

(2) Unless otherwise required, the agency head shall either:

(a) issue a final order in writing within fifty-six(56) days of the receipt of the final briefs or oral argument, whichever is later, unless the period is waived or extended with the written consent of all parties or for good cause shown;

(b) remand the matter for additional hearings; or

(c) hold additional hearings.

(3) The agency head on review of the recommended decision shall exercise all the decision-making power that he would have had if the agency head had presided over the hearing.

67-5245. REVIEW OF PRELIMINARY ORDERS.

(1) A preliminary order shall include:

(a) a statement that the order will become a final order without further notice; and

(b) the actions necessary to obtain administrative review of the preliminary order.

(2) The agency head, upon his own motion may, or, upon motion by any party shall, review a preliminary order, except to the extent that:

(a) another statute precludes or limits agency review of the preliminary order; or

(b) the agency head has delegated his authority to review preliminary orders to one(1) or more persons.

(3) A petition for review of a preliminary order must be filed with the agency head, or with any person designated for this purpose by rule of the agency, within fourteen(14) days after the issuance of the preliminary order unless a different time is required by other provision of law. If the agency head on his own motion decides to review a preliminary order, the agency head shall give written notice within fourteen(14) days after the issuance of the preliminary order unless a different time is required by other provisions of law. The fourteen(14) day period for filing of notice is tolled by the filing of a petition for reconsideration under section 67-5243(3), Idaho Code.

(4) The basis for review must be stated on the petition. If the agency head on his own motion gives notice of his intent to review a preliminary order, the agency head shall identify the issues he intends to review.

(5) The agency head shall allow all parties to file exceptions to the preliminary order, to present briefs on the issues, and may allow all parties to participate in oral argument.

(6) The agency head shall:

(a) issue a final order in writing, within fifty-six(56) days of the receipt of the final briefs or oral argument, whichever is later, unless the period is waived or extended with the written consent of all parties, or for good cause shown;

(b) remand the matter for additional hearings; or

(c) hold additional hearings.

(7) The head of the agency or his designee for the review of preliminary orders shall exercise all of the decision-making power that he would have had if the agency head had presided over the hearing.

67-5246. FINAL ORDERS -- EFFECTIVENESS OF FINAL ORDERS.

(1) If the presiding officer is the agency head, the presiding officer shall issue a

final order.

(2) If the presiding officer issued a recommended order, the agency head shall issue a final order following review of that recommended order.

(3) If the presiding officer issued a preliminary order, that order becomes a final order unless it is reviewed as required in section 67-5245, Idaho Code. If the preliminary order is reviewed, the agency head shall issue a final order.

(4) Unless otherwise provided by statute or rule, any party may file a motion for reconsideration of any final order issued by the agency head within fourteen(14) days of the issuance of that order. The agency head shall issue a written order disposing of the petition. The petition is deemed denied if the agency head does not dispose of it within twenty-one (21) days after the filing of the petition.

(5) Unless a different date is stated in a final order, the order is effective fourteen(14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

> (a) the petition for reconsideration is disposed of; or
>
> (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one(21) days.

(6) A party may not be required to comply with a final order unless the party has been served with or has actual knowledge of the order. If the order is mailed to the last known address of a party, the service is deemed to be sufficient.

(7) A nonparty shall not be required to comply with a final order unless the agency has made the order available for public inspection or the nonparty has actual knowledge of the order.

(8) The provisions of this section do not preclude an agency from taking immediate action to protect the public interest in accordance with the provisions of section 67-5247, Idaho Code.

67-5247. EMERGENCY PROCEEDINGS.

(1) An agency may act through an emergency proceeding in a situation involving an immediate danger to the public health, safety, or welfare requiring immediate agency action. The

agency shall take only such actions as are necessary to prevent or avoid the immediate danger that justifies the use of emergency contested cases.

(2) The agency shall issue an order, including a brief, reasoned statement to justify both the decision that an immediate danger exists and the decision to take the specific action. When appropriate, the order shall include findings of fact and conclusions of law.

(3) The agency shall give such notice as is reasonable to persons who are required to comply with the order. The order is effective when issued.

(4) After issuing an order pursuant to this section, the agency shall proceed as quickly as feasible to complete any proceedings that would be required if the matter did not involve an immediate danger.

(5) Unless otherwise required by a provision of law, the agency record need not constitute the exclusive basis for agency action in emergency contested cases or for judicial review thereof.

67-5248. CONTENTS OF ORDERS.

(1) An order must be in writing and shall include:

> (a) a reasoned statement in support of the decision. Findings of fact, if set forth in statutory language, shall be accompanied by a concise and explicit statement of the underlying facts of record supporting the findings.
>
> (b) a statement of the available procedures and applicable time limits for seeking reconsideration or other administrative relief.

(3) Findings of fact must be based exclusively on the evidence in the record of the contested case and on matters officially noticed in that proceeding.

(4) All parties to the contested case shall be provided with a copy of the order.

67-5249. AGENCY RECORD.

(1) An agency shall maintain an official record of each contested case under this chapter for a period of not less than six (6) months after the expiration of the last date for judicial review, unless otherwise provided by law.

(2) The record shall include:

(a) all notices of proceedings, pleadings, motions, briefs, petitions, and intermediate rulings;

(b) evidence received or considered;

(c) a statement of matters officially noticed;

(d) offers of proof and objections and rulings thereon;

(e) the record prepared by the presiding officer under the provisions of section 67-5242, Idaho Code, together with any transcript of all or part of that record;

(f) staff memoranda or data submitted to the presiding officer or the agency head in connection with the consideration of the proceeding; and

(g) any recommended order, preliminary order, final order, or order on reconsideration.

(3) Except to the extent that this chapter or another statute provides otherwise, the agency record constitutes the exclusive basis for agency action in contested cases under this chapter or for judicial review thereof.

67-5250. INDEXING OF PRECEDENTIAL AGENCY ORDERS -- INDEXING OF AGENCYGUIDANCE DOCUMENTS.

(1) Unless otherwise prohibited by any provision of law, each agency shall index all written final orders that the agency intends to rely upon as precedent. The index and the orders shall be available for public inspection and copying at cost in the main office and each regional or district office of the agency. The orders shall be indexed by name and subject. A written final order may not be relied on as precedent by an agency to the detriment of any person until it has been made available for public inspection and indexed in the manner described in this subsection.

(2) Unless otherwise prohibited by any provision of law, each agency shall index by subject all agency guidance documents. The index and the guidance documents shall be available for public

inspection and copying at cost in the main office and each regional or district office of the agency. As used in this section, "agency guidance" means all written documents, other than rules, orders, and pre-decisional material, that are intended to guide agency actions affecting the rights or interests of persons outside the agency. "Agency guidance" shall include memoranda, manuals, policy statements, interpretations of law or rules, and other material that are of general applicability, whether prepared by the agency alone or jointly with other persons. The indexing of a guidance document does not give that document the force and effect of law or other precedential authority.

67-5251. EVIDENCE -- OFFICIAL NOTICE.

(1) The presiding officer may exclude evidence that is irrelevant, unduly repetitious, or excludable on constitutional or statutory grounds, or on the basis of any evidentiary privilege provided by statute or recognized in the courts of this state. All other evidence may be admitted if it is of a type commonly relied upon by prudent persons in the conduct of their affairs.

(2) Any part of the evidence may be received in written form if doing so will expedite the hearing without substantially prejudicing the interests of any party.

(3) Documentary evidence may be received in the form of copies or excerpts, if the original is not readily available. Upon request, parties shall be given an opportunity to compare the copy with the original if available.

(4) Official notice may be taken of:

> (a) any facts that could be judicially noticed in the courts of this state; and
>
> (b) generally recognized technical or scientific facts within the agency's specialized knowledge.

Parties shall be notified of the specific facts or material noticed and the source thereof, including any staff memoranda and data. Notice should be provided either before or during the hearing, and must be provided before the issuance of any order that is based in whole or in part on facts or material noticed. Parties must be afforded a timely and meaningful opportunity to contest and rebut the facts or material so noticed. When the presiding officer proposes to notice staff memoranda or reports, a responsible staff member shall be made available for cross-examination if any party so requests.

(5)The agency's experience, technical competence,

(6) and specialized knowledge may be utilized in the evaluation of the evidence.

67-5252. PRESIDING OFFICER -- DISQUALIFICATION.

(1) Except as provided in subsection(4) of this section, any party shall have the right to one (1) disqualification without cause of any person serving or designated to serve as presiding officer, and any party shall have a right to move to disqualify for bias, prejudice, interest, substantial prior involvement in the matter other than as a presiding officer, status as an employee of the agency hearing the contested case, lack of professional knowledge in the subject matter of the contested case, or any other cause provided in this chapter or any cause for which a judge is or may be disqualified.

(2) Any party may petition for the disqualification of a person serving or designated to serve as presiding officer:

(a) within fourteen(14) days after receipt of notice indicating that the person will preside at the contested case; or

(b) promptly upon discovering facts establishing grounds for disqualification, whichever is later.

Any party may assert a blanket disqualification for cause of all employees of the agency hearing the contested case, other than the agency head, without awaiting designation of a presiding officer.

(3) A person whose disqualification for cause is requested shall determine in writing whether to grant the petition, stating facts and reasons for the determination.

(4) Where disqualification of the agency head or a member of the agency head would result in an inability to decide a contested case, the actions of the agency head shall be treated as a conflict of interest under the provisions of section 59-704, Idaho Code.

(5) Where a decision is required to be rendered within fourteen(14) weeks of the date of a request for a hearing by state or federal statutes or rules and regulations, no party shall have the right to a disqualification without cause.

67-5253. EX PARTE COMMUNICATIONS.
Unless required for the disposition of ex parte matters specifically authorized by statute, a presiding officer serving in a contested case shall not communicate, directly or indirectly, regarding any substantive issue in the proceeding, with any party, except upon notice and opportunity for all parties to participate in the communication.

67-5254. AGENCY ACTION AGAINST LICENSEES.

(1) An agency shall not revoke, suspend, modify, annul, withdraw or amend a license, or refuse to renew a license of a continuing nature when the licensee has made timely and sufficient application for renewal, unless the agency first gives notice and an opportunity for an appropriate contested case in accordance with the provisions of this chapter or other statute.

(2) When a licensee has made timely and sufficient application for the renewal of a license with reference to any activity of a continuing nature, the existing license does not expire until the application has been finally determined by the agency, and, in case the application is denied or the terms of the new license limited, until the last day for seeking review of the agency order or a later date fixed by a reviewing court.

(3) This section does not preclude an agency from:

> (a) taking immediate action to protect the public interest in accordance with section 67-5247, Idaho Code; or
>
> (b) adopting rules, otherwise within the scope of its authority, pertaining to a class of licensees, including rules affecting the existing licenses of a class of licensees.

67-5255. DECLARATORY RULINGS BY AGENCIES.

(1) Any person may petition an agency for a declaratory ruling as to the applicability of any order issued by the agency.

(2) A petition for a declaratory ruling does not preclude an agency from initiating a contested case in the matter.

(3) A declaratory ruling issued by an agency under this section is a final agency action.

67-5270. RIGHT OF REVIEW.

(1) Judicial review of agency action shall be governed by the provisions of this chapter unless other provision of law is applicable to the particular matter.

(2) A person aggrieved by final agency action other than an order in a contested case is entitled to judicial review under this chapter if the person complies with the requirements of sections 67-5271 through 67-5279, Idaho Code.

(3) A party aggrieved by a final order in a contested case decided by an agency other than the industrial commission or the public utilities commission is entitled to judicial review under this chapter if the person complies with the requirements of sections 67-5271 through 67-5279, Idaho Code.

67-5271. EXHAUSTION OF ADMINISTRATIVE REMEDIES.

(1) A person is not entitled to judicial review of an agency action until that person has exhausted all administrative remedies required in this chapter.

(2) A preliminary, procedural, or intermediate agency action or ruling is immediately reviewable if review of the final agency action would not provide an adequate remedy.

67-5272. VENUE -- FORM OF ACTION.

(1) Except when required by other provision of law, proceedings for review or declaratory judgment are instituted by filing a petition in the district court of the county in which:

(a) the hearing was held; or

(b) the final agency action was taken; or

(c) the aggrieved party resides or operates its principal place of business in Idaho; or

(d) the real property or personal property that was the subject of the agency decision is located.

(2) When two(2) or more petitions for judicial review of the same agency action are filed in different counties or are assigned to different district judges in the same county, upon motion filed by any party to any of the proceedings for judicial review of the same agency action, the separate consideration of the petitions in different counties or by different district judges shall be stayed. The administrative judge in the judicial district in which the first petition was filed, after appropriate consultation with the affected district judges and the affected administrative judges, shall then order consolidation of the judicial review of the petitions before one(1) district judge in one(1) county in which a petition for judicial review was properly filed, at which time the stay shall be lifted.

67-5273. TIME FOR FILING PETITION FOR REVIEW.

(1) A petition for judicial review of a temporary or final rule may be filed at any time, except as limited by section 67-5231, Idaho Code.

(2) A petition for judicial review of a final order or a preliminary order that has become final when it was not reviewed by the agency head or preliminary, procedural or intermediate agency action under section 67-5271(2), Idaho Code, must be filed within twenty-eight(28) days of the issuance of the final order, the date when the preliminary order became final, or the issuance of a preliminary, procedural or intermediate agency order, or, if reconsideration is sought, within twenty-eight(28) days after the decision thereon. A cross-petition for judicial review may be filed within fourteen(14) days after a party is served with a copy of the notice of the petition for judicial review.

(3) A petition for judicial review of a final agency action other than a rule or order must be filed within twenty-eight(28) days of the agency action, except as provided by other provision of law. The time for filing a petition for review shall be extended during the pendency of the petitioner's timely attempts to exhaust administrative remedies, if the attempts are clearly not frivolous or repetitious. A cross-petition for judicial review may be filed within fourteen(14) days after a party is served with a copy of the notice of the petition for judicial review.

67-5274. STAY.
The filing of the petition for review does not itself stay the effectiveness or enforcement of the agency action. The agency may grant, or the reviewing court may order, a stay upon appropriate terms.

67-5275. AGENCY RECORD FOR JUDICIAL REVIEW.

(1) Within forty-two(42) days after the service of the petition, or within further time allowed by the court, the agency shall transmit to the reviewing court the original or a certified copy of the agency record. The agency record shall consist of:

> (a) the record compiled under section 67-5225, Idaho Code, when the agency action was a rule;
>
> (b) the record compiled under section 67-5249, Idaho Code, when the agency action was an order; or
>
> (c) any agency documents expressing the agency action when the agency action was neither an order nor a rule.

(2) By stipulation of all parties to the review proceedings, the record may be shortened. A party unreasonably refusing to stipulate to limit the record may be taxed by the court for the additional costs.

(3) The court may require corrections to the record.

67-5276. ADDITIONAL EVIDENCE.

(1) If, before the date set for hearing, application is made to the court for leave to present additional evidence and it is shown to the satisfaction of the court that the additional evidence is material, relates to the validity of the agency action, and that:

(a) there were good reasons for failure to present it in the proceeding before the agency, the court may remand the matter to the agency with directions that the agency receive additional evidence and conduct additional fact finding.

(b) there were alleged irregularities in procedure before the agency, the court may take proof on the matter.

(2) The agency may modify its action by reason of the additional evidence and shall file any modifications, new findings, or decisions with the reviewing court.

67-5277. JUDICIAL REVIEW OF ISSUES OF FACT.
Judicial review shall be conducted by the court without a jury. Unless otherwise provided by statute, judicial review of disputed issues of fact must be confined to the agency record for judicial review as defined in this chapter, supplemented by additional evidence taken pursuant to section 67-5276, Idaho Code.

67-5278. DECLARATORY JUDGMENT ON VALIDITY OR APPLICABILITY OF RULES.

(1) The validity or applicability of a rule may be determined in an action for declaratory judgment in the district court, if it is alleged that the rule, or its threatened application interferes with or impairs, or threatens to interfere with or impair, the legal rights or privileges of the petitioner.

(2) The agency shall be made a party to the action.

(3) A declaratory judgment may be rendered whether or not the petitioner has requested the agency to pass upon the validity or applicability of the rule in question.

67-5279. SCOPE OF REVIEW -- TYPE OF RELIEF.

(1) The court shall not substitute its judgment for that of the agency as to the weight of the evidence on questions of fact.

(2) When the agency was not required by the provisions of this chapter or by other provisions of law to base its action exclusively on a record, the court shall affirm the agency action unless the court finds that the action was:

(a) in violation of constitutional or statutory provisions;

(b) in excess of the statutory authority of the agency;

(c) made upon unlawful procedure; or

(d) arbitrary, capricious, or an abuse of discretion.

If the agency action is not affirmed, it shall be set aside, in whole or in part, and remanded for further proceedings as necessary.

(3) When the agency was required by the provisions of this chapter or by other provisions of law to issue an order, the court shall affirm the agency action unless the court finds that the agency's findings, inferences, conclusions, or decisions are:

(a) in violation of constitutional or statutory provisions;

(b) in excess of the statutory authority of the agency;

(c) made upon unlawful procedure;

(d) not supported by substantial evidence on the record as a whole; or

(e) arbitrary, capricious, or an abuse of discretion.

If the agency action is not affirmed, it shall be set aside, in whole or in part, and remanded for further proceedings as necessary.

(4) Notwithstanding the provisions of subsections(2) and(3) of this section, agency action shall be affirmed unless substantial rights of the appellant have been prejudiced.

67-5291. LEGISLATIVE REVIEW OF RULES.
The standing committees of the legislature may review temporary, pending and final rules which have been published in the bulletin or in the administrative code. If reviewed, the standing committee which reviewed the rules shall report to the membership of the body its findings and

recommendations concerning its review of the rules. If ordered by the presiding officer, the report of the committee shall be printed in the journal. A concurrent resolution may be adopted approving the rule, or rejecting, amending or modifying the rule where it is determined that the rule violates the legislative intent of the statute under which the rule was made, or where it is determined that any rule previously promulgated and reviewed by the legislature shall be deemed to violate the legislative intent of the statute under which the rule was made. The rejection, amendment or modification of a rule by the legislature via concurrent resolution shall prevent the agency's intended action from remaining in effect beyond the date of the legislative action. It shall be the responsibility of the secretary of state to immediately notify the affected agency of the filing and effective date of any concurrent resolution enacted to approve, amend, modify, or reject an agency rule and to transmit a copy of the concurrent resolution to the director of the agency for promulgation. The agency shall be responsible for implementing legislative intent as expressed in the concurrent resolution, including, as appropriate, the reinstatement of the prior rule, if any, in the case of legislative rejection of a new rule, or the incorporation of any legislative amendments to a new rule. If a rule has been amended or modified by the legislature, the agency shall republish the rule in accordance with the provisions of chapter 52, title 67, Idaho Code, reflecting the action taken by the legislature and the effective date thereof. If a rule has been rejected by the legislature, the agency shall publish notice of such rejection in the bulletin. Except as provided in section 67-5226, Idaho Code, with respect to temporary rules, every rule promulgated within the authority conferred by law, and in accordance with the provisions of chapter 52, title 67, Idaho Code, and made effective pursuant to section 67-5224(5), Idaho Code, shall remain in full force and effect until the same is rejected, amended or modified by concurrent resolution, or until it expires as provided in section 67-5292, Idaho Code, or by its own terms.

67-5292. EXPIRATION OF ADMINISTRATIVE RULES.

(1) Notwithstanding any other provision of this chapter to the contrary, every rule adopted and becoming effective after June 30, 1990, shall automatically expire on July 1 of the following year unless the rule is extended by statute. Extended rules shall then continue to expire annually on July 1 of each succeeding year unless extended by statute in each such succeeding year.

(2) All rules adopted prior to June 30, 1990, shall expire on July 1, 1991, unless extended by statute. Thereafter, any rules which are extended shall then continue to expire annually on July 1 of each succeeding year unless extended by statute in each succeeding year.

(3) Rules adopted and becoming effective pursuant to this chapter may be extended in whole or in part. When any part of an existing rule is amended, then that entire rule shall be subject to the provisions of this section.

(4) This section is a critical and integral part of this chapter. If any portion of this section or the application thereof to any person or circumstance is held invalid, the invalidity shall be deemed to affect all rules adopted subsequent to the effective date of this act and such rules shall be deemed null, void and of no further force and effect.

39-107. Board - Composition - Officers - Compensation - Powers - Subpoena - Depositions - Review - Rules.

1. The board of health and welfare shall consist of seven (7) members who shall be appointed by the governor, with the advice and consent of the senate. The members may be removed by the governor for cause. Each member of the board shall be a citizen of the United States, a resident of the state of Idaho, and a qualified elector. Not more than four (4) members of the board shall be from any one (1) political party. All members of the board shall be chosen with due regard to their knowledge and interest in environmental protection and health.

2. The members of the board of environmental and community services, serving on the effective date of this act shall continue in office as members of the board of health and welfare, subject to the provisions of this act. Four (4) members of the board of environmental and community services shall be designated by the governor to serve terms on the board of health and welfare expiring on the first Tuesday following the first Monday of January, 1975. The remaining three (3) members of the board of environmental and community services shall serve terms on the board of health and welfare expiring on the first Tuesday following the first Monday of January, 1977. Thereafter, all members of the board of health and welfare shall serve four (4) year terms.

3. The board annually shall elect a chairman, a vice-chairman, and a secretary, and shall hold such meetings as may be necessary for the orderly conduct of its business, and such meetings shall be held from time to time on seventy-two (72) hours notice of the chairman or a majority of the members. Five (5) members shall be necessary to constitute a quorum at any regular or special meeting and the action of the majority of members present shall be the action of the board. The members of the board shall be compensated as provided in section 59-509(h), Idaho Code.

4. The board, in furtherance of its duties under this act and under its rules, shall have the power to administer oaths, certify to official acts, and to issue subpoenas for the attendance of witnesses and the production of papers, books, accounts, documents and testimony. The board may, if a witness refuses to attend or testify, or to produce any papers required by such subpoenas, report to the district court in and for the county in which the proceeding is pending, by petition, setting forth that due notice has been given of the time and place of attendance of said witnesses, or the production of said papers, that the witness has been properly summoned, and that the witness has failed and refused to attend or produce the papers required by this subpoena before the board, or has refused to answer questions propounded to him in the course of said proceedings, and ask an order of said court compelling the witness to attend and testify and produce said papers before the board. The court, upon the petition of the board, shall enter an order directing the witness to appear before the court at a time and place to be fixed by the court in such order, the time to be not more than ten

(10) days from the date of the order, and then and there shall show cause why he has not attended and testified or produced said papers before the board. A copy of said order shall be served upon said witness. If it shall appear to the court that said subpoena was regularly issued by the board and regularly served, the court shall thereupon order that said witness appear before the board at the time and place fixed in said order, and testify or produce the required papers. Upon failure to obey said order, said witness shall be dealt with for contempt of court.

5. The director, his designee, or any party to the action may, in an investigation or hearing before the board, cause the deposition or interrogatory of witnesses or parties residing within or without the state, to be taken in the manner prescribed by law for like depositions and interrogatories in civil actions in the district court of this state, and to that end may compel the attendance of said witnesses and production of books, documents, papers and accounts.

6. Any person aggrieved by an action or inaction of the department of health and welfare shall be afforded an opportunity for a fair hearing upon request therefor in writing pursuant to chapter 52, title 67, Idaho Code, and the rules promulgated thereunder. In those cases where the board has been granted the authority to hold such a hearing pursuant to a provision of the Idaho Code, the hearing may be conducted by the board at a regular or special meeting, or the board may designate hearing officers, who shall have the power and authority to conduct hearings in the name of the board at any time and place. In any hearing, a member of the board or hearing officer designated by it, shall have the power to administer oaths, examine witnesses, and issue in the name of the board subpoenas requiring the testimony of witnesses and the production of evidence relevant to any matter in the hearing.

7. Any person adversely affected by a final determination of the board, may secure judicial review by filing a petition for review as prescribed under the provisions of chapter 52, title 67, Idaho Code. The petition for review shall be served upon the chairman of the board, the director of the department, and upon the attorney general of the state of Idaho. Such service shall be jurisdictional and the provisions of this section shall be the exclusive procedure for appeal.

8. The board, by the affirmative vote of four (4) of its members, may adopt, amend or repeal the rules, codes, and standards of the department, that are necessary and feasible in order to carry out the purposes and provisions of this act and to enforce the laws of this state. The rules and orders so adopted and established shall have the force and effect of law and may deal with any matters deemed necessary and feasible for protecting the environment or the health of the state.

9. All rule making proceedings and hearings of the board shall be governed by the provisions of chapter 52, title 67, Idaho Code.

10. All codes, rules and standards heretofore adopted by the department of public health, the board of health, and the air pollution control commission and board of environmental and community services, shall remain in full force and effect until superseded by rules and standards duly adopted by the board or until the same is rejected, amended or modified by the legislature in accordance with the provisions of chapter 52, title 67, Idaho Code.

11. All of the powers and duties, rule making and hearing functions transferred to the board of environmental and community services in chapter 87, laws of 1973, are hereby transferred to the board of health and welfare. [1972, ch. 347, § 7, p. 1017; am. 1974, ch. 23, § 51, p. 633; am. 1978, ch. 45, § 2, p. 80; am. 1980, ch. 34, § 1, p. 57; am. 1980, ch. 247, § 32, p. 582; am. 1980, ch. 325, § 2, p. 820; am. 1981, ch. 122, § 1, p. 208; am. 1993, ch. 216, § 23, p. 587.1]

39-105. Powers and duties of the director. - The director shall have the following powers and duties:

1. All of the powers and duties of the department of public health, the department of health, the board of health, and the air pollution control commission, are hereby transferred to the director of the department of health and welfare, provided, however, that rulemaking and hearing functions relating to environmental protection, public health and licensure and certification standards shall be vested in the board of health and welfare. The director shall have all such powers and duties as may have been or could have been exercised by his predecessors in law, including the authority to adopt, promulgate, and enforce rules and regulations in those circumstances when the authority to adopt, promulgate, and enforce such rules and regulations is not vested in the board of health and welfare, and shall be the successor in law to all contractual obligations entered into by his predecessor in law. All rulemaking proceedings and hearings of the director shall be governed by the provisions of chapter 52, title 67, Idaho Code.

2. The director shall, pursuant and subject to the provisions of the Idaho Code, and the provisions of this act, formulate and recommend to the board, rules, regulations, codes and standards, as may be necessary to deal with problems related to personal health, water pollution, air pollution, visual pollution, noise abatement, solid waste disposal, and licensure and certification requirements pertinent thereto, which shall, upon adoption by the board, have the force of the law relating to any purpose which may be necessary and feasible for enforcing the provisions of this act, including, but not limited to the prevention, control or abatement of environmental pollution or degradation and the maintenance and protection of personal health. Any such regulation or standard may be of general application throughout the state or may be limited as to times, places, circumstances, or conditions in order to make due allowance for variations therein.

3. The director, under the rules, regulations, codes or standards adopted by the board, shall have the general supervision of the promotion and protection of the life, health, mental health and environment of the people of this state. The powers and duties of the director shall include but not be limited to the following:

    a. The issuance of licenses and permits as prescribed by law and by the rules and regulations of the board. For each air quality operating permit issued under title V of the federal clean air act and its implementing regulations, the director shall, consistent with the federal clean air act and its implementing regulations, expressly include a provision stating that compliance with the conditions of the permit shall be deemed compliance with the applicable requirements of the federal clean air act and the title V implementing regulations. The director may develop and issue general permits covering numerous similar sources, as authorized by 40 CFR 70.6(d) as may be amended, and as appropriate.

b. The supervision and administration of laboratories and the supervision and administration of standards of tests for environmental pollution, chemical analyses and communicable diseases. The director may require that laboratories operated by any city, county, institution, person, firm or corporation for health or environmental purposes conform to standards set by the board.

c. The supervision and administration of a mental health program, which shall include services for the evaluation, screening, custody and treatment of the mentally ill and those persons suffering from a mental defect, or mental defects.

d. The enforcement of minimum standards of health, safety and sanitation for all public swimming pools within the state.

e. The enforcement of standards, rules and regulations, relating to public water supplies and to administer the drinking water loan account pursuant to chapter 76, title 39, Idaho Code, including making loans to eligible public drinking water systems as defined in the federal safe drinking water act as amended, and to comply with all requirements of the act, 42 U.S.C. 300f, et seq. and regulations promulgated pursuant to the act. This includes, but is not limited to, the adoption and implementation of an operator certification program; the development of and implementation of a capacity development strategy to ensure public drinking water systems have the technical, managerial and financial capability to comply with the national primary drinking water regulations; and the enhancement of protection of source waters for public drinking water systems.

f. The supervision and administration of the various schools, hospitals and institutions that were the responsibility of the board of health at the time this act went into effect.

g. The supervision and administration of services dealing with the problems of alcoholism, including but not limited to the care and rehabilitation of persons suffering from alcoholism.

h. The establishment of liaison with other governmental departments, agencies and boards in order to effectively assist other governmental entities with the planning for the control of or abatement of environmental and health problems. All of the rules, regulation and standards adopted by the board shall apply to state institutions.

i. The supervision and administration of an emergency medical service program, including but not limited to assisting other governmental agencies and local governmental units, in providing first aid emergency medical services and for transportation of the sick and injured.

j. The supervision and administration of a system to safeguard air quality and for limiting and controlling the emission of air contaminants.

k. The supervision and administration of a system to safeguard the quality of the waters of this state, including but not limited to the enforcement of standards relating to the discharge of effluent into the waters of this state and the storage, handling and transportation of solids, liquids, and gases which may cause or contribute to water pollution.

l. The supervision and administration of administrative units whose responsibility shall be to assist and encourage counties, cities, other governmental units, and industries in the control of and/or abatement of environmental and health problems.

m. The administration of solid waste disposal site and design review in accordance with the provisions of chapter 74, title 39, Idaho Code, and' chapter 4, title 39, Idaho Code, and in particular as follows:

    i. The issuance of a solid waste disposal site certificate in the manner provided in chapter 74, title 39, Idaho Code.

    ii. Provide review and approval regarding the design of solid waste disposal facilities and ground water monitoring systems and approval of all applications for flexible standards as provided in 40 CFR 258, in accordance with the provisions of chapter 74, title 39, Idaho Code.

    iii. Cooperating and coordinating with operational monitoring of solid waste disposal sites by district health departments pursuant to authority established in chapters 4 and 74, title 39, Idaho Code.

    iv. The authority granted to the director pursuant to provisions of this subsection shall be effective upon enactment of chapter 74, title 39, Idaho Code, by the legislature.

    v. The authority to develop and propose regulations as necessary to supplement details of compliance with the solid waste facilities act and applicable federal regulations, provided that such regulations shall not conflict with the provisions of this act nor shall such regulations be more strict than the requirements established in federal law or in the solid waste facilities act.

    n. The enforcement of all laws, rules, regulation, codes and standards relating to environmental protection and health.

o. The formulation and adoption of a comprehensive state nutrient management plan for the surface waters of the state of Idaho in consultation with the appropriate state or federal agencies, local units of government, and with the public involvement as provided under the administrative procedure act, The director shall recommend by, March 1, 1990, to the board for adoption, rules and regulations setting forth procedures for development of the plan, including mechanisms to keep the public informed and encourage public participation in plan development. The plan shall be developed on a hydrologic basin unit basis with a lake system emphasis. The panhandle hydrologic basin plan shall be completed no later than July 1, 1995. The remaining basin plans shall be completed no later than January 1, 1995. Each plan shall identify nutrient sources; the dynamics of nutrient removal, use, and dispersal; and preventative or remedial actions where feasible and necessary to protect the surface waters of the state. The director shall formulate and recommend to the board for adoption rules and regulations as necessary to implement the plan. The plan shall be used by the department and other appropriate agencies including soil conservation districts, public health districts and local units of government in developing programs for nutrient management. State and local units of government shall exercise their police powers in compliance with the comprehensive state nutrient management plan of this act. Local nutrient management programs adopted by any unit of government prior to the completion of the state comprehensive nutrient management plan or a hydrologic basin plan shall be consistent with the criteria for inclusion in the comprehensive state nutrient management plan as enumerated in this subsection, as evidenced by findings of fact by the local units of government and confirmed by the division of environmental quality and the local health district board. The director shall recommend by March 1, 1990, to the board for adoption, rules and regulations for procedures to determine consistency.

p. The formulation of a water quality management plan for Priest lake in conjunction with a planning team from the Priest lake area whose membership shall be appointed by the board and consist of a fair representation of the various land managers, and user and interest groups of the lake and its Idaho watershed. The stated goal of the plan shall be to maintain the existing water quality of Priest lake while continuing existing nonpoint source activities in the watershed and providing for project specific best management practices when necessary. The plan shall include comprehensive characterization of lake water quality through completion of a baseline monitoring program to be conducted by the department and shall consider existing economics and nonpoint source activity dependent industries of the priest lake area. The planning team shall conduct public hearings and encourage public participation in the plan development including opportunity for public review and input. Technical assistance to the planning team with state nonpoint source management programs in

forest practices, road construction and maintenance, agriculture and mining shall be provided by the department. Technical assistance to the planning team on area planning, zoning and sanitary regulations shall be provided by the clean lakes council. The plan shall be submitted to the board for its approval at the end of a three (3) year plan development period. Upon review and acceptance by the board, the plan shall be submitted to the legislature for amendment, adoption, or rejection. If adopted by the legislature, the plan shall be enacted by passage of a stature at the regular legislative session when it receives the plan and shall have the force and effect of law. Existing forest practices, agricultural and mining nonpoint source management programs are considered to be adequate to protect water quality during the plan development period.

4. The director, when so designated by the governor, shall have the power to apply for, receive on behalf of the state, and utilize any federal aid, grants, gifts, gratuities, or moneys made available through the federal government, including but not limited to the federal water pollution control act, for use in or by the state of Idaho in relation to health and environmental protection.

5. The director shall have the power to enter into and make contracts and agreements with any public agencies or municipal corporation for facilities, land, and equipment when such use will have a beneficial, recreational, or therapeutic effect or be in the best interest in carrying out the duties imposed upon the department. The director shall also have the power to enter into contracts for the expenditure of state matching funds for local purposes. This subsection will constitute the authority for public agencies or municipal corporations to enter into such contracts and expend money for the purposes delineated in such contracts.

6. The director is authorized to adopt an official seal to be used on appropriate occasions, in connection with the functions of the department or the board, and such seal shall be judicially noticed. Copies of any books, records, papers and other documents in the department shall be admitted to evidence equally with the originals thereof when authenticated under such seal. [1972, ch. 347, § 5, p. 1017; am. 1974, ch. 23, § 49, P. 633; am. 19W), ch. 325, § 1, p. 820; am. 1988, ch. 47, § 2, p. 54; am. 1989, ch. 308, § 3, p, 762; am. 1991, ch. 332, § 22 p. 859; am. 1992, ch. 307, § 1, P. 915; am. 19wi. ch. 331, § 2, p. 972; am. 1993, ch. 139, § 22, p. 342; am. 1993, ch. 275, § 4, D. 926; am. 1994, ch. 75, § 1, p. 156; am. 1997, ch. 26, § 1, p. 36.1]

Appendix G.
References

G-1 **APA Report: "1997 Demographic Report for Ada and Canyon Counties", APA Report No. 09-97, June 1997.**

G-2 **EPA Memorandum: "Procedures for Processing Requests to Redesignate Areas to Attainment", September 4, 1992 from John Calcagni, Director of Air Quality Management Division.**

G-3 **EPA Memorandum: "Ozone and Carbon Monoxide Design Value Calculations", June 18, 1990 from William G. Laxton, Director Technical Support Division.**

G-4 **EPA Memorandum: "Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas", October 6, 1995 from Joseph W. Paisie, Group Leader Integrated Policy and Strategies Group.**

G-5 **Wolyn, Paul G., and Mckee, Thomas B. 1989. "Deep Stable Layers In The Intermountain Western United States." Monthly Weather Review 117: 461-47.**

G-6 **Ada Planning Association designated as lead agency for carbon monoxide SIP:**
- **Resolution 2-78**
- **Feb. 3, 1978 Letter – APA to Division of Environment**
- **Feb. 6, 1978 Memorandum – Division of Environment to Idaho Governor**
- **Feb. 6, 1978 Letter –Idaho Governor to EPA Region 10**

G-7 **1995 Memorandum of Understanding between DEQ and APA outlining agency responsibilities in developing SIPs**

G-8 **1999 Sub-Memorandum of Understanding between DEQ and APA that DEQ will develop the CO Maintenance Plan**

G-9 **Destination 2015 – Transit Plan**

G-10 **Treasure Valley Regional Public Transportation Authority (VIATrans) Goals, Objectives, and Policies**

Appendix G-1
APA Report: "1997 Demographic Report for Ada and Canyon Counties"

1997 Demographic Report for Ada and Canyon Counties

APA Report No. 09-97
June 1997

Endorsed by the Ada Planning Association Board
February 24, 1997

BACKGROUND

The 1997 Demographic Report for Ada and Canyon Counties contains population, employment and housing unit forecasts for Ada and Canyon Counties. The information is the result of the Demographic Advisory Committee's (DAC) efforts. The DAC is a committee (see committee membership roster on right) consisting of representatives of local governments, public utilities, citizens, businesses, and the development community. Their work was endorsed by the APA Board of Directors on February 24, 1997.

Forecasts of population and employment have been prepared for 2000, 2005, 2010, 2015, and 2020. Data from 1990 and 1996 have been included for purpose of comparison.

Forecasts were prepared for each of twenty-three *planning areas* (for example, Meridian, Caldwell, Boise Southeast, Rural Ada County, etc.,) They were then further subdivided into ***traffic analysis zones*** (TAZ) forecasts (284 zones in Ada County and 185 zones in Canyon County).

This document marks the first time future growth projections have been coordinated between Ada and Canyon Counties.

DEMOGRAPHIC ADVISORY COMMITTEE

Chuck Bockenstette
Canyon County Cities' Representative

Chuck Bower, Mayor
City of Eagle

Mark Butler
City of Eagle

John Church
Idaho Power Company

Jay Clemens
Boise Area Chamber of Commerce

Robert Corrie, Mayor
City of Meridian

Dave Dykstra
Canyon County Chambers' Representative

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Phil Whitener
APA Citizens' Advisory Committee Representative

Judy Litt, *Secretary*

SUMMARY

The following is a summary of a detailed technical document in which population, housing, and employment data for the years 2000, 2005, 2010, 2015, and 2020 were forecasted from a base year of 1990. The 1990 Census provided the basis for the forecasts. The report is also a revision of a similar document prepared by APA in 1993.

Long range forecasts were prepared for public facility and service planning as well as for private development purposes. The information will also be used to plan for locating and improving the transportation infrastructure. Work of this type is also called for by the Local Planning Act as part of each community's comprehensive plan. These projections have been endorsed by the Ada Planning Association Board as the official forecast for Ada County and recognizes Canyon County forecasts.

Population, housing and employment characteristics of the report are presented. Each discussion consists of the data sources, assumptions and methodologies — charts and tables are included. A brief summary of a vacant land inventory is also presented.

The projections are summarized for each county and for each of the twenty-three planning areas. (Maps 1 & 2 show how the counties are divided into planning areas.) All of the forecasts have also been provided for traffic zones which are smaller units than planning areas. Information at the zone level is not included in this summary, but may be obtained from the technical report.

Ada County
VACANT LAND

An inventory of vacant land in Ada County was undertaken as part of updating the demographic report. The main purpose of the inventory was to catalog vacant land available for future population, housing unit and employment distributions. Another purpose was to establish a base to compare land use changes from an old 1980 inventory.

Areas of vacant land were identified and measured using the automated basemap for Ada County. The areas were categorized into residential, commercial, industrial, or public uses depending upon their existing zoning.

Another benefit of the inventory was that a population carrying capacity analysis could be done. That analysis was based on the amount of vacant

land available for residential development, Comprehensive

Plan guideline, the 1996 population, and future population characteristics.

It was estimated that an additional 122,000 households could be held within cities and their areas of impact. Another 13,500 households could be added in the rural area under current plan policies. These figures brought the potential household counts for Ada County to around 235,700. More detailed results of this analysis will be available at a later date.

POPULATION

Ada County was one of the fastest growing counties in the United States from 1990 to 1996 — population increased over 25 percent from 205,775 to above 260,000 in that 6-year period of time. While population will increase into the future, it is expected to increase at a slower rate than in the past. It is anticipated that population will exceed 284,000 persons by the turn of the century and 366,000 by the year 2020.

Some population information for this report was provided by the Idaho Power Company. Their projections of future population were analyzed and applied to past growth trends to arrive at the forecasts for Ada County.

The population projection data were distributed to the fifteen planning areas based on the following factors:

- Change in number of dwelling units from 1990 to 1996 in each planning area.
- Subdivision platting activity, by planning area, from 1980 through 1996.
- The amount of residential vacant land in 1996 by planning area.
- Maintenance of existing growth assumptions in the area cities' Comprehensive Plans

Use of the first two trends mentioned above assumed that people would continue to locate as they had in the recent past. The vacant land factor was included on the assumption that areas with large supplies of vacant land would attract more population than areas with a limited supply of land for residential development. Vacant land was also included so that the population allocated to an area would not exceed the supply of available land.

In all cases, the intents of the area cities' Comprehensive Plans provided the basis for internal distribution of population. Population increases for the projected years were added to the 1996 base to arrive at totals for those years. Population distribution is shown as follows:

ADA COUNTY POPULATION PROJECTIONS

Planning Area	1996	2000	2005	2010	2015	2020
Airport	824	589	471	338	214	192
Central Bench	40,320	39,731	38,591	39,846	38,146	38,340
Eagle	9,375	10,296	11,659	13,134	14,448	14,610
Garden City	7,317	7,722	10,613	11,778	11,985	12,031
Kuna	3,297	3,684	4,408	5,189	5,812	5,922
Meridian	27,236	38,446	43,404	48,964	58,033	59,733
North River						
Downtown	3,094	4,143	5,180	7,772	8,293	8,555
East End	6,705	6,234	6,853	6,785	7,017	7,009
Foothills	9,022	9,939	10,644	11,105	11,380	11,406
North End	16,910	15,695	14,429	15,247	14,301	14,234
Northwest	15,214	15,349	16,906	18,382	18,922	19,576
Southeast	30,367	33,623	38,396	42,619	45,623	46,341
Southwest	21,423	23,807	25,348	28,386	32,494	33,152
West Bench	53,561	54,229	53,259	54,769	57,146	57,078
Rural County	15,877	20,782	24,921	30,575	37,216	38,320
TOTAL	260,543	284,269	305,084	334,889	361,029	366,497

HOUSEHOLDS

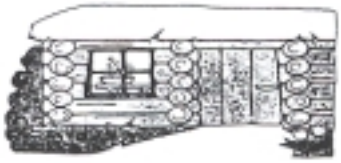
Households are described as "occupied dwelling units." The number of households in an area has a direct relationship to the number of persons in that area. That relationship however, has been changing over time. While the population of Ada County increased by 18.9% from 1980 to 1990, the total number of households was enlarged by 22.4 %. Several factors, including delayed marriages, accelerating birth rates, lower fertility rates, higher survivor rates, and higher divorce rates have contributed to this lower persons per household trend. These trends are expected to continue in the future.

Idaho Power Company also provided some information in projecting the number of future households. They provided a statewide ratio of persons to the number of households. This ratio was also provided for Ada County and was factored, through past trends, to each planning area in the county. Total population was calculated when the person per household ratio applied to each household.

Results of this methodology are shown as follows:

ADA COUNTY HOUSEHOLD PROJECTIONS

Planning Area	1996	2000	2005	2010	2015	2020
Airport	312	264	223	167	112	100
Central Bench	15,414	15,704	16,050	17,152	18,252	18,482
Eagle	3,573	4,096	4,639	5,209	5,778	5,898
Garden City	3,416	4,529	6,240	6,923	7,053	7,080
Kuna	1,201	1,468	1,699	2,012	2,325	2,390
Meridian	10,456	13,660	15,823	20,033	23,877	24,684
North River						
Downtown	1,185	1,858	2,438	3,225	4,009	4,173
East End	2,585	2,795	3,226	3,359	3,491	3,519
Foothills	3,432	4,327	4,868	5,344	5,796	5,918
North End	6,471	6,679	6,792	7,204	7,361	7,394
Northwest	5,997	7,164	8,271	9,364	10,453	10,682
Southeast	11,678	14,307	17,178	19,891	22,765	23,343
Southwest	7,994	9,961	11,657	13,956	16,247	16,728
West Bench	20,433	22,180	22,625	24,660	27,474	28,187
Rural County	5,962	7,831	9,515	12,301	15,172	15,748
TOTAL	100,107	116,824	131,243	150,800	170,164	174,326



EMPLOYMENT

The final step in updating the demographic report was to prepare an employment inventory and forecast. Employment data for 1990 by place of employment was obtained from the Census Bureau as a part of the Census Transportation Planning Package (CTPP). Since this package did not cover all of the employment components in Ada County, Idaho Department of Employment information was supplemented for those to arrive at an employment total.

Idaho Power Company also provided county wide employment forecasts. As was the case with population/households, the county employment estimates were compared with local development and employment trends and comprehensive plans to determine future levels of employment. It was forecast that Ada County would have nearly 200,000 employees in 2000, and over 307,000 employees in 2020.

When allocating employment to the planning areas, separate forecasts were made for the retail and non-retail employment sectors.

Generally, retail employment (those jobs that provide an actual, tangible product) was allocated to planning areas based on existing retail employment, known employment expansions and employment increases.

Non-retail employment (those jobs that provide services and manufacturing) was allocated based on existing employment, known expansions, and land available for such types of development (according to comprehensive plans). In all cases, projected increases were added to the known base. The two employment categories were then totaled for each planning area.

Results of the analysis are shown on the accompanying table. 1990 data has been included for comparison.

ADA COUNTY EMPLOYMENT PROJECTIONS

Planning Area	1990	2000	2005	2010	2015	2020
Airport	5,485	12,628	16,592	21,057	24,954	29,311
Central Bench	23,319	28,979	31,570	34,442	36,974	39,455
Eagle	1,621	2,708	3,273	3,879	4,419	4,771
Garden City	5,270	7,505	8,148	8,844	9,463	9,924
Kuna	697	1,317	1,738	2,202	2,612	3,000
Meridian	5,611	9,085	11,543	14,227	16,626	18,800
North River						
Downtown	36,020	43,923	47,527	51,548	55,064	58,769
East End	3,786	5,176	5,281	5,400	5,504	5,618
Foothills	3,449	3,779	4,041	4,327	4,580	4,796
North End	4,070	4,321	4,548	4,778	5,000	5,132
Northwest	1,859	3,629	4,215	4,849	5,413	5,825
Southeast	13,385	22,606	26,909	31,690	35,896	40,055
Southwest	2,934	6,262	8,286	10,529	12,507	14,432
West Bench	24,272	38,659	42,456	46,603	50,279	53,316
Rural County	3,578	8,450	9,966	11,559	12,996	14,183
TOTAL	135,356	199,026	226,093	255,932	282,286	307,387

MONITORING

An important aspect of the demographic report update is to have the ability to monitor change to determine if the forecasts are realistic. A system to monitor subdivision creation and the subsequent building permit activity was activated in 1980. Household counts and population estimates are prepared based on levels of permit activity and used to check the forecasts for the county and each planning area. The monitoring system will also be used to update data in non-census years.

Canyon County

VACANT LAND

An inventory of vacant land in Canyon County was undertaken as part of the creation of their transportation plan. The main purpose of the inventory was to catalog land available for future population, housing unit and employment land uses in an attempt to determine the future impact on their transportation system.

Areas of vacant land were identified and measured by their contractor, using aerial photographs and local development knowledge. The areas were categorized into residential, commercial, industrial, or public uses depending upon their existing and future zoning.

POPULATION

Canyon County has experienced quite intense growth pressure from 1990 to 1996 — estimates have a population increase of over 14 percent from 90,076 to above 102,840 in that 6-year period of time. Population will increase into the future, it is expected to increase at a slower rate than in the past. It is anticipated that population will exceed 125,000 persons by the turn of the century and 188,000 by the year 2020.

Population information for this report was provided by the Idaho Power Company, the Canyon County Transportation Advisory Committee, and the City of Nampa Sewer Plan. Their projections of future population were analyzed and applied to past growth trends to arrive at the forecasts for Canyon County.

The population projection data were distributed to the nine planning areas based on the following factors:

- Change in number of dwelling units from 1990 to 1996 in each area.
- Subdivision platting activity, during the same period of time.
- The anticipation of future residential development activity by area.
- Maintenance of existing growth assumptions in the areas' Comprehensive Plans.

Use of the first two trends mentioned above assumed that people would continue to locate as they had in the recent past. The vacant land factor was included on the assumption that areas with large supplies of vacant land would attract more population than areas with a limited supply of land for residential development. Vacant land was also included so that the population allocated to an area would not exceed the supply of available land.

In all cases, the intents of the area cities' Comprehensive Plans provided the basis for internal distribution of population. Population increases for the projected years were added to the 1996 base to arrive at totals for those years.

Population distribution is shown as follows:

CANYON COUNTY POPULATION PROJECTIONS

Area	1990	2000	2005	2010	2015	2020
Caldwell	18,400	25,969	29,754	33,538	37,323	41,107
Greenleaf	648	695	719	743	766	790
Melba	252	337	380	423	465	508
Middleton	1,851	2,617	3,000	3,382	3,765	4,148
Nampa	28,365	48,500	59,000	69,000	79,500	90,000
Notus	380	464	506	548	590	632
Parma	1,597	2,028	2,244	24,60	2,675	2,891
Wilder	1,232	1,748	2,006	2,263	2,521	2,779
Unincorporated	37,351	43,071	43,643	44,215	44,787	45,360
TOTAL	90,076	125,429	141,251	156,572	172,393	188,215

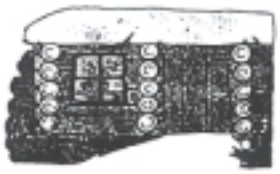
HOUSEHOLDS

Households are described as "occupied dwelling units." The number of households in an area has a direct relationship to the number of persons in that area. That relationship however, has been changing over time.

While the population of Canyon County increased by 7.5% from 1980 to 1990, the total number of households was enlarged by 9.9 %. Several factors, including delayed marriages, accelerating birth rates, lower fertility rates, higher survivor rates, and higher divorce rates have contributed to this lower persons per household trend. These trends are expected to continue in the future.

Idaho Power Company also provided some information in projecting the number of future households. They provided a statewide ratio of persons to the number of households. This ratio was also provided for Canyon County and was factored, through past trends, to each planning area in the county. Total population was calculated when the person per household ratio applied to each household.

Results of this methodology are shown as follows:



CANYON COUNTY HOUSEHOLD PROJECTIONS

Area	1990	2000	2005	2010	2015	2020
Caldwell	6,817	9,478	11,102	12,801	14,579	16,120
Greenleaf	218	254	268	283	299	310
Melba	105	123	142	161	182	199
Middleton	638	955	1,119	1,291	1,471	1,627
Nampa	10,308	17,701	22,015	26,336	31,055	35,294
Notus	151	169	189	209	230	248
Parma	656	740	837	939	1,045	1,134
Wilder	386	638	748	864	985	1,090
Unincorporated	12,466	15,719	16,285	16,876	17,495	17,788
TOTAL	31,745	45,777	52,705	59,760	67,341	73,810

EMPLOYMENT

The final step in updating the demographic report was to prepare an employment inventory and forecast. Employment data for 1996 by place of employment was obtained from the State of Idaho Department of Employment. Since this package did not cover all of the employment components in Ada County, local land use information and community knowledge, was supplemented for those to arrive at an employment total.

Idaho Power Company also provided county wide employment forecasts. As was the case with population/households, the county employment estimates were compared with local development and employment trends and comprehensive plans to determine future levels of employment. It was forecast that Canyon County would have nearly 57,500 employees in 2000, and over 78,000 employees in 2020.

When allocating employment to the planning areas, separate forecasts were made for the retail and non-retail employment sectors.

Generally, retail employment (those jobs that provide an actual, tangible product) was allocated to planning areas based on existing retail employment, known employment expansions and employment increases.

Non-retail employment (those jobs that provide services and manufacturing) was allocated based on existing employment, known expansions, and land available for such types of development (according to comprehensive plans). In all cases, projected increases were added to the known base. The two employment categories were then totaled for each planning area.

Results of the analysis are shown on the accompanying table. 1990 data has been included for comparison.

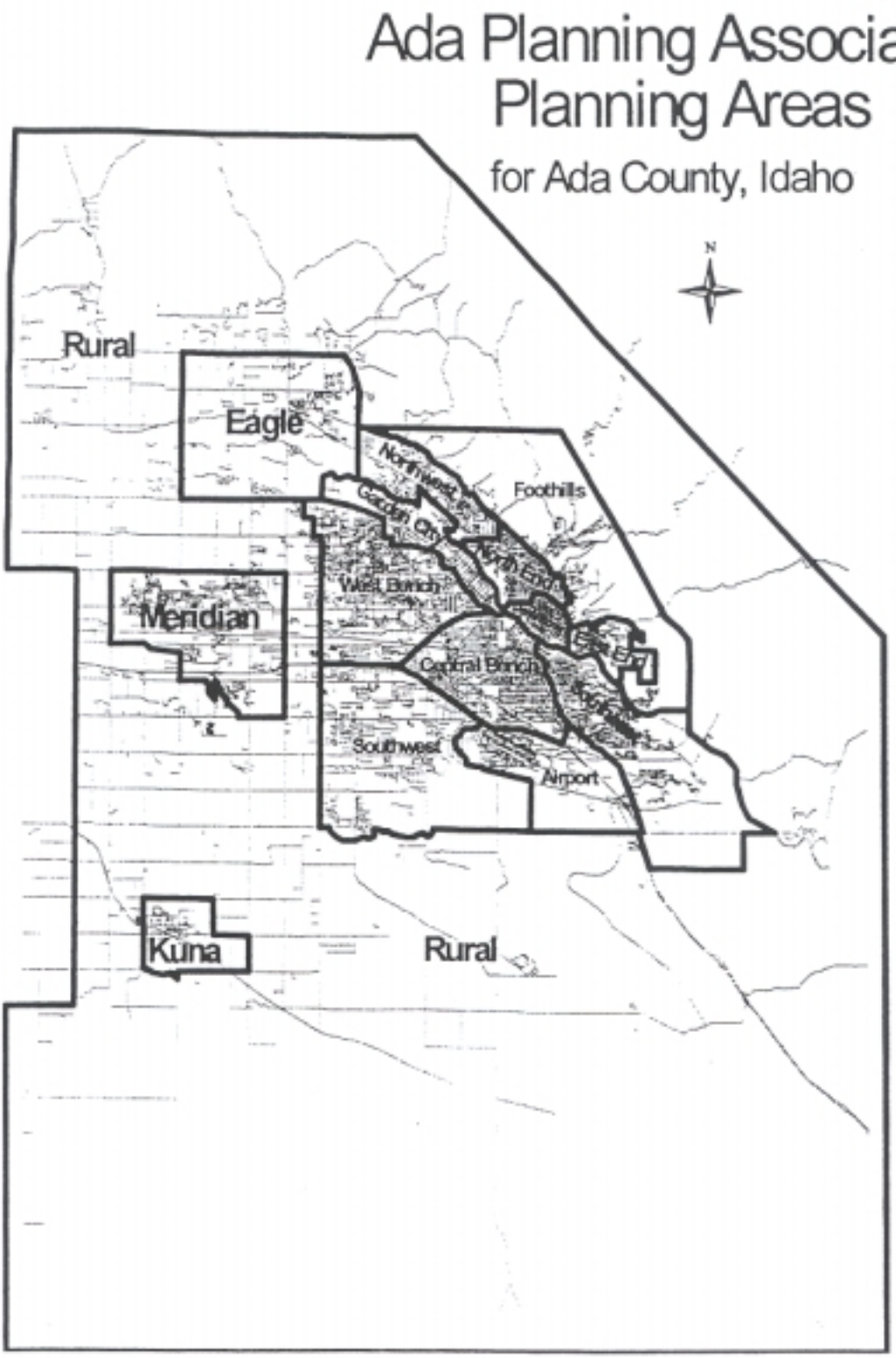
CANYON COUNTY EMPLOYMENT PROJECTIONS

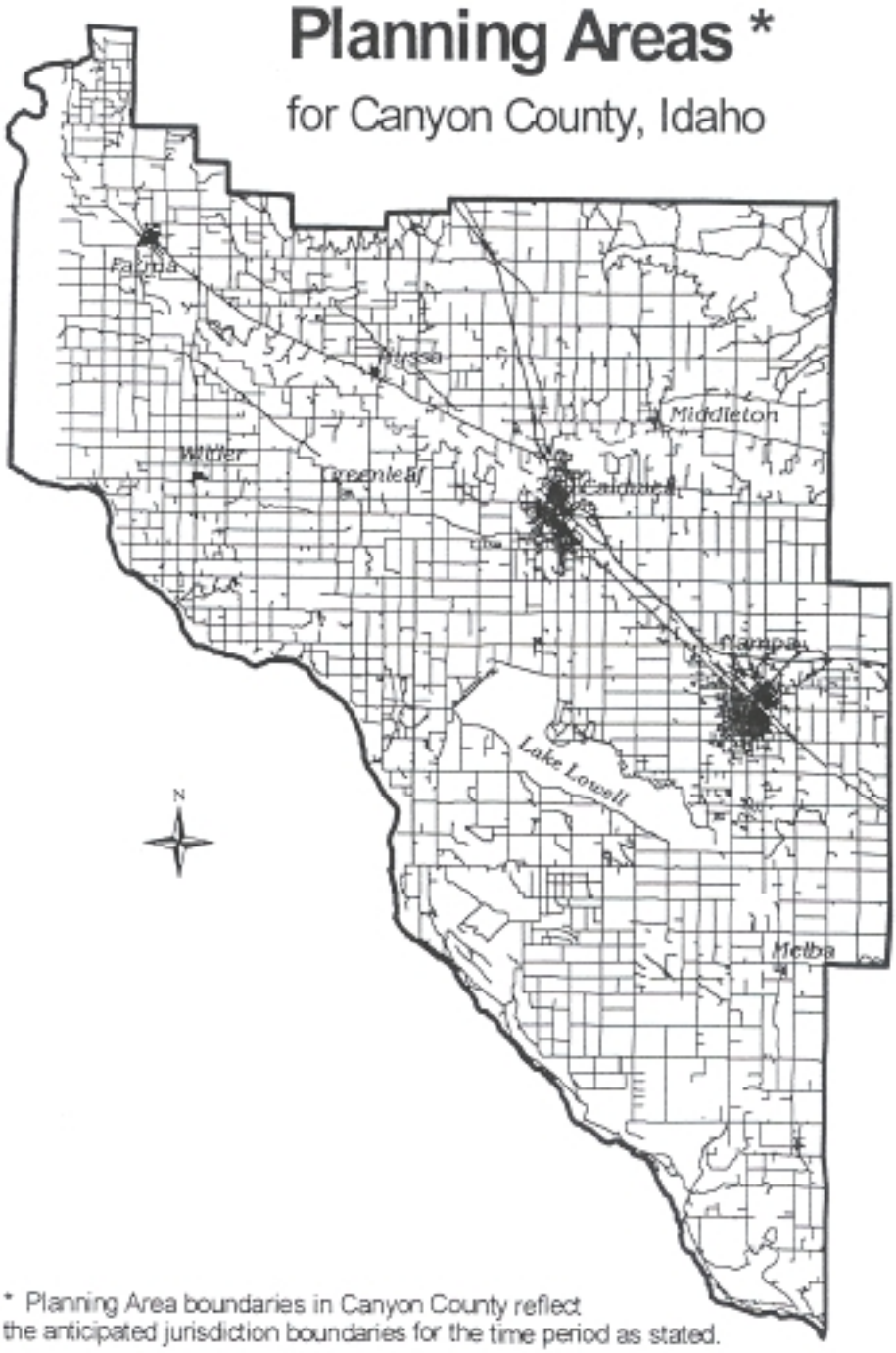
Area	2000	2005	2010	2015	2020
Caldwell	10,099	11,814	13,301	14,781	14,994
Greenleaf	508	537	558	581	597
Melba	152	198	237	265	272
Middleton	306	358	387	407	425
Nampa	33,013	36,318	40,136	44,021	44,566
Notus	81	98	115	131	139
Parma	442	490	549	609	623
Wilder	314	356	396	437	466
Unincorporated	12,487	13,484	14,652	15,831	16,076
TOTAL	57,402	63,653	70,332	77,063	78,156

MONITORING

An important aspect of the demographic report update is to have the ability to monitor change to determine if the forecasts are realistic. A system to monitor land use changes has been activated by Canyon County.

This system will provide a method to estimate household counts and new business starts. Then population and employee estimates could be prepared based on those levels of activity within the area.


Ada Planning Association
Planning Areas
for Ada County, Idaho
N
Rural
Eagle
Northwest
Foothills
Garden City
North End
West Bench
Meridian
Central Bench
Southwest
Airport
Kuna
Rural



* Planning Area boundaries in Canyon County reflect the anticipated jurisdiction boundaries for the time period as stated.

Appendix G-2
EPA Memorandum: "Procedures for Processing Requests to Redesignate Areas to Attainment"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

4 SEP 1992

SEP 08 1992
AIR
BRANCH

MEMORANDUM

SUBJECT: Procedures for Processing Requests to Redesignate Areas to Attainment

FROM: John Calcagni, Director
Air Quality Management Division (MD-15)

TO: Director, Air, Pesticides and Toxics Management Division, Regions I and IV
Director, Air and Waste Management Division, Region II
Director, Air and Waste Management Division, Region II
Director, Air, Radiation and Toxics Division, Region III
Director, Air and Radiation Division, Region V
Director, Air, Pesticides and Toxics Division, Region VI
Director, Air and Toxics Division, Regions VII, VIII, IX, and X

Purpose

The Office of Air Quality Planning and Standards (OAQPS) expects that a number of redesignation requests will be submitted in the near future. Thus, Regions will need to have guidance on the applicable procedures for handling these requests, including maintenance plan provisions. This memorandum, therefore, consolidates the Environmental Protection Agency's (EPA's) guidance regarding the processing of requests for redesignation of nonattainment areas to attainment for ozone (O_3), carbon monoxide (CO), particulate matter (PM-10), sulfur dioxide (SO_2), nitrogen dioxide (NO_2) and lead (Pb). Regions should use this guidance as a general Framework for drafting Federal Register notices pertaining to redesignation requests. Special concerns for areas seeking redesignation from unclassifiable to attainment will be addressed on a case-by-case basis.

Background

Section 107(d)(3)(E) of the Clean Air Act, as amended, states that an area can be redesignated to attainment if the following conditions are met:

1. The EPA has determined that the national ambient air quality standards (NAAQS) have been attained.

2. The applicable implementation plan has been fully approved by EPA under section 110(k).

3. The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.

4. The State has met all applicable requirements for the area under section 110 and Part D.

5. The EPA has fully approved a maintenance plan, including a contingency plan, for the area under section 175A.

Each of these criteria is discussed in more detail in the following paragraphs. Particular attention is given to maintenance plan provisions at the end of this document since maintenance plans constitute a new requirement under the amended Clean Air Act. Exceptions to the guidance will be considered on a case-by-case basis.

1. Attainment of the Standard

The State must show that the area is attaining the applicable NAAQS. There are two components involved in making this demonstration which should be considered interdependently. The first component relies upon ambient air quality data. The data that are used to demonstrate attainment should be the product of ambient monitoring that is representative of the area of highest concentration. These monitors should remain at the same location for the duration of the monitoring period required for demonstrating attainment, The data should be collected and quality-assured in accordance with 40 CFR 58 and recorded in the Aerometric Information Retrieval System (AIRS) in order for it to be available to the public for review. For purposes of redesignation, the Regional Office should verify that the integrity of the air quality monitoring network has been preserved.

For PM-10, an area may be considered attaining the NAAQS if the number of expected exceedances per year, according to 40 CFR 50.6, is less than or equal to 1.0. For 03, the area must show that the average annual number of expected exceedances, according to 40 CFR 50.9, is less than or equal to 1.0 based on data from all monitoring sites in the area or its affected downwind environs. In making this showing, both PM-10 and 03 must rely on 3 complete, consecutive calendar years of quality assured air quality monitoring data, collected in accordance with 40 CFR 50, Appendices H and K. For CO, an area may be considered attaining the NAAQS if there are no violations, as determined in accordance

3

with 40 CFR 50.8, based on 2 compete, consecutive calendar years of quality assured monitoring data. For $S0_2$, according to 40 CFR 50.4, an area must show no more than one exceedance annually and for Pb, according to section 50.12, an area may show no exceedances on a quarterly basis.

The second component relies upon supplemental EPA-approved air quality modeling. No such supplemental modeling is required for O_3 nonattainment areas seeking redesignation. Modeling may be necessary to determine the representativeness of the monitored data. For pollutants such as $S0_2$ and CO, a small number of monitors typically is not representative of area wide air quality or areas of highest concentration. When dealing with S02, Pb, PM-10 (except for a limited number. of initial moderate nonattainment areas), and CO (except moderate areas with design values of 12.7 parts per million or lower at the time of passage of the Clean Air Act Amendments of 1990), dispersion modeling will generally be necessary to evaluate comprehensively sources' impacts and to determine the areas of expected high concentrations based upon current conditions. Areas which were designated nonattainment based on modeling will generally not be redesignated to attainment unless an acceptable modeling analysis indicates attainment. Regions should consult with OAQPS for further guidance addressing the need for modeling in specific circumstances.

2. State Implementation Plan (SIP) Approval

The SIP for the area must be fully approved under section 110(k),[1] and must satisfy all requirements that apply to the area. It should be noted that approval action on SIP elements and the redesignation request may occur simultaneously. An area cannot be redesignated if a required element of its plan is the subject of a disapproval; a finding of failure to submit or to implement the SIP; or partial, conditional, or limited approval. However, this does not mean that earlier issues with regard to the SIP will be reopened. Regions should not reconsider those things that have already been approved and for which the Clean Air Act Amendments did not alter what is required. In contrast, to the extent the Amendments add a requirement or alter an existing requirement so that it adds something more, Regions should consider those issues. In addition, requests from areas known to be affected by dispersion techniques which are inconsistent with EPA guidance will continue to be considered unapprovable under section 110 and will not qualify for redesignation.

4

[1] Section 110(k) contains the requirements for EPA action on plan submissions. It addresses completeness, deadlines, full and partial approval, conditional approval, and disapproval.

3. Permanent and Enforceable Improvement in Air Quality

The State must be able to reasonably attribute the improvement in air quality to emission reductions which are permanent and enforceable.[2] Attainment resulting from temporary reductions in emission rates (e.g., reduced production or shutdown due to temporary adverse economic conditions) or unusually favorable meteorology would not qualify as an air quality improvement due to permanent and enforceable emission reductions.

In making this showing, the State should estimate the percent reduction (from the year that was used to determine the design value for designation and classification) achieved from Federal measures such as the Federal Motor vehicle Control Program and fuel volatility rules as well as control measures that have been adopted and implemented by the State.. This estimate should consider emission rates, production capacities, and other related information to clearly show that the air quality improvements are the result of implemented controls. The analysis should assume that sources are operating at permitted levels (or historic peak levels) unless evidence is presented that such an assumption is unrealistic.

4. Section 110 _and Part D Requirements

For the purposes of redesignation, a State must meet all requirements of section 110 and Part D that were applicable prior to submittal of the complete redesignation request. When evaluating a redesignation request, Regions should not consider whether the State has met requirements that come due under the Act after submittal of a complete redesignation request.[3]

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[2] This is consistent with EPA's existing policy on redesignations as stated in an April 21, 1983 memorandum titled "Section 107 Designation Policy Summary." This memorandum states that in order for an area to be redesignated to attainment, the State must show that "actual enforceable emission reductions are responsible for the recent air quality improvement." This element of the policy retains its validity under the amended Act pursuant to section 193. (Note: other aspects of the April 21, 1983 memorandum have since been superseded by subsequent memorandums interested parties should consult with OAQPS before relying on these aspects, e.g. those relating to required years of air quality data.)

[3] Under section 175A(c), however, %the requirements of Part D remain in force and effect for the area until such time as it is redesignated. Upon redesignation to attainment, the requirements that became due under section 175A(c) after submittal of the complete redesignation request would no longer be applicable.

However, any requirements that came due prior to submittal of the redesignation request must be fully approved into the plan at or before the time EPA redesignates the area.

To avoid confusion concerning what requirements will be applicable for purposes of redesignation, Regions should encourage States to work closely with the appropriate Regional Office early in the process. This will help to ensure that a redesignation request submitted by the State has a high likelihood of being approved by EPA. Regions should advise States of the practical planning consequences if EPA disapproves the redesignation request or if the request is invalidated because of violations recorded during EPA's review. Under such circumstances, EPA does not have the discretion to adjust schedules for implementing SIP requirements. As a result, an area may risk sanctions and/or Federal implementation Plan implementation that could result from failure to meet SIP submittal or implementation requirements.

a. Section 110 Requirements

Section 110(a)(2) contains general requirements for nonattainment plans. Most of the provisions of this section are the same as those contained in the pre-amended Act. We will provide guidance on these requirements as needed.[4]

b. Part D Requirements

Part D consists of general requirements applicable to all areas which are designated nonattainment based on a violation of the NAAQS. The general requirements are followed by a series of subparts specific to each pollutant. The general requirements appear in subpart 1. The requirements relating to O_3, CO, PM-10, SO_2, NO_2, and Pb appear in subparts 2 through 5. In those instances where an area is subject to both the general nonattainment provisions in subpart 1 as well as one of the pollutant-specific subparts, the general provisions may be subsumed within, or superseded by, the more specific requirements of subparts 2 through 5.

If an area was not classified under section 181 for O_3, or section 186 for CO, then that area is only subject to the provisions of subpart 1, “Nonattainment Areas in General.” In addition to relevant provisions in subpart 1, an O_3 and CO area, which is classified, must meet all applicable requirements in subpart 2, “Additional Provisions for Ozone Nonattainment Areas.” and subpart 3, “Additional Provisions for Carbon Monoxide

[4] General guidance regarding the requirements for SIP's may be found in the "General Preamble to Title I of the 1990 Clean Act Amendments,” 57 FR 13498 (April 16, 1992).

Nonattainment areas," respectively, before the area may be redesignated to attainment. All PM-10 nonattainment areas (whether classified as moderate or serious) must similarly meet the applicable general provisions of subpart 1 and the specific PM-10 provisions in subpart 4, "Additional Provisions for Particulate Matter Nonattainment Areas." Likewise, $S0_2$, NO_2, and Pb nonattainment areas are subject to the applicable general, nonattainment provisions in subpart 1 as well as the more specific requirements in subpart 5, "Additional Provisions for Areas Designated Nonattainment for Sulfur Oxides, Nitrogen Dioxide, and Lead."

i. Section 172(c) Requirements

This section contains general requirements for nonattainment plans. A thorough discussion of these requirements may be found in the General Preamble to Title 1 [57 FR 13498 (April 16, 1992)]. The EPA anticipates that areas will already have met most or all of these requirements to the extent that they are not superseded by more specific Part D requirements. The requirements for reasonable further progress, identification of certain emissions increases, and other measures needed for attainment will not apply for redesignations because they only have meaning for areas not attaining the standard. The requirements for an emission inventory will be satisfied by the inventory requirements of the maintenance plan. The requirements of the Part D new source review program will be replaced by the prevention of significant deterioration (PSD) program once the area has been redesignated. However, in order to ensure that the PSD program will become fully effective immediately upon redesignation, either the State must be delegated the Federal PSD program or the State must make any needed modifications to its rules to have the approved PSD program apply to the affected area upon redesignation.

ii. conformity

The state must work with EPA to show that its SIP provisions are consistent with section 176(c)(4) conformity requirements. The redesignation request should include conformity procedures, if the State already has these procedures in place. Additionally, we currently interpret the conformity requirement to apply to attainment areas. However, EPA has not yet issued its conformity regulations specifying what areas are subject to the conformity requirement. Therefore, if a State, does not have conformity procedures in place at the time that it submits a redesignation request, the State must commit to follow EPA's conformity regulation upon issuance, as applicable. If the State submits the redesignation request subsequent to EPA's issuance of the conformity regulations, and the conformity requirement became applicable to the area prior to submission,

the State must adopt the applicable conformity requirements before EPA can redesignate the area.

5. Maintenance Plans

Section 107(d)(3)(E) of the amended Act stipulates that for an area to be redesignated, EPA must fully approve a maintenance plan which meets the requirements of section 175A. A State may submit both the redesignation request and the maintenance plan at the same time and rulemaking on both may proceed on a parallel track. Maintenance plans may, of course, be submitted and approved by EPA before a redesignation is requested. However, according to section 175A(c), pending approval of the maintenance plan and redesignation request, all applicable nonattainment area requirements shall remain in place.

Section 175A defines the general framework of a maintenance plan. The maintenance plan will constitute a SIP revision and must provide for Maintenance of the relevant NAAQS in the area for at least 10 years after redesignation. Section 175A further states that the plan shall contain such additional measures, it any, as may be necessary to ensure such maintenance. Because the Act requires a demonstration of maintenance for 10 years after an area is redesignated (not 10 years after submittal of a redesignation request), the State should plan for some lead time for EPA action o@ the request. In other words, the maintenance demonstration should project maintenance for 10 years, beginning from a date which factors in the time necessary for EPA review and approval action on the redesignation request. In determining the amount of lead time to allow, States should consider that section 107(d)(3)(D) grants the Administrator up to 18 months from receipt of a complete submittal to process a redesignation request. The statute also requires the State to submit a revision of the SIP 8 years after the original redesignation request is approved to provide for maintenance of the NAAQS for an additional 10 years following the first 10-year period [see section 175A(b)].

In addition, the maintenance plan shall contain such contingency measures as the Administrator deems necessary to ensure prompt correction of any violation of the NAAQS [see section 175A(d)]. The Act provides that, at a minimum, the contingency measures must include a requirement that the State will implement all measures contained in the nonattainment SIP prior to redesignation. Failure to maintain the NAAQS and triggering of the contingency plan will not necessitate a revision of the SIP unless required by the Administrator, as stated in section 175,k(d).

The following is a list of core provisions that we anticipate will be necessary to ensure maintenance of the relevant NAAQS in an area seeking redesignation from

nonattainment to attainment. We therefore recommend that States seeking redesignation of a nonattainment area consider these ' provisions. However, any final EPA determination regarding the adequacy of a maintenance plan will be made following review of the plan submittal in light of the particular circumstances facing the area proposed for redesignation and based on all relevant information available at the time.

a. Attainment Inventory

The State should develop an attainment emissions inventory to identify the level of emissions in the area which is sufficient to attain the NAAQS.[5] This inventory should be consistent with EPA's most recent guidance on emission inventories for nonattainment areas available at the time and should include the emissions during the time period associated with the monitoring data showing attainment.[6]

Source size thresholds are 100 tons/year for SO_2, NO_2, and PM-10 areas, and 5 ton's/year for Pb based upon 40 CFR 51.100(k) and 51.322, as well as established practice for AIRS data. The source size threshold for serious PM-10 areas is 70 tons/year

[5] Where the State has made an adequate demonstration that air quality has improved as a result of the SIP (as discussed previously), the attainment inventory will generally be the actual inventory at the time the area attained the standard.

[6] The EPA's current guidance on the preparation of emission inventories for O_3 and CO nonattainment areas is contained in the following documents "Procedures for the Preparation of Emission Inventories for Carbon monoxide and Precursors of Ozone: Volume I" (EPA-450/4-91-016), "Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone: Volume II' (EPA-450/4-91-014), "Emission Inventory Requirements for Ozone State Implementation Plans" (EPA-450/4-91-010), "Emission Inventory Requirements for Carbon Monoxide Implementation Plans" (EPA-450/4-91-011), "Guideline for Regulatory Application of the Urban Airshed Model" (EPA-450/4-91-013), "Procedures for Emission Inventory Preparation: Volume IV, Mobile Source's (EPA,-450/4-81-026d), and "Procedures for Preparing Emission Inventory Projections" (EPA-450/4-91-019). The EPA does not currently have specific guidance on attainment emissions inventories for SC)2'. In lieu thereof, States are referred to the guidance on emissions data to be used as input to modeling demonstrations, contained in Table 9.1 of EPA's "Guideline on Air Quality Models (Revised)" (EPA-450/2-76-027R), July 1987, which is generally applicable to all criteria pollutants. Emission inventory procedures and requirements documents are currently being prepared by OAQPS for PM-10 and Pb; these documents are due for release by summer 1992.

according to Clean Air Act section 189(b)(3). However, the inventory should include sources below these size thresholds if these smaller sources were included in the SIP attainment demonstration. Where sources below the 100, 70, and 5 tons/year-size thresholds (e.g., areas with smaller source size definitions) are subject to a State's minor source permit program, these sources need only be addressed in the aggregate to the extent that they result in areawide growth.

For O_3 nonattainment areas, the inventory should be based on actual "typical summer day" emissions of O_3 precursors (volatile organic compounds and nitrogen oxides) during the attainment year. This will generally correspond to one of the periodic inventories required 'for nonattainment areas to reconcile milestones. For CO nonattainment areas, the inventory should be based on actual "typical CO season day" emissions for the attainment year. This will generally correspond to one of the periodic inventories required for nonattainment areas.

b. Maintenance Demonstration

A State may generally demonstrate maintenance of the NAAQS by either showing that future emissions of a pollutant or its precursors will not exceed the level of the attainment inventory, or by modeling to show that the future mix of sources and emission rates will not cause a violation of the NAAQS. Under the Clean Air Act, many areas are required to submit modeled attainment demonstrations to show that proposed reductions in emissions will be sufficient to attain the applicable NAAQS. For these areas, the maintenance demonstration should be based upon the same level of modeling. In areas where no such modeling was required, the State should be able to rely on the attainment inventory approach. In both instances, the demonstration should be for a period of 10 years following the redesignation.

Where modeling is relied upon to demonstrate maintenance, each plan should contain a summary of the air quality concentrations expected to result from application of the control strategy. In the process, the plan should identify and describe the dispersion model or other air quality model used to project ambient concentrations (see 40 CFR 51.46).

In either case, to satisfy the demonstration requirement the State should project emissions for the 10-year period following redesignation, either for the purpose of showing that emissions will not increase over the attainment inventory or for conducting modeling.[7] The projected inventory should consider future growth, including population and industry, should be consistent

[7] Guidance for projecting emissions may be found in the emissions inventory guidance cited in footnote 6.

with the attainment inventory, and should document data inputs and assumptions. All elements of the demonstration (e.g., emission projections, new source growth, and modeling) should be consistent with current EPA modeling guidance[8]. For O_3 and CO, the projected, emissions should reflect the expected actual emissions based on enforceable emission rates and typical production rates.

For CO, a State should address the areawide component of the maintenance demonstration either by showing that future CO emissions will not increase or by conducting areawide modeling. Preferably, the State should carry out hot-spot modeling that is consistent with the Guideline on Air Quality Models (Revised), in order to demonstrate maintenance of the NAAQS. In particular, if the nonattainment problem is related to a pattern of hot-spots then hot-spot modeling should generally be conducted. However, hot-spot modeling is not automatically required. For example, if the nonattainment problem was related solely to stationary point sources, or if highway improvements have been implemented and the associated emission reductions and travel characteristics can be qualitatively documented, then hot-spot modeling is not required. In such cases, adequate documentation as well as the concurrence of Headquarters is needed.

Any assumptions concerning emission rates must reflect permanent, enforceable measures. In other words, a State generally cannot take credit in the maintenance demonstration for reductions unless there are regulations in place requiring those reductions or the reductions are otherwise shown to be permanent. Therefore, the State will be expected to maintain its implemented control strategy despite redesignation to attainment, unless such measures are shown to be unnecessary for maintenance or are replaced with measures that achieve equivalent reductions (see additional discussion under "Contingency Plan"). Emission reductions from source shutdowns can be considered permanent and enforceable to the extent that those shutdowns have been reflected in the SIP and all applicable permits have been modified accordingly.

Modeling used to demonstrate attainment may be relied upon in the maintenance demonstration where the modeling conforms to current EPA guidance and where the State has projected no significant changes in the modeling inputs during the intervening time. Where the original attainment demonstration may no longer be relied upon, States will be expected to remodel using current

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[8] The EPA approved modeling guidance may be found in the following documents: "Guideline on Air Quality Models Revised)," OAQPS, RTP, NC (EPA-450/2-78-027R), July 1986; and "PM-10 SIP Development Guideline," OAQPS, RTP, NC (EPA-450/2-86- 001), June 1987.

EPA referenced techniques.[9] This may be necessary where, for example, there has been a change in emissions or a change in the siting of new sources or modifications such that air quality may no longer be accurately represented by the existing modeling.

c. Monitoring Network

Once an area has been redesignated, the State should continue to operate an appropriate air quality monitoring network, in accordance with 40 CFR Part 58, to verify the attainment status of the area. The maintenance plan should contain provisions for continued operation of air quality monitors that will provide such verification. In cases where measured mobile source parameters (e.g., vehicle miles traveled congestion) have changed over time, the State may also need to perform a saturation monitoring study to determine the need for, and location of, additional permanent monitors.

d. Verification of Continued Attainment

Each State should ensure that it has the legal authority to implement and enforce all measures necessary to attain and to maintain the NAAQS. Sections 110(a)(2)(B) and (F) of the Clean Air Act, as amended, and regulations promulgated at 40 CFR 51.110(k), suggest that one such measure is the acquisition of ambient and source emission data to demonstrate attainment and maintenance.

Regardless of whether the maintenance demonstration is based on a showing that future emission inventories will not exceed the attainment inventory or on modeling, the State submittal should indicate how the State will track the progress of the maintenance plan. This is necessary due to the fact that the emission projections made for the maintenance demonstration depend on assumptions of point and area source growth.

One option for tracking the progress of the maintenance demonstration, provided here as an example, would be for the State to periodically update the emissions inventory. In this case, the maintenance plan should specify the frequency of any planned inventory updates. Such an update could be based, in part, on the annual AIRS update and could indicate new source growth and other changes from the attainment inventory (e.g., changes in vehicle miles traveled or in traffic patterns). As an alternative to a complete update of the inventory, the State may choose to do a comprehensive review of the factors that were used in developing the attainment inventory to show no significant change. If this review does show a significant change, the State should then perform an update of the inventory.

[9] See references for modeling guidance cited in footnote 8.

Where the demonstration is based on modeling, an option for tracking progress would be for the State to periodically (typically every 3 years) reevaluate the modeling assumptions and input data. In any event, the State should monitor the indicators for triggering contingency measures (as discussed below).

e. Contingency Plan

Section 175A of the Act also requires that a maintenance plan include contingency provisions, as necessary, to promptly correct any violation of the NAAQS that occurs after redesignation of the area. These contingency measures are distinguished from those generally required for nonattainment areas under section 172(c)(9) and those specifically required for O_3 and CO nonattainment areas under sections 182(c)(9) and 187(a)(3), respectively. For the purposes of section 175A, a State is not required to have fully adopted contingency measures that will take effect without further action by the State in order for the maintenance plan to be approved. However, the contingency plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted expediently once they are triggered. The plan should clearly identify the measures to be adopted, a schedule and procedure for adoption and implementation, and a specific time limit for action by the State. As a necessary part of the plan, the State should also identify specific indicators, or triggers, which will be used to determine when the contingency measures need to be implemented.

Where the maintenance demonstration is based on the inventory, the State may, for example, identify an "action level" of emissions as the indicator. If later inventory updates show that the inventory has exceeded the action level, the State would take the necessary steps to implement the contingency measures. The indicators would allow a State to take early action to address potential violations of the NAAQS before they occur. By taking early action, States may be able to prevent any actual violations of the NAAQS and, therefore, eliminate the need on the part of EPA to redesignate an area to nonattainment.

Other indicators to consider include monitored or modeled violations of the NAAQS (due to the inadequacy of monitoring data in some situations). It is important to note that air quality data in excess of the NAAQS will not automatically necessitate a revision of the SIP where implementation of contingency measures is adequate to address the cause of the violation. The need for a SIP revision is subject to the Administrator's discretion.

The EPA will review what constitutes a contingency plan on a case-by-case basis. At a minimum, it must require that the State will implement all measures contained in the Part D nonattainment

plan for the area prior to redesignation [see section 175A(d)). This language suggests that a State may submit a SIP revision at the time of its redesignation request to remove or reduce the stringency of control measures. Such a revision can be approved by EPA if it provides for compensating equivalent reductions. A demonstration that measures are equivalent would have to include appropriate modeling or an adequate justification. Alternatively, a State might be able to demonstrate (through EPA-approved modeling) that the measures are not necessary for maintenance of the standard. In either case the contingency plan would have to provide for implementation of any measures that were reduced or removed after redesignation of the area.

Summary

As stated previously, this memorandum consolidates EPA's redesignation and maintenance plan guidance and Regions should rely upon it as a general framework in drafting Federal Register notices. It is strongly suggested that the Regional Offices share this document with the appropriate States. This should give the States a better understanding of what is expected from a redesignation request and maintenance plan under existing policy. Any necessary changes to existing Agency policy will be made through our action on specific redesignation requests and the review of section 175A maintenance plans for these particular areas, both of which are subject to notice and comment rulemaking procedures. Thus, in applying this memorandum to specific circumstances in a rulemaking, Regions should consider the applicability of the underlying policies to the particular facts and to comments submitted by any person. If your staff Members have questions which require clarification, they may contact Sharon Reinders at (919) 541-5284 for O_3- and CO-related issues, and Eric Ginsburg at (919) 541-0877 for SO_2-, PM-10-, and Pb-related issues.

cc: Chief, Air Branch, Regions I-X
John Cabaniss, OMS
Denise Devoe, OAQPS
Bill Laxton, TSD
Rich Ossias, OGC
John Rasnic, SSCD
John Seitz, OAQPS
Mike Shapiro, OAR
Lydia Wegman, OAQPS

Appendix G-3
EPA Memorandum: "Ozone and Carbon Monoxide Design Value Calculations"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

June 18, 1990

MEMORANDUM

SUBJECT: Ozone and Carbon Monoxide Design Value Calculations

FROM: William G. Laxton, Director
Technical Support Division (MD-14)

TO: See Below

In discussions related to the Clean Air Act legislation, design values for ozone and carbon monoxide are receiving particular attention. Previously, it sufficed to designate areas as either attainment or nonattainment but now areas will be further classified into different categories based upon the magnitude of the appropriate design value. This additional classification step places added emphasis on the need to accurately determine these design values. The classification will be done according to concentration cutpoints, and on a schedule, specified in the legislation.

Obviously, once this process is set in motion we will be working very closely with you to develop these design values. However, I thought it would be appropriate to reiterate our design value computation procedures in advance to help people anticipate the types of data review questions that may arise. The computation procedures stated here are consistent with our previous methods. There are differences between the procedures for ozone and carbon monoxide because the National Ambient Air Quality Standard (NAAQS) is structured in terms of expected exceedances while the carbon monoxide NAAQS uses the older "once per year" format. The most apparent difference is that the CO design values are based upon 2 years of data while design values for ozone use 3 years. Another difference is that the ozone NAAQS uses the daily maximum ozone value while the CO NAAQS considers running 8-hour averages so that, even though they must be non-overlapping, it is possible to have more than one CO exceedance per day. Because of these differences, it is convenient to discuss each pollutant separately. With respect to terminology, you may hear the CO design value approach referred to as "the highest of the second highs', while the ozone design value is frequently simplified as "the fourth high in 3 years."

One point to remember is that all locations within an area have to meet the standard (NAAQS). Therefore, when we do our evaluations, we look at each individual site to make sure that every site meets the standard. A separate design value is developed for each site that does not meet the NAAQS, and the highest of these design values is the design value for the area.

Carbon Monoxide

CO design values are discussed in terms of the 8-hour CO NAAQS,

rather that the 1-hour NAAQS, because the 8-hour NAAQS is typically the standard of concern. However, a 1-hour design value would be computed in the same manner. For 8-hour CO, we simply look at the maximum and second maximum (non-overlapping) 8-hour values at a site for the most recent 2 years of data. These values may be readily found on an AIRS AMP450, "Quick Look", printout. Then we choose the highest of the second highs and use this as our design value for that site. We then look at all design values within an area and the highest of these serves as the design value for the area. Note that, for each site, individual years of CO data are considered separately to determine the second maximum for each year - CO data are not combined from different years. It is probably worth commenting on this. The CO NAAQS requires that not more than one 8-hour average per year can exceed 9 ppm greater than or equal to 9.5 ppm to adjust for rounding). We evaluate attainment over a 2-year period. If an area has a design value greater that 9 ppm, it means there was a monitoring site where the second highest (non-overlapping) 8-hour average was greater that 9 ppm in at least 1 year. Therefore, there were at least two values above the standard during 1 year at that site and thus the standard was not met.

Hypothetical Case (two CO sites in an area)

```
                                (8-Hour Averages)
                                MAX 2nd High
                SITE 1    1987 14.6  8.9
                          1988 13.9 10.9
                                          10.9 is the Design Value
                                          for Site 1

                                (8-Hour Averages)
                                MAX 2nd High
                SITE 2    1987 12.2 11.1
                          1988 10.8 10.4
                                          11.1 is the Design Value
                                          for Site 2

            11.1 ppm would be the design value for the area.
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Ozone

The form of the ozone NAAQS requires the use of a 3-year period to determine the average number of exceedances per year. In its simplest form, the ozone standard requires that the average number of exceedances over a 3-year period, cannot be greater than 1.0. An area with four exceedances during a 3-year period, therefore, does not meet the ozone standard because four exceedances in 3 years averages out to more than once per year. Now, if the fourth highest value was equal to the level of the ozone standard, i.e. 0.12 ppm, then the area would have no more than three exceedances during the 3-year period and the average number of exceedances per year would not be greater

than one. This assumes no missing data and is how the fourth high value in 3-years came to be used as the design value. Actually, an adjustment is specified in the ozone NAAQS to account for missing data in determining the expected exceedances for ozone. Because of considerations associated with control strategy modeling, the following basic approach for ozone design values has been in use since 1981. If there are 3 complete years of ozone data, then the fourth highest daily maximum during the 3-year period is the data, then the fourth highest daily maximum during the 3-year period is the design value for that site. If only 2 complete years of data are available, then the third highest is used and, if only one complete year is available, then the second highest is used. In this approach, a year of ozone data is considered complete if valid daily maximums are available for at least 75 percent of the ozone season. Note that because of the form of the ozone NAAQS, data are combined over multiple years but they are not combined from different sites.

Hypothetical Case (two O3 sites in an area, each year at least 75% complete)

FOUR HIGHEST DAILY MAXIMUM VALUES

		Max	2nd Hi	3rd Hi	4th Hi
SITE 1	1986	.127	.123	.122	.110
	1987	.129	.124	.121	.116
	1988	.142	.136	.134	.115

The design value for Site 1 is 0.129 ppm, the fourth highest daily maximum value during the three year period.

FOUR HIGHEST DAILY MAXIMUM VALUES

		Max	2nd Hi	3rd Hi	4th Hi
SITE 2	1986	.110	.100	.095	.090
	1987	.110	.100	.095	.090
	1988	.180	.175	.160	.110

The design value for Site 2 is 0.110, the fourth highest value during the three year period.

0.129 ppm would be the design value for the area.

There are a few additional comments warranted on the ozone example. First, note that data from each site was treated independently in computing the design value for that site. Assuming no missing data, the second site would meet the ozone NAAQS but the area would not because the other site shows that the NAAQS is not being met. Also, it should be noted that the high

values for a year are considered even if the data for that year did not satisfy the 75 percent data completeness criterion. For example, if a site had 2 years of data that met the 75 percent data completeness requirement and 1 year that did not, then the third highest value during the 3-year period would be the design value because there were only 2 complete years of data but the data from all 3 years would be considered when determining the third highest value. This ensures that valid high ozone measurements in a particular year are not ignored simply because other data in that year were missing. When computing data completeness, the number of valid days can be increased to include days that may be assumed to be less than the standard level as stated in the ozone NAAQS. Also, for new sites that have just come on line, the 75 percent data completeness requirement for the start-up year may be applied beginning with the first day of actual monitoring as long as the data set is at least 75 percent complete for June through August.

A final practical complication that must be addressed in determining ozone design values is the case where a site reports data but has no year that meets the 75 percent data completeness requirement. Admittedly, this is an unusual situation but, for the sake of completeness, it needs to be addressed. At the same time, however, the reason for this consistent data completeness problem should be examined because ozone monitoring data completeness is typically greater that 90 percent. In general, if a site has no complete years of data and fewer than 90 days of data during the 3-year period, the design value will be determined on a case by case basis. In such cases, the data base is so sparse that it would be extremely difficult to describe general rules that would apply and a careful evaluation would have to be made to determine why this situation occurred and what is the most appropriate way to use the data. For a site without a single complete year of data but at least 90 days of data during the 3-year period, the following steps are followed in determining the ozone design value:

1. Divide the number of valid daily maximums during the 3-year period by the required number of monitoring days per year. As noted earlier, the number of valid days can be increased by including the number of days that may be assumed to be less than the standard level as specified in the ozone NAAQS.

2. Add 1.0 to the above total and then use the integer portion of the result as the rank of the design value.

These steps are not as complicated as they may initially appear. For example, suppose a site with a required ozone monitoring season of 214 days each year reports 0, 121, and 130 valid days of ozone data during the 3-year period. Step 1 would give (0+121+130)/214=1.17. In step 2, 1.0 is added to this total giving 2.17. The integer portion of 2.17 is 2 and so the design value is the second highest value during the three year period. Again, this type of situation should not occur that often and the reasons for the data completeness problems should be identified.

When discussing data completeness for ozone, it is important to recognize that monitoring sites are occasionally discontinued for valid

practical reasons. In such cases, if data are available from another site that is representative of the same situation, then data from the discontinued site may be superceded by data from the other site. The intent is to ensure that a single year of data from a monitor that was discontinued 2 years ago, does not dictate the design value if data are available from another, equally representative, site. This is not intended to eliminate the missing data penalty when a site is discontinued and there is no data available from a similar monitor.

I have not discussed certain basic data handling conventions, such as computing 8-hour CO averages with missing data, determining the non-overlapping second maximum 8-hour average, or the definition of a valid daily maximum 1-hour ozone daily maximum. All of these conventions have been in place since the 1970's and are routinely incorporated into AIRS outputs so I have not bothered to discuss these points.

Addressees:
Director, Environmental Services Division, Regions I-VIII, X
Director, Office of Policy and Management, Region IX
Director, Air Management Division, Region III
Director, Air and Waste Management Division, Region II
Director, Air, Pesticides and Toxics Management Division, Regions I and IV
Director, Air and Radiation Division, Region V
Director, Air, Pesticides and Toxics Division, Region VI
Director, Air and Toxics Division, Regions VII, VIII, IX, and X

cc: J. Calcagni (MD-15)
R. Campbell (MD-10)
T. Curran (MD-14)
D. DeVoe (ANR-443)
J. Farmer (MD-13)
T. Helms (MD-15)
W. Hunt (MD-14)
S. Meiburg (MD-11)
R. Ossias (LE-132A)

Appendix G-4
EPA Memorandum: "Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

October 6, 1995

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas

FROM: Joseph W. Paisie, Group Leader
Integrated Policy and Strategies Group (MD-15)

TO: Air Branch Chiefs, Regions I-X

On November 26, 1994, EPA issued guidance regarding a limited maintenance plan option for nonclassifiable ozone nonattainment areas in a memorandum from Sally L. Shaver, Director, Air Quality Strategies and Standards Division, to Regional Air Division Directors. EPA believes that such an option is also appropriate for nonclassifiable CC) nonattainment areas and the following questions and answers set forth EPA's guidance regarding the availability of this option for such areas. As this is guidance, final and binding determinations regarding the eligibility of areas for the limited maintenance plan option will only be made in the context of notice and comment rulemaking actions regarding specific redesignation requests.

If there are any questions concerning the limited maintenance plan option for nonclassifiable CO areas, please contact me at (919) 541-5556 or Larry Wallace at (919) 541-0906.

Attachment

cc: E. Cummings, OMS
K. McLean, OGC
C. Oldham
L. Wallace

10/6/95

Limited Maintenance Plan option for Nonclassifiable CO Nonattainment areas

1. Question:

   What requirements must CO nonclassifiable areas, which are attaining the CO NAAQS with a design value that is significantly below the NAAQS, meet in order to have an approvable maintenance plan under section 175A of the Act?

   Answer:

   Nonclassifiable Co nonattainment areas seeking redesignation to attainment whose design values are at or below 7.65 ppm (85 percent of exceedance levels of the CO NAAQS) at the time of redesignation may choose to submit a less rigorous maintenance plan than was formerly required. This new option is being termed a limited maintenance plan. Nonclassifiable Co areas with design values greater than 7.65 ppm will continue to be subject to full maintenance plan requirements described in the September 4, 1992 memorandum, "Procedures for Processing Requests to Redesignate Areas to Attainment," from John Calcagni, former Director of the OAQPS Air Quality Management Division to the Regional Air Division Directors.

   The EPA now believes that it is justifiable and appropriate to apply a different set of maintenance plan requirements to a nonclassifiable CO nonattainment areas whose monitored air quality is equal to or less than 8S percent of exceedance levels of the ozone NAAQS. The EPA does not believe that the full maintenance plan requirements need be applied to these areas because they have achieved air quality levels well below the standard without the application of control measures required by the Act for moderate and serious nonattainment areas. Also, these areas do not have either a recent history of monitored violation of the CO NAAQS or a long prior history of monitored air quality problems. The EPA believes that the continued applicability of prevention of significant deterioration (PSD) requirements, any control measures already in the SIR, and Federal measures (such as the Federal motor vehicle control program) should provide adequate assurance of maintenance for these areas.

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2. Question:

Besides having a design value that is equal to or less than 85% of the CO NAAQS what Other requirements are necessary for a nonclassifiable CO nonattainment area to qualify for the limited maintenance plan option?

Answer:

To qualify for the limited maintenance plan option, the CO design value for the area, based on the 8 consecutive quarters (2 yeas of data) used to demonstrate attainment, must be at Or below 7.65 ppm (85 percent of exceedance levels of the ozone NAAQS). Additionally, the design value for the area must continue to be at or below 7.65p ppm until the time of final EPA action on the redesignation. The method for calculating design values is presented in the June l8, 1990 memorandum, “Ozone and Carbon Monoxide Design value Calculations,” from William G. Laxton, former Director of the(OAQPS Technical Support Division to Regional Air Directors. The memorandum focuses primarily on determining design values for nonattainment areas in order to classify the areas as moderate or serious for CO. Therefore, the document discusses determining the design value for an area based on the monitors which are exceeding the standard. In the case of a nonattainment area seeking redesignation to attainment, all monitors must be meeting the standard. To assess whether a nonclassifiable area meets the applicability cutoff for the limited maintenance plan, a separate design value must be developed for every monitoring site. The highest of these design values is the design value for the whole area. If the area design value is at or below 7.65 ppm, the State may select the limited maintenance plan option for the first 10-year maintenance period-under section 175A. If the design value for the area exceeds 7.65 ppm prior to final EPA action on the redesignation, the area no longer qualifies for the limited maintenance plan and must instead submit a full maintenance plan, an indicated in the September 4, 1992 memorandum.

3. Question:

What elements must be contained in a section 175A maintenance plan for nonclassifiable CO areas which qualify for the limited maintenance plan option?

Answer:

Following is a list of core provisions which should be included in the limited maintenance plan for CO nonclassifiable areas. Any final EPA determination regarding the adequacy of a limited maintenance plan will be made following review of the plan submittal in light of the particular circumstances facing the area proposed for redesignation and based on all relevant available information.

a. Attainment Inventory

The State should develop an attainment emissions inventory to identify a level of emissions in the area which is sufficient to attain the NAAQS. This inventory should be consistent with EPA's most recent guidance[1] on emissions inventories for nonattainment areas available at the time and should represent emissions during the time period associated with the monitoring data showing attainment. The inventory should be based on actual "typical winter day" emissions of CO.

b. Maintenance Demonstration

The maintenance demonstration requirement is considered to be satisfied for nonclassifiable areas if the monitoring data show that the area is meeting the air quality criteria for limited maintenance areas (7.65 ppm or 85% of the CO NAAQS). There is no requirement to project emissions over the maintenance period. The EPA believes if the area begins the maintenance period at or below 85 percent of exceedance levels, the air quality along with the continued applicability of PSD requirements, any control measures already in the SIP, and Federal measures, should provide adequate assurance of maintenance over the initial 10-year

[1] The EPA's current guidance on the preparation of emissions inventories for ozone areas is contained in the following documents: “Procedures for the Preparation of Emission inventories for Carbon Monoxide and Precursors of Ozone. Volume I” (EPA-450/4–91-016), “Emission Inventory Requirements for Ozone State Implementation Plans” (EPA-450/4–91-010), and “Procedures for Emission Inventory Preparation: Volume IV, Mobile Sources” (EPA-450/4-81-026d).

maintenance period.

When EPA approves a limited maintenance plan, EPA is concluding that an emissions budget may be treated as essentially not constraining for the length of the maintenance period because it is unreasonable to expect that such an area will experience so much growth in that period that a violation of the CO NAAQS would result.

c. Monitoring Network/Verification of Continued Attainment

To verify the attainment status of the area over the maintenance period, the maintenance plan should contain provisions for continued operation of an appropriate, EPA-approved air quality monitoring network, in accordance with 40 CFR part 58. This is particularly important for areas using a limited maintenance plan because there will be no cap on emissions.

d. Contingency Plan

Section 175A of the Act requires that a maintenance plan include contingency provisions as necessary, to promptly correct any violation of the NAAQS that occurs after redesignation of the area. These contingency measures do not have to be fully adopted at the time of redesignation. However, the contingency plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted expeditiously once they are triggered by a specified event. The contingency plan should identify the measures to be promptly adopted and provide a schedule and procedure for adoption and implementation of the measures. The State should also identify specific indicators, or triggers, which will be used to determine when the contingency measures need to be implemented. While a violation of the NAAQS is an acceptable trigger, States may wish to choose a pre-violation action level as a trigger, such as an exceedance of the NAAQS. By taking early action, a State may be able to prevent any actual violation of the NAAQS and, therefore, eliminate any need on the part of EPA to redesignate an area back to nonattainment.

e. Conformity Determination Under Limited Maintenance Plans

The transportation conformity rule (58 FR 62188; November 24, 1993) and the general conformity rule (58 FR 63214; November 30, 1993) apply to nonattainment areas and maintenance areas operating under maintenance plans. Under either rule, one means of demonstrating conformity of Federal actions is to indicate that expected emissions from

planned actions are consistent with the emissions budget for the area. Emissions budgets in limited maintenance plan areas may be treated as essentially not constraining for the length of the initial maintenance period because it is unreasonable to expect that such an area will experience so much growth in that period that a violation of the CO NAAQS would result. In other words, EPA would be concluding that emissions need not be capped for the maintenance period. Therefore, in areas with approved limited maintenance plans, Federal actions requiring conformity determinations under the transportation conformity rule could be considered to satisfy the "budget test" required in sections; 93.118, 93.119, and 93,120 of the rule. Similarly, in these areas, Federal actions subject to the general conformity rule could be considered to satisfy the "budget test" specified in section 93.158(a)(5)(i)(A) of the rule.

Appendix G-5
Deep Stable Layers in the Intermountain Western United States. Wolyn, Paul G. and McKee, Thomas B.

VOLUME 117 MONTHLY WEATHER REVIEW MARCH 1989

Deep Stable Layers in the Intermountain Western United States

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(Manuscript received 9 December 1987, in final form 3 August 1988)

ABSTRACT

A deep stable layer (DSL) is a layer much deeper than a typical nocturnal inversion with stabilities not frequently found over a stable portion of the lowest 1.5 km. They have traits that can cause the stagnation of cold air in basins, i.e., light winds at the surface even if moderately strong winds aloft are present, and the restriction of the growth of daytime convective boundary layers. The objective definition used in this study is that, if 65% of the lowest 1.5 km of the 1200 UTC (0500 mountain standard time (MST)) sounding has a lapse rate of 2.5°C km^{-1} or less, then the day is under the influence of a DSL. A climatology of days under the influence of a DSL was performed at four sites in the intermountain western United States: Grand Junction, Colorado; Salt Lake City, Utah; Winnemucca, Nevada; and Boise, Idaho. The DSL is a wintertime phenomenon with 10% to 20% of the days in December and January at the four stations being under the influence of a DSL. Successive days with a DSL present lead to episodes of varying lengths. Episodes of three days or longer occurred at least once each year at Boise and Grand Junction and at least once every two years at Salt Lake City and Winnemucca. An episode of 8 days duration occurred at Grand Junction.

A DSL episode that occurred in December 1980 was examined in depth to gain insight into the life cycle of a DSL. Synoptic-scale warming above 1 to 1.5 km and weak surface heating were important for the initiation of the episode. The longwave radiation properties of a persistent fog layer and weak surface heating were important physical processes for maintaining and prolonging the episode. From the episode it is hypothesized that DSLs form when warming aloft traps relatively cold air near the surface, decoupling it from the rest of the atmosphere. The barriers surrounding the basins are important for the formation of a DSL because they prevent the horizontal movement of the cold air. DSLs have important implications for air quality, episodes of persistent fog, and surface temperature forecasts.

1. Introduction

Complex terrain has profound influences on the movement of surface air masses which are stable. Mountain barriers can prevent the movement of very stable, relatively cold air masses into a region. The barrier's influences can also have the opposite effect. If a stable air mass moves into or develops within the region or if warming aloft greatly increases the stability of the air mass, the complex terrain can prevent the stable, relatively cold air from leaving the region.

This study will examine an atmospheric condition defined as a deep stable layer (DSL) in the intermountain western United States. DSLs are deep layers of at least moderate stability that are deeper than typical nocturnal inversions. The deep layer of stability has two traits which can cause the stagnation of relatively cold air in basins. The stability can cause light winds at the surface even if there are moderately strong winds aloft and they can cause a shallow daytime convective boundary layer (CBL).

DSLs are studied at Salt Lake City, Utah; Boise, Idaho; Winnemucca, Nevada; and Grand Junction, Colorado. Figure 1 shows the location of these intermountain region stations. The four stations are located in basins. In this study a "basin" refers to a broad, fairly deep valley where the destruction of a nocturnal inversion proceeds like the destruction over flat terrain. Unlike deep, relatively narrow mountain valleys, buoyant flows up the slope of the surrounding terrain are not important for the destruction of a nocturnal inversion (see Bader and McKee 1985).

There have been many studies of persistent fog episodes and poor air quality which were associated with deep layers of stability in complex terrain. Willett (1928) found that for high inversion fog in Europe, the mean temperature was −2°C at the surface, −4.7°C at 700 m and 0°C at 1270 m. Lockhart (1943) studied high inversion fog in the Central Valley of California. He indicated that, during formation of the episode, warming and drying occurred at a station 4209 feet MSL while no trend occurred in the valley. Once the fog formed, it remained in the Central Valley until a disturbance moved over the region causing the fog and associated inversion to dissipate. Holets and Swanson (1981) indicated that the change in potential temperature with height in a high inversion fog episode was 29 K km^{-1} and that this inversion above the fog layer had a thickness of 1000 m or less. Yu and Pielke (1986)

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FIG. 1. Locations of the stations used in this study.

in their study of air pollution in the Lake Powell region of Utah showed several soundings on days with poor visibility. These days had deep layers of moderate stability. The use of a fully dynamic mesoscale model showed that "recirculation" of pollutants in the cold stagnant air occurred without a sizable amount of pollutants leaving the region.

In this paper the rationale for the objective definition of a DSL will be stated. Then, using this definition, 25 years of National Weather Service (NWS) sounding data at the four intermountain region stations will be examined to develop a climatology of DSLs. One extensive DSL episode will be examined in depth to provide insight into the important factors for the initiation, continuation, and termination of DSL episodes. From this episode the physical processes that form a DSL will be hypothesized. Finally, the influence that DSLs have on air quality, fog episodes, and surface temperature forecasting will be discussed.

2. Deep stable layer definition

The DSL definition is comprised of a depth and lapse rate criteria. The depth criteria identifies layers of stability much deeper than typical nocturnal inversions. The lapse rate criteria eliminates the possibility of buoyancy-induced motions and isolates one group of soundings with relatively strong static stabilities, which do not occur frequently over significant depths of the lower atmosphere. Days satisfying the definition have two traits that can cause the stagnation of air in basins in the intermountain west. First, the layer will severely hamper the mechanically induced vertical mixing of momentum except when a strong wind shear is present. Second, the layer will require a substantial sensible heat input at the surface to form a deep daytime CBL.

The definition of a DSL used in this study is that if 65% of the lowest 1.5 km of the 1200 UTC [0500 Mountain Standard Time (MST)] sounding has a lapse rate of 2.5°C km^{-1} or less the day is under the influence of a DSL. The climatological study of sounding data done by Holzworth and Fisher (1979) showed that at least 75% of the 1200 UTC soundings in the intermountain west had surface-based inversion depths of 500 m or less and that more than half of the soundings had surface-based inversions of 250 m or less. The DSL definition examines a layer much deeper than a typical nocturnal inversion, and the depth of the sounding which must satisfy the minimum stability criteria is at least twice as deep as a typical nocturnal inversion.

Figure 2 shows a temperature versus height plot in the lowest 2.0 km for three special conditions, the DSL lapse rate criteria, a sounding which meets the DSL criteria, and a sounding which does not meet the criteria. The three special conditions are lapse rates of 9.8°C km^{-1}, 4.0°C km^{-1} and isothermal. The line with a lapse rate of 9.8°C km^{-1} is the dry adiabatic lapse rate. Except for shallow layers, a sounding cannot be less stable than this lapse rate. The line with a lapse rate of 4.0°C km^{-1} is a representative value for moist adiabats at temperatures near 20°C and pressures of 800 mb. (For 0°C and 800 mb the lapse rate is near

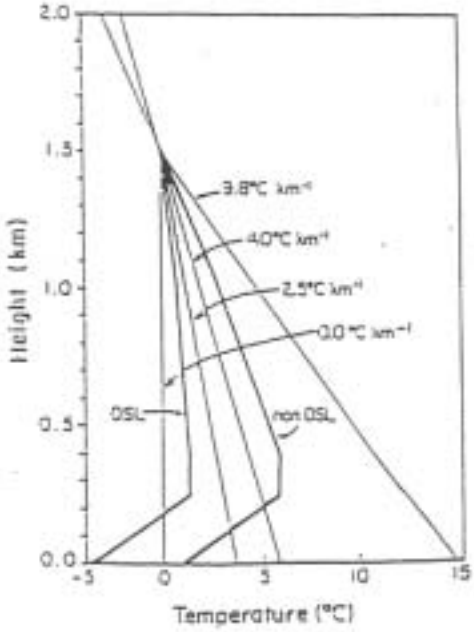

FIG. 2. A temperature versus height plot of a sounding which meets the DSL criteria and one which does not. The lighter lines are lapse rates of 9.8, 4.0, 2.5°C km^{-1}, and isothermal.

5°C km^{-1}). Saturated parcels are buoyant if the lapse rate is greater than moist adiabatic. Using a more stable lapse rate than moist adiabatic ensures that parcels are not buoyant even when saturated. The isothermal lapse rate defines a relative boundary since few soundings have a significant portion of the lowest 1.5 km with lapse rates at least this stable.

The DSL definition is in the region between moist adiabatic and isothermal lapse rates. Soundings that meet the DSL definition have a significant portion of the layer above a surface-based inversion (or other thermal structure) and below 1.5 km with lapse rates less (more stable) than 2.5°C km^{-1}. These soundings comprise a set of days formed by a strong stabilizing action in the atmosphere. The two soundings in Fig. 2 with bold lines illustrate the difference between a sounding which meets the DSL (to the left) and one which does not meet the definition. The energy required to bring each to the adiabatic lapse rate is strikingly different. Sensitivity of the frequency of the number of DSL days to the depth and lapse rate criteria are shown in Figs. 3 and 4. Figure 3 shows the mean percentage change in the number of DSL days using different lapse rate criteria for the four stations in the study for the years 1960–64. The curve is shaped like a negative exponent. The 2.5°C km^{-1} lapse rate is on the edge of a region where the number of days identified increases rapidly for larger lapse rates. For example, decreasing the lapse rate to 2.0°C km^{-1} results in only 19%–26% fewer days meeting the DSL definition while increasing the lapse rate to 3.0°C km^{-1} results in 22%–45% more days meeting the definition. Using the isothermal lapse rate decreases the number of days by 43%–68% while using 4.0°C km^{-1} increases the number of days by 81%–167%. The 2.5°C km^{-1} lapse rate appears to identify one group of days with deep layers of stability which does not commonly occur. Choosing a smaller lapse rate, like isothermal, will identify less

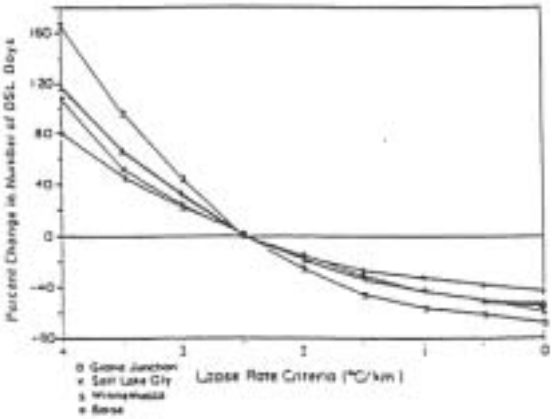

FIG. 3. The mean percentage change (bold line) for the four stations in the number of DSL days for different lapse rate criteria. The lighter lines show the percentage change for individual stations.

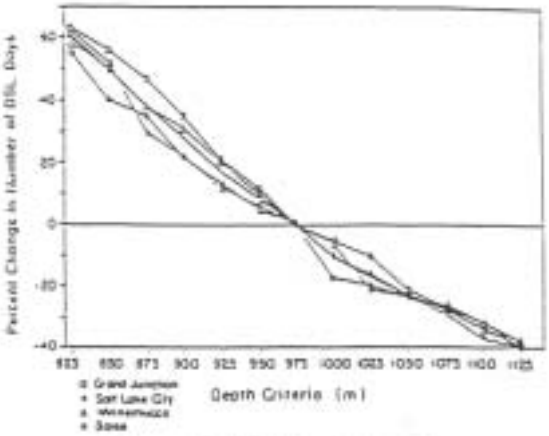

FIG. 4. As in Fig. 3 but for depth criteria.

days of a similar nature while a larger lapse rate may start to identify days in a different regime.

Figure 4 shows a similar graph for the depth criteria. The depth criteria has more of a linear shape than the lapse rate criteria. Changing the depth criteria by 25 m will alter the number of DSL days by 5%–11% while a change of 50 m will alter the number of days by 10%–21%. The slope of the lines connecting the mean percentage change is almost exactly linear for depth ranges 825–925 m and 1025–1125 m with the lines in these two regions having different slopes. It is interesting to note that the depth criteria (975 m) is in a transition region between two different meteorological regimes.

Other key factors in the choice of a definition are to identify days which would likely have the traits of light surface winds even with moderately strong winds aloft and shallow daytime CBLs. The Richardson number given in Panofsky and Dutton (1984) is

$$R_i = \frac{g}{T}\frac{(\gamma_d - \gamma)}{(\partial v/\partial z)^2}, \qquad (1)$$

where

R_i Richardson number,
g gravity,
T temperature,
γ_d dry adiabatic lapse rate,
γ the lapse rate of the atmosphere,
v wind speed,
z height.

Panofsky and Dutton (1984) state that when using rawinsondes a bulk Richardson number of 1.0 is needed to get clear air turbulence. With a temperature of 273 K and a lapse rate of 2.5°C km^{-1} a wind shear of 16 m s^{-1}/km is needed to get a bulk Richardson number equal to 1.0. The depth criteria in the present definition of a DSL will allow for a sufficiently deep layer of stable air so that vertical momentum transfer will not occur easily. Since the objective DSL definition requires a

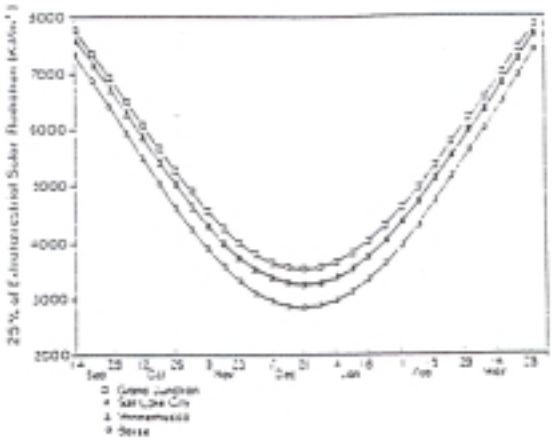

FIG. 5. Twenty-five percent of the daily extraterrestrial solar radiation at the four stations from 14 September 1980 to 28 March 1981.

fairly large wind shear to have vertical mixing of momentum, it is likely that the cold air in the basin will have only light wind speeds even if the winds above the basin are relatively strong.

Figure 5 shows 25% of the daily incoming solar radiation at the top of the atmosphere for the four intermountain region stations. (Using 25% of the radiation will be shown later to be a good estimate.) Comparing this figure to two hypothetical soundings will demonstrate that a sizable amount of surface heating needed to form a CBL when a DSL is present. A sounding which minimally meets the DSL requirements has a lapse rate of 2.5°C km^{-1} from the surface upward. To form a CBL up to 500, 750, and 1000 m requires a surface sensible heat flux of 1835, 2753, and 3671 kJ m^{-2}, respectively. During the low sun season 25% of the incoming solar radiation is not much greater than the amount needed to form a CBL up to 1000 m.

A surface-based nocturnal inversion often is present at the morning sounding. When a 250 m deep surface inversion with a strength of 10°C km^{-1} (a "weak" surface inversion as defined by Holzworth and Fisher 1979) is inserted into the sounding, the amount of energy required to form a CBL to 500, 750, and 1000 m becomes 2220.0, 3139.7, and 4057.4 kJ m^{-2}, respectively. Figure 5 shows that for an 8 week period centered on the solstice at Grand Junction, 10 weeks at Salt Lake City and Winnemucca, and for 13 weeks at Boise the 25% of the incoming solar radiation is below the amount to form a CBL to 1000 m. A sounding with a weak surface-based inversion and a layer above which barely meets the DSL lapse rate criteria likely would not be able to form a daytime CBL deep enough to destroy the DSL by surface sensible heat flux alone during the low sun season.

3. Deep stable layer climatology

National Weather Service rawinsonde data from 1959 to 1983 at Salt Lake City, Utah; Boise, Idaho; Winnemucca, Nevada; and Grand Junction, Colorado were examined to determine the days on which DSLs were present. Unlike previous studies (i.e., Holzworth 1962, 1967) where climatologies of mean soundings were developed, we are identifying specific days with deep layers of moderate stability. The data includes temperature and moisture at the mandatory and significant levels which according to the Manual for Radiosonde Coding (1968) can represent the temperature profile to an accuracy of at least 2°C and humidity to 10% below 300 mb when a straight line connects these points.

Table 1 shows the number of DSL days by month at the four intermountain region stations. The distribution is very similar for all the stations. In December and January 10% to 20% of the days met the objective DSL definition while from April to September less than 2% of the days were DSL days. Table 2 shows the length of DSL episodes. Days with missing or bad data were

TABLE 1. Monthly distribution of DSL days and percentage of DSL days in all days of the period of record from 1959 to 1983.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
						Grand Junction							
Number of days	151	33	4	3	5	6	4	6	9	16	37	143	417
Percentage	20	5	1	<1	1	1	1	1	1	2	5	18	
						Salt Lake City							
Number of days	83	30	8	3	2	4	3	2	4	25	49	85	298
Percentage	11	4	1	<1	<1	1	<1	<1	1	3	7	11	
						Winnemucca							
Number of days	119	40	6	0	9	0	4	3	7	35	76	117	417
Percentage	15	6	1	0	1	0	1	<1	1	5	10	15	
						Boise							
Number of days	118	51	8	6	3	6	14	3	8	53	76	116	462
Percentage	15	7	1	1	<1	1	2	<1	1	7	10	15	

TABLE 2. Monthly distribution of DSL episodes of various length (number of days) over the period of record from 1959 to 1983.

Length	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Grand Junction						
1	40	13	2	3	5	6	4	6	10	14	29	41
2	25	4	1	0	0	0	0	0	0	1	2	21
3	10	2	0	0	0	0	0	0	0	0	1	8
4	3	0	0	0	0	0	0	0	0	0	0	2
5	2	0	0	0	0	0	0	0	0	0	0	1
6	2	0	0	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	0	1
						Salt Lake City						
1	29	15	6	3	2	4	3	2	4	19	33	43
2	9	6	1	0	0	0	0	0	0	1	7	16
3	6	1	0	0	0	0	0	0	0	1	0	1
4	1	0	0	0	0	0	0	0	0	0	1	2
5	1	0	0	0	0	0	0	0	0	0	0	0
6	1	0	0	0	0	0	0	0	0	0	0	0
						Winnemucca						
1	51	19	6	0	9	0	4	3	7	25	37	59
2	21	6	0	0	0	0	0	0	0	5	11	16
3	7	1	0	0	0	0	0	0	0	0	2	4
4	1	0	0	0	0	0	0	0	0	0	2	2
5	1	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	1	0
						Boise						
1	52	20	8	6	3	6	11	3	5	36	40	35
2	11	9	0	0	0	0	0	0	0	6	7	15
3	4	1	0	0	0	0	0	0	1	2	3	11
4	4	0	0	0	0	0	0	0	0	0	2	0
5	3	1	0	0	0	0	0	0	0	0	0	2
6	0	0	0	0	0	0	0	0	0	0	1	0

included in an episode as having a DSL if the episode was at least four days long and if the day was sandwiched between two DSL days. In the 25 years examined, the number of DSL episodes of three days or longer was 15 at Salt Lake City, 21 at Winnemucca, 34 at Grand Junction, and 35 at Boise. The average number of episodes of three days or longer per year was 0.60 at Salt Lake City, 0.84 at Winnemucca, 1.36 at Grand Junction, and 1.40 at Boise.

The examination of the DSL episode that follows will show that the objective definition is "conservative." That is, cold air stagnation may occur on days that do not strictly meet DSL criteria. Consequently, the statistics presented in this section may underestimate the number of days with sufficiently deep layers of stability to cause cold air to stagnate. The results of this climatology as well as the few examples in the introduction of DSL-like phenomenon strongly suggest that DSLs are common occurrences throughout most of the intermountain western United States.

4. Episode

In this section a DSL episode which occurred at the four intermountain region stations from 6 to 23 December 1980 will be examined in detail. Table 3 shows the days which met the objective deep stable layer definition at each location. The analysis will focus on Salt Lake City, which had persistent fog, and Winnemucca, which did not have fog. First, the synoptic situation during the initiation, continuation, and termination of the episode will be discussed. Then, diagrams showing the vertical profiles of potential temperature and winds throughout the episode will be examined.

a. Synoptic situation

Figure 6 shows the 700 mb temperature time history for 6 to 23 December 1980 at the four intermountain region stations. On the 7th and 8th, a deep, cold trough was over the intermountain region providing unsettled weather. By the 9th the upper level trough had moved eastward. For the next several days a warm ridge built into the area causing significant warming at all stations. During this time an eastward progression of warming is evident. On the 13th and 14th a weak "cutoff" low moved over the region resulting in slight cooling aloft. Afterwards, the warm ridge reappeared over the region. On the 17th the ridge began to weaken and by the 21st the flow over the region was nearly zonal. By the 22nd the winds aloft had become stronger as a result of a Pacific storm moving onshore.

TABLE 3. Days which satisfied the objective deep stable layer definition.

Date (December)	Grand Junction	Salt Lake City	Winnemucca	Boise
6				
7				
8				
9			×	×
10		×	×	×
11	×		×	×
12		×		×
13	×		×	×
14	×	×	×	
15	×	×		×
16	×	×		×
17	×	×		×
18	×			×
19				×
20				
21				
22				
23				

b. Isentropic analysis

To gain better insight into the life cycle of the episode, time–height sections of potential temperature and winds were constructed (Figures 7 and 8). Winds are also plotted. Each small barb indicates speeds of 2–3 m s^{-1}, each full barb represents speeds of 4–6 m s^{-1}, and each flag represents speeds of 24–26 m s^{-1}. The shading on the figures represents dew point depressions of 3°C or less. For the rest of this paper the word "day" represents the calendar day at the station. "Morning" refers to the 1200 UTC (0500 MST) sounding and "afternoon" refers to the 0000 UTC (1700 MST) sounding.

To aid in the discussion of the episode, three phases of the deep stable layer episode will be defined. The initiation phase occurs when processes which form a DSL occur. Once a DSL is formed the continuation phase begins. During the continuation phase the DSL may strengthen or weaken, but processes which lead to the final destruction of the episode do not occur. The termination phase starts when processes which lead to the destruction of the episode are first evident.

1) SALT LAKE CITY

Figure 7 shows the isentropic analysis for Salt Lake City. On the 6th there is a deep layer of slight stability up to 5.0 km. Then the initiation phase of the episode starts. Beginning the morning of the 7th, a layer of strong stability and rapid warming appears in the upper part of the sounding. The region of warming descends and by the tenth the base of the stable layer reaches a height of 1.0 km. At this time the continuation phase begins. The adiabats become horizontal between 400 and 1000 m signifying the presence of a deep layer of strong stability. This layer will be called the capping stable layer. From the morning of the 10th through the 12th the air near the surface is very moist but fog does not form. On the 13th a persistent fog layer develops which lasts until the 21st.

On the 14th a "cutoff" low passes over the area. The cooling associated with the disturbance is able to weaken the capping stable layer but not destroy it. After the disturbance passed the capping stable layer reintensifies. The termination phase of the episode begins on the 17th when the warm ridge aloft weakens. During this period the capping stable layer weakens; however, a very strong, shallow inversion remains at the top of the fog layer. Finally, on the 22nd when a strong disturbance influences the area, the fog and the remaining capping stable layer are destroyed. At Boise the episode is very similar to that of Salt Lake City. Note from Table 3 and Fig. 7 that stagnation of relatively cold air in the basin occurred on some of the days which did not meet the objective DSL layer criteria.

2) WINNEMUCCA

Figure 8 shows the isentropic analysis for Winnemucca. The episode has many similarities to the episode at Salt Lake City. On the morning of the 7th, a region of rapid warming first appears. By the morning of the 9th a capping stable layer forms which signifies the beginning of the continuation phase. During this phase a weak disturbance passing over the region does not destroy the capping stable layer. On the morning of the 17th the termination phase begins when significant cooling occurs above 1.0 km. Unlike Salt Lake City, there is not a persistent fog layer, and a CBL forms daily. By the afternoon of the 19th the atmosphere above the daytime boundary layer is only weakly stable. This signifies the end of the episode at Winnemucca.

5. Physical processes

The importance of synoptic scale warming for the initiation of the DSL episode is evident from the case study. During the initiation phase the warming rates at 700 mb, which is about 1.5–2.4 km AGL at the four stations, averaged 3.75 to 5.0°C day^{-1} for a 3–4 day period (see Fig. 6). Since there is little or no condensation induced diabatic heating in this region, the warming aloft is the result of subsidence, horizontal warm advection, or a combination of both processes. The distribution of the resulting heating between the two processes will not be examined in this study.

The importance of physical processes which occur near the surface also are important to the life cycle of the episode. In this section the importance of longwave heating/cooling as well as surface heating to the DSL episode will be evaluated.

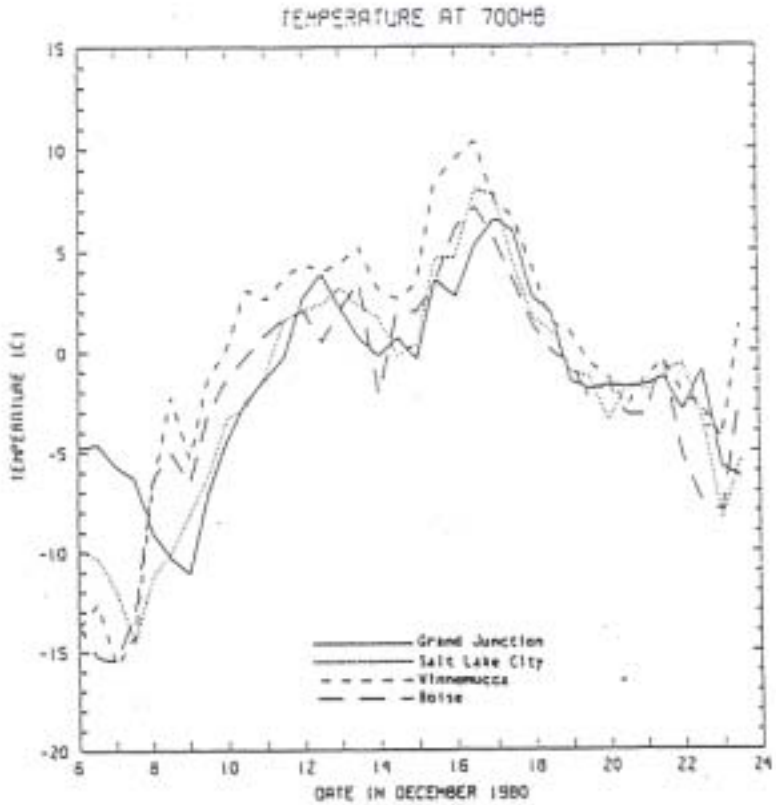

FIG. 6. The temperature at 700 mb for 6–24 December 1980. The data points above the date indicators are from the morning soundings while data between the date indicators are from the afternoon soundings.

a. Longwave heating/cooling

Radiational cooling can have an important influence on the episode by inducing heating or cooling at different heights. Using the IR model described in Cox and Griffith (1979) the upward and downward IR flux along with IR heating rates were calculated for some of the soundings during the episode studied. The carbon dioxide and ozone mixing ratios for the atmosphere and the temperature profile above the sounding are climatological values from McClatchey et al. (1972). The liquid water content of fog used in the IR calculation is 0.025 g m^{-3} and a liquid water content of 0.05 g m^{-3} is used for non-fog clouds. The model was run for three different meteorological situations: cloudless air, a deep fog layer with a cloudless above it, and fog with clouds above it.

1) CLOUDLESS AIR

The IR model was run for two soundings with clear skies as a reference to establish the IR cooling rates for cold, moist surface air beneath warm, dry air and for moist air above dry surface air. Figures 9a and 9b show the soundings and calculated IR heating rates. Generally, throughout the lowest 4.0 km of the atmosphere the magnitude of the IR heating rates are approximately 1.0 to 1.5°C day^{-1} or less and there are not any large vertical gradients in IR heating rates. These calculations indicate that with cloudless skies vertical differences in IR heating rates will not greatly change the overall stability of the atmosphere. These clear air cooling rates, however, may be very important for the formation of deep fog layers which greatly affect the life cycle of the episode.

2) FOG WITH CLOUDLESS AIR ABOVE

Figure 9c shows the morning sounding on 13 December 1980 at Salt Lake City and the calculated IR heating rates. Cooling rates stronger than 10°C day^{-1} occur in the fog layer with slight warming above it. The strong IR cooling provides a source of cold air for the surface fog layer. This cooling not only helps maintain the fog layer, but it can intensify the inversion and provide a mechanism that will help maintain the DSL when other processes which will destroy or weaken it are present.

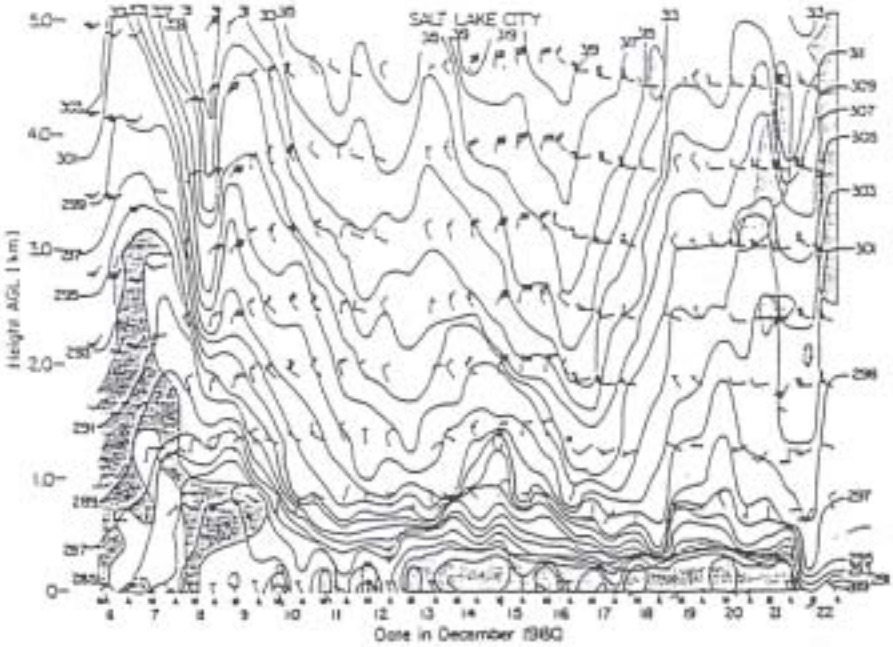

FIG. 7. A time versus height plot of potential temperature and winds for Salt Lake City for 6–23 December 1980. Shaded regions show dew point depressions of 3.0°C or less. "M" refers to the morning sounding and "A" refers to the afternoon sounding.

3) CLOUDS ABOVE FOG LAYER

The afternoon sounding of the 14th and morning sounding of the 15th at Boise have a low, warm cloud above a deep fog layer. During this time a weak disturbance passed over the area and there was a temporary dissipation of the fog layer and warming near the surface. Figures 9d and 9e show the soundings and

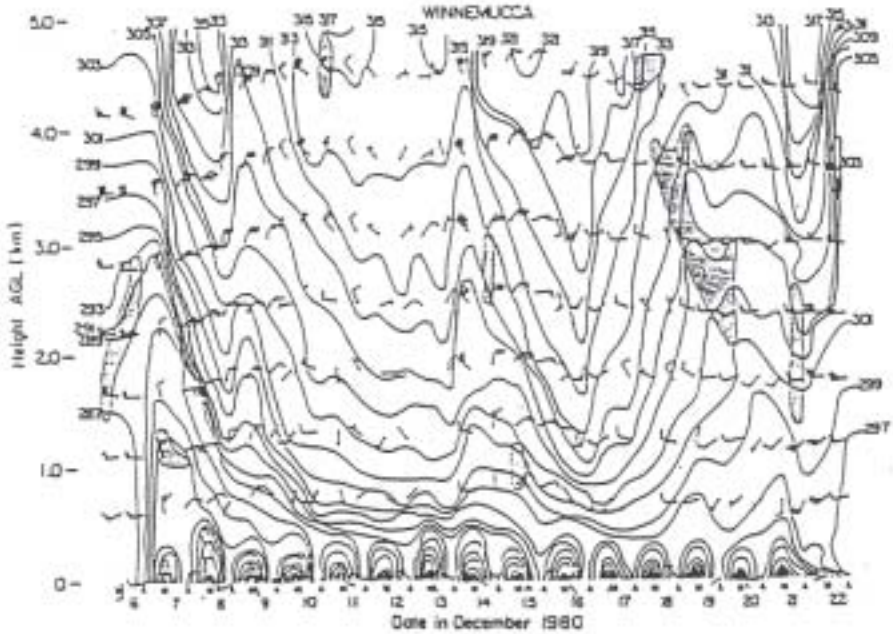

FIG. 8. As in Fig. 7 but for Winnemucca.

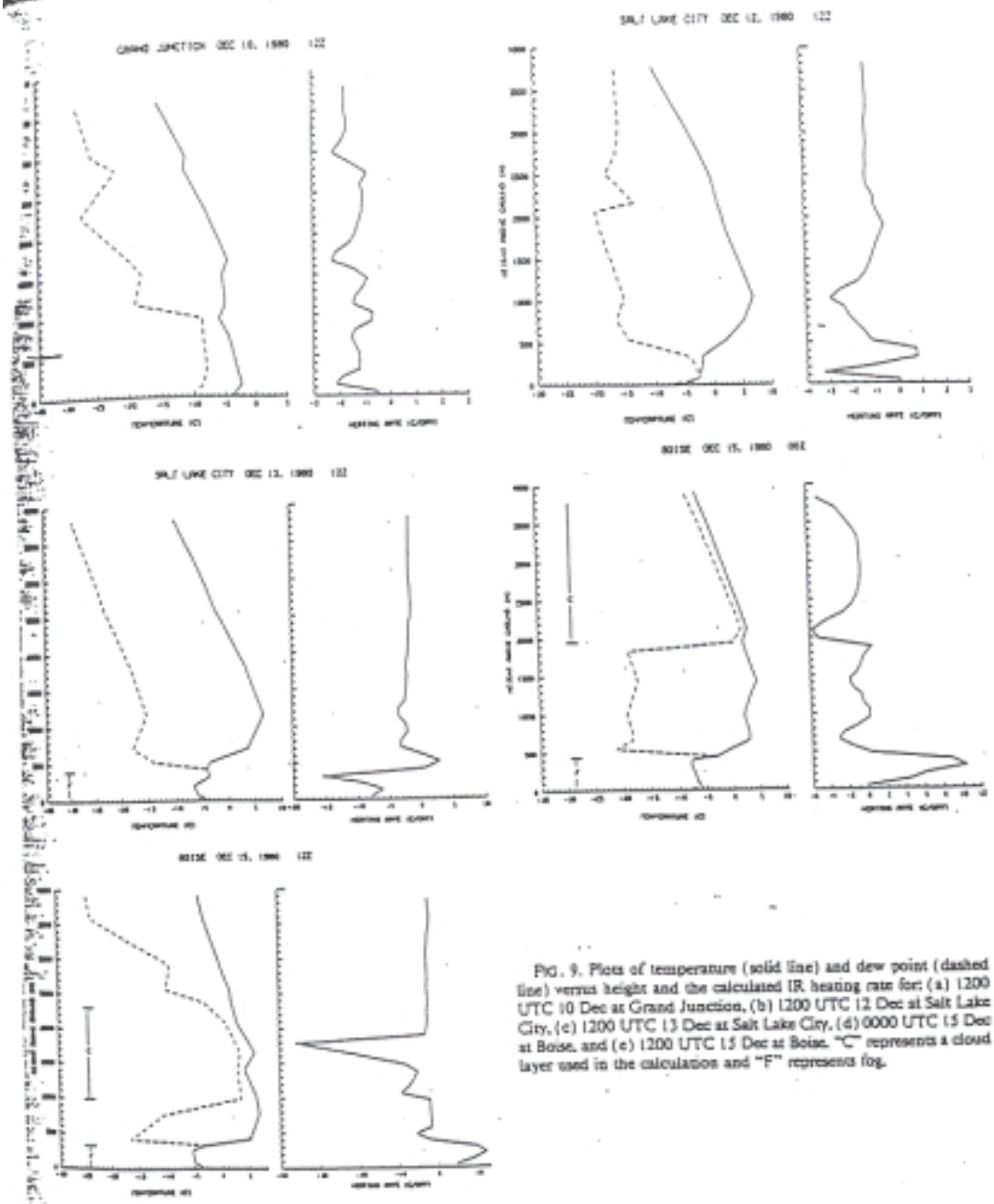

FIG. 9. Plots of temperature (solid line) and dew point (dashed line) versus height and the calculated IR heating rate for: (a) 1200 UTC 10 Dec at Grand Junction, (b) 1200 UTC 12 Dec at Salt Lake City, (c) 1200 UTC 13 Dec at Salt Lake City, (d) 0000 UTC 15 Dec at Boise, and (e) 1200 UTC 15 Dec at Boise. "C" represents a cloud layer used in the calculation and "F" represents fog.

IR heating rates. For both soundings there are warming rates greater than 5°C day^{-1} in the fog layer. The warming in the fog layer could result in the weakening of the overall stability of the atmosphere and dissipation of the fog layer. The influence of the IR heating may help to explain the observed warming at Boise during this time.

b. Surface heating

Figure 10 shows the calculated convective boundary layer (CCBL) heights at Salt Lake City and Winnemucca for this episode. The CCBL is the height at which the potential temperature of the daily surface maximum temperature intersects the 0000 UTC (1700

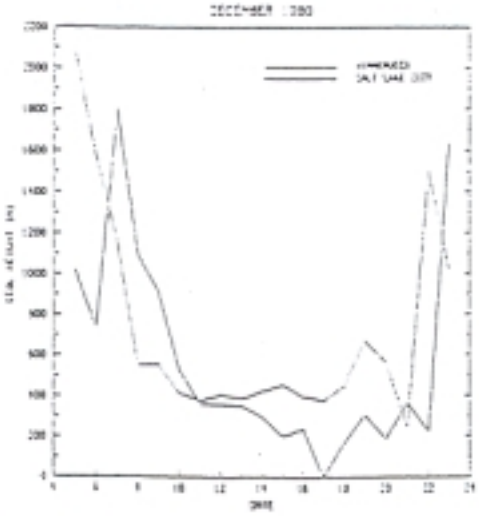

FIG. 10. The CCBL heights at Winnemucca and Salt Lake City for 4–24 December 1980.

MST) sounding. The 0000 UTC sounding was used because it is close to the time of a typical afternoon maximum temperature. The CCBL height is an estimate of the maximum daytime CBL height. The CCBL heights are much lower than the top of the capping stable layer indicating the daytime CBL was not able to mix through the stable layer allowing for the continuation of the DSL episode.

The amount of energy from the surface to the CCBL height between the 1200 UTC sounding and the potential temperature used to calculate the CCBL height is an estimate of the heating needed to form the CBL that day. Figure 11 shows this heating expressed as a percentage of the incoming solar radiation at the top of the atmosphere. During the episode the amount of heating is generally between 20% and 30% at Winnemucca and Grand Junction which are the sites without the persistent fog layer. This shows that using 25% of the incoming solar radiation in the analysis in section 2 is reasonable. The percentages are much smaller at Boise and Salt Lake City on days with a persistent fog layer. With the fog layer present the combination of a high albedo with weak surface heating and IR cooling provide the mechanism to maintain and prolong the episode.

6. Hypothesized life cycle of a DSL episode

During the initiation phase of the episode the atmosphere below 2.0 km was weakly stable and generally cooling. The isentropic analyses show that a deep layer of relatively cold air was present in and above the basins. When warming aloft occurred, the barriers surrounding the basin act as walls restricting the horizontal movement of the relatively cold air near the surface. The deep layer of stability which forms acts as a cap trapping the cold air near the surface and decoupling it from the air aloft. The daytime CBL cannot mix through the capping stable layer and the capping stable layer hampers the vertical transfer of momentum to the surface. Once formed, a weak disturbance could not destroy the capping stable layer. During the termination phase the cooling aloft and some warming near the surface decrease the stability of the atmosphere. The presence of the persistent fog layer strengthens and prolongs the episode by providing a source of IR cooling near the surface and by its high albedo to solar radiation.

7. Implications of deep stable layers

DSLs are associated with the stagnation of relatively cold air in basins. The presence of DSLs can have implications for regional air quality, persistent fog episodes, and surface temperature forecasts. The low daytime CBL along with light winds can provide conditions for potentially poor regional air quality. Figure 12 shows the CCBL height, the mean wind speed below the CCBL height, and the mixing volume for Winnemucca. The mixing volume is the product of the mean wind speed and CCBL height. If this quantity is multiplied by time and a length perpendicular to the wind, it gives an estimate of the volume of air into which pollutants are mixed. Before the episode the mixing volume is large. During the episode the mixing volume decreases drastically and it increases after the episode. Notice that the 12th did not meet the objective DSL definition: yet the three elements remained small so this episode at Winnemucca is at least six days long. The other three stations show a similar pattern. A low mixing volume can allow for the collection of pollutants in a small volume resulting in high pollutant concen-

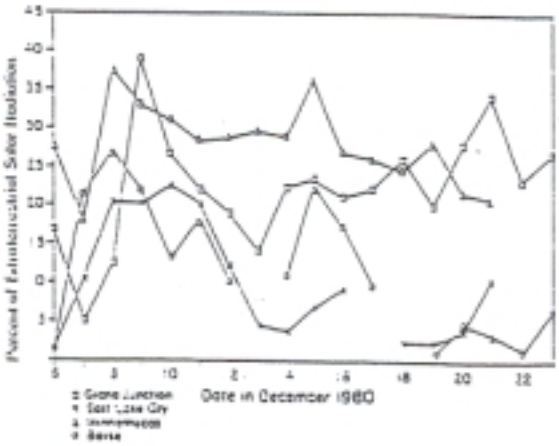

FIG. 11. The percentage of the daily extraterrestrial solar radiation needed to form a CBL to the height and potential temperature of the CCBL.

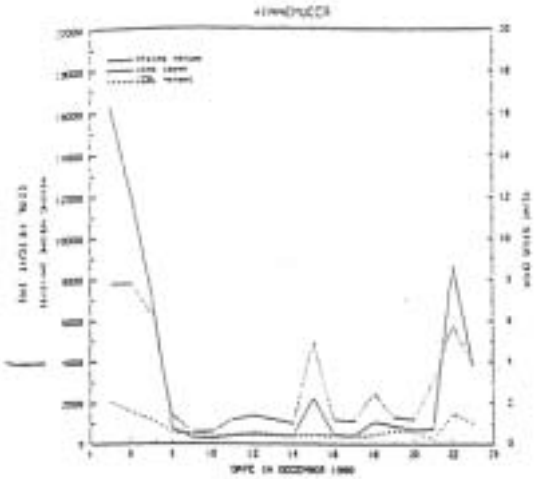

FIG. 12. Mixing volume, wind speed, and CCBL height at Winnemucca for 4–24 December 1980.

trations. The work by Yu and Pielke (1986) indicates that when DSLs are present pollutants will disperse in the basin with little pollution leaving it. Not only do DSLs allow for locally high pollutant concentrations over source regions, but very poor air quality can occur over a significant portion of the basin through the accumulation of pollutants over several days.

Table 4 shows the mixing volumes for December days in the years 1976 to 1980. Nearly all the DSL days had small mixing volumes. There is also a sizable number of non-DSL days with small mixing volumes.

Besides poor air quality, stagnation can also lead to other problems. As seen in the case studies for Salt Lake City and Boise the layer of persistent fog, once formed, may last throughout an entire day and can persist for many days. DSLs can provide the stagnant conditions necessary for the formation and existence of fog.

The presence of DSLs can also be important for surface temperature forecasts. At the four intermountain region stations the mean surface temperature only warmed about 6° to 8°C from 7 December until the end of the episode. By contrast, 700 mb temperatures warmed 15° to 20°C. With the strong warming aloft, objective forecasting indices (such as 500 to 1000 mb thickness or the 700 mb temperature) suggest that surface warming should also be substantial. The knowledge of the presence of a DSL can help the forecaster to properly estimate the change in the mean surface temperature throughout the period.

8. Summary

DSLs in the intermountain western United States are mainly a wintertime phenomenon with episodes of 3 days or longer occurring at least once every two years at Salt Lake City and Winnemucca and at least once a year at Boise and Grand Junction. The case study showed that the objective DSL definition is "conservative" because some days that did not meet the objective definition still had sufficiently deep layers of stability to cause stagnation. DSLs can cause potentially poor regional air quality and are one group of days associated with low mixing volumes at the four stations. DSLs can also be accompanied by episodes of fog which last the entire day. An in depth examination of a DSL episode and the physical processes which may be important to the episode showed the following DSL life cycle.

TABLE 4. The distribution of mixing volumes for December DSL days and non-DSL days from 1976 to 1980.

Mixing volume (10^3 m^2 s^{-1})	Grand Junction		Salt Lake City		Winnemucca		Boise	
	DSL	non-DSL	DSL	non-DSL	DSL	non-DSL	DSL	non-DSL
<1	26	78	12	53	18	24	24	55
1–2	6	23	2	20	8	17	7	20
2–3	0	3	1	17	1	14	1	9
3–4	0	3	0	4	0	9	0	6
4–5	0	1	0	6	0	7	0	7
5–6	0	6	0	7	0	4	0	4
6–7	0	3	0	4	1	3	0	1
7–8	1	1	0	3	0	6	0	1
8–9	0	2	0	3	0	5	0	2
9–10	0	0	0	3	0	3	0	1
10–11	0	1	0	2	0	1	0	2
11–12	0	0	0	1	0	2	0	1
>12	0	4	0	14	0	23	0	12
				Mixing volume				
Mean (m^2 s^{-1})	655	2158	726	4380	1109	8339	755	4892
Standard deviation (m^2 s^{-1})	396	4432	673	7111	1261	12709	542	10721

In the initiation phase a deep layer of cold air was present over the region. A layer of rapid warming descended to form a DSL. The deep layer of stability decoupled the air near the surface from the air aloft. The daytime CBL could not mix through the deep layer of stability and the transfer of momentum aloft to the surface was severely hampered. The barriers surrounding the basin acted as walls restricting the horizontal movement of the cold air near the surface. The deep layer of stability along with the barriers trapped the air in the basin.

The continuation phase had a capping stable layer which did not greatly weaken. In this phase a weak disturbance passed over the region but was not able to destroy the capping stable layer, and weak surface heating prevented the daytime CBL from being sufficiently warm to mix through the capping stable layer. Episodes of fog which last the entire day can occur during this phase and the longwave cooling and high albedo of the fog layer can help maintain or strengthen the DSL.

In the termination phase a weakening of the synoptic-scale ridge aloft allowed disturbances to move over the region with associated cooling aloft. Without the presence of fog the episode ended in two days, while with fog present the episode ended when a strong disturbance moved over the region. The high albedo and strong longwave cooling of the fog layer help prolong the DSL episode.

Acknowledgments. We would like to thank Judy Sorbie for drafting some of the figures and we would like to thank Odie Bliss for her help in preparing this paper. This work was supported by the National Science Foundation under Grant ATM-8304328.

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Appendix G-6
Ada Planning Association Designated As Lead Agency For CO SIP

- **Resolution 2-78**
- **Feb. 3, 1978 Letter – APA to Division of Environment**
- **Feb. 6, 1978 Memorandum – Division of Environment to Idaho Governor**
- **Feb. 6, 1978 Letter –Idaho Governor to EPA Region 10**

ADA PLANNING ASSOCIATION

150 N. Capitol Boulevard
P. O. Box 500
Boise, Idaho 83701
(208) 384-4310

RESOLUTION NO. 2-78

RESOLUTION DESIGNATING THE ADA PLANNING ASSOCIATION TO DEVELOP THE REVISED STATE IMPLEMENTATION PLAN PROVIDED FOR UNDER THE CLEAN AIR ACT OF 1977 FOR THE ADA COUNTY AREA AS SPECIFIED IN ATTACHMENT A.

WHEREAS, the Clean Air Act Amendments of 1977, P.L. 95-95, (hereinafter called the "Act"), require that in certain areas which do not meet national ambient air quality standards (nonattainment areas), a revised state implementation plan can be prepared and the deadline for attaining national standards can be extended to 1982, or in certain circumstances 1987; and

WHEREAS, the Ada County area as specified in Attachment "A" is such a nonattainment area because of excessive levels of carbon monoxide and, therefore, is eligible to develop a revised state implementation plan with a transportation control plan element and obtain the extension date for compliance with national standards; and

WHEREAS, Section 174 of the Act provides that within six months from enactment of the Act or February 7, 1978 the local governments in a nonattainment area may agree to designate an organization of local elected officials to prepare a revised plan and jointly determine with the state which elements of a revised plan will be planned for, implemented and enforced by the state, local governments and regional agencies; and

WHEREAS, the Ada Planning Association and representatives of the State of Idaho have jointly analyzed and defined the appropriate local agencies, the nonattainment area, and appropriate roles in accordance with the Act and appropriate Environmental Protection Agency guidelines and rules; and

WHEREAS, the Ada Planning Association is an organization, of local elected officials which has gained experience in transportation and environmental planning; and

WHEREAS, by motion of the Ada Planning Association Board on January 5, 1978, it has been determined that the Ada Planning Association be designated the lead agency with overall responsibility for developing and coordinating the planning required by the Act; and

Page 2
Resolution No. 2-78
February 2, 1978

WHEREAS, the Ada Planning Association as organized under Section 67-2326 of the Idaho Code and through its Articles of Agreement (Attachment "B") is authorized to perform said planning and conduct said planning process; and

WHEREAS, the Ada Planning Association is the designated Metropolitan Planning Organization serving Ada County as designated by the Governor of Idaho; and

WHEREAS, the Ada Planning Association is the Areawide Planning Organization under the Housing and Community Development Act of 1974, and is conducting an ongoing land use and housing planning process; and

WHEREAS, the Ada Planning Association through Memorandum of Understanding with the State of Idaho is the Metropolitan Clearinghouse for Circular A-95 Project Notification and Review System; and

WHEREAS, the designation-of the Ada Planning Association will assure a local/state/regional cooperative approach toward the planning, implementation or enforcement of the plan;

NOW THEREFORE BE IT RESOLVED that the Ada Planning Association seeks official designation by the Environmental Protection Agency as the lead agency and organization of local elected officials to meet all applicable requirements of the Clean Air Act of 1977.

DATED this 2 day of February 1978.

ADA PLANNING ASSOCIATION

By Mike Silva
Mike Silva, Chairman

ATTEST:

Robert Hilgenberg
Robert Hilgenberg, Executive Director

ADA PLANNING ASSOCIATION

150 N. Capitol Boulevard
P. O. Box 500
Boise, Idaho 83701
(208) 384-4310

RECEIVED
FEB 3 1978

February 3, 1978

Murray Michael, Chief
Air Quality Bureau
IDHW - Division of Environment
Statehouse
Boise, Idaho 83720

Re: Designation of Ada Planning Association as organization of local elected officials to carry out provisions of the Clean Air Act of 1977

Dear Murray:

Attached are the official actions of the Ada Planning Association requesting designation as the lead planning agency of Ada County local elected officials for the applicable provisions of the Clean Air Act of 1977. As per agreement at its meeting of February 2, 1978, the Ada Planning Association requests that Governor Evans submit this jointly developed request for designation.

Attached also is the draft letter from Governor Evans to the Environmental Protection Agency which the Board reviewed. The Board agrees with the contents except request that the following change be made on page 2:

> Vehicle Emission System and Inspection and Maintenance Program – change Responsible Entity to "Appropriate State Agency"

On behalf of the Board and staff, I would like to thank you for the good cooperation we have had on this matter, and look forward to our future mutual efforts in seeking improvements in our air quality problems.

Sincerely yours,

Robert Hilgenberg

ROBERT HILGENBERG
Executive Director

RGH:me
cc: Mike Silva
Dick Williams
Marilee Gross
Joy Suersmeyer
Fritz Dixon

STATE OF IDAHO

DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENT
Statehouse
Boise, Idaho 83720

February 6, 1978

M E M O R A N D U M

To: Governor John V. Evans

From: Lee W. Stokes

Subject: Designation of the Ada Planning Association

In those areas where air quality standards for carbon monoxide are being exceeded, the 1977 Clean Air Act Amendments require the state air quality agency and the local elected officials to jointly determine which agency should be primarily responsible for developing a plan to achieve the standards. In Idaho the only area affected by this section of the Act is Boise.

The Division of Environment has worked closely with the Ada Planning Association to develop the agreement described in the attached letter. Essentially we have agreed that the APA should have overall responsibility for developing the air quality plan and this department should be responsible for certain monitoring and data analysis functions.

Since programs to reduce carbon monoxide may involve changes in transportation and land use plans, we believe such programs can best be developed at the local level. The Congress re- cognized this fact and made it clear in the Act that Metropolitan Planning Agencies such as the APA are the preferred agencies to do the carbon monoxide planning.

We recommend that you sign the attached letter designating the Ada Planning Association as the lead agency for carbon monoxide planning in Ada county.

Lee W. Stokes
Administrator
Division of Environment

LWS/MM/jb

Attachment:

CC: Mr. Bob Hilgenberg, APA

EQUAL OPPORTUNITY EMPLOYER

JOHN V. EVANS
GOVERNOR

OFFICE OF THE GOVERNOR
STATE CAPITOL
BOISE 83720

Mr. Don Dubois
Region X
E P A
1200 Sixth Avenue
Seattle, WA 98101

Dear Mr. Dubois:

Pursuant to Section 174(a) of the Clean Air Act Amendments of 1977, we hereby designate the Ada Planning Association as the lead planning agency for preparing implementation plan revisions to attain the carbon monoxide standards in Boise. The Ada Planning Association (APA) is the Metropolitan Planning Organization for Ada county.

Designation of the APA is appropriate for several reasons. Not only is the organization the preferred agency under the Act, but it is also the organization responsible for water quality planning pursuant to Section 208 of the Federal Water Pollution Control Act, and transportation planning under Section 134, Title 23, United States Code. It is our belief that environmental planning of the type required to meet carbon monoxide standards can only be done at the local level and can best be done by the agency currently doing water quality and transportation planning.

Designation of the Ada Planning Association also has the support of the affected local governments as is evidenced by the attached resolution, which was adopted by the APA Board an February 2, 1978.

Since the full extent of the carbon monoxide problem in Boise is not yet known, it is not possible to define the duties of the various governmental agencies with any degree

. . . more

Mr. Don Dubois - 2 - February 6, 1978

of specificity. These details will be worked out over the next several months and specific responsibilities will be set forth in the implementation plan to be submitted by January 1, 1979. We have, however, agreed to the following general assignment of responsibilities. The Ada Planning Association will be the agency with overall responsibility for development of the implementation plan revisions. Under this overall responsibility certain elements will be handled as follows:

Inventory development: The State Department of Health and Welfare and the Ada Planning Association will share the primary responsibility, and the State Transportation Department will provide input as necessary.

Air Quality Analysis: The State Department of Health and Welfare will be the responsible agency and will work in cooperation with the APA and ITD.

Control Strategy Development: The Ada Planning Association will be the responsible organization. The State Department of Health and Welfare will provide technical assistance in assessing the air quality impacts of the candidate control strategies.

Implementation: Until the planning has been completed, any discussion of control measure implementation is purely speculative. However, some potential control measures and the likely responsible agencies, should such measures be implemented, include:

Possible Control Measures	Responsible Entity(ies)
Vehicle Emission System and Inspection and Maintenance Program	Appropriate State Agency (Implement and Enforce)
Park and Ride Program	City of Boise and Ada County (Implement)
Van and Carpool Program	Ada County Highway Dist. and Ada County (Implement)

. . . more

Mass Transit System Improvements	City of Boise and/or Ada County (Implement)
Improve Traffic Flow (Signalization, Street Imp., etc.)	Ada County High-way District; Idaho Department of Transportation (Implement)
Restriction of Long Term Parking in CBD	City of Boise (Implement and Enforce), Central Business District Businesses, Gov't Agencies (Implement)
Public Education Program	All of the entities (Implement)
Staggered/Flexible Work Hours	ACHD, IDHW, Central Business District Businesses and Government Agencies (Implement)
Bike and Pedestrian System Improve.	ACHD (Implement)

The Clean Air Act sets some ambitious goals for achieving an acceptable level of air quality. It is our belief that these goals can best be achieved in Ada County by means of the cooperative effort described in this submittal.

Sincerely,

JOHN V. EVANS
GOVERNOR

cc: Mr. Milt Klein
Mr. Mike Silva

Appendix G-7
1995 Memorandum of Understanding Between DEQ And APA Outlining Agency Responsibilities In Developing SIPs

AIR QUALITY PLANNING MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING (MOU) IS MADE AND ENTERED INTO BY AND BETWEEIN THE STATE OF IDAHO, DEPARTMENT OF HEALTH AIND WELFARE, DIVISION OF ENVIRONMENTAL QUALITY, AND THE ADA PLANNING ASSOCIATION.

WITNESSETH:

THAT, WHEREAS, the Idaho Department of Health and Welfare, Division of Environmental Quality is the responsible state agency for air pollution control, is the lead agency responsible for developing the air quality control plan for particulate matter (PM,,) in Ada County, and has the capability of providing technical support for Ada County's air quality planning processes; and

WHEREAS the Ada Planning Association is the responsible local Government agency for transportation planning in Ada County, is the lead agency responsible for developing the air quality control plan for carbon monoxide in Ada County, and has the capability of providing technical support for Ada County's air quality planning processes; and

WHEREAS, 42 U.S.C. 7504(a) of the 1990 Clean Air Act Amendments requires states and organizations of local elected officials to determine jointly a division of responsibilities for preparing the various elements of an air quality implementation plan, and 42 U.S. C. 7504(b) of the Clean Air Act requires that the preparation of the State Implementation Plan for air quality shall be coordinated with local continuing, cooperative, and comprehensive transportation planning processes required under Section 134 of the Title 23, United States Code; and

WHEREAS, the Idaho Department of Health and Welfare, Division of Environmental Quality and Ada Planning Association recognize the need to outline agency responsibilities for preparing revisions to the Implementation Plan for the Control of Air Pollution in the State of Idaho (SIP), for obtaining federal transportation funds, and in order to avoid duplication or misunderstanding of tasks and responsibilities.

NOW, THEREFORE, in consideration of the above, the Idaho Department of Health and Welfare, Division of Environmental Quality and Ada Planning Association hereby enter into this MOU.

DEFINITIONS

Air Quality Conformity Determination. A determination that proposed transportation plans, transportation improvement programs (TIPs), and regionally significant transportation projects, meet the requirements, criteria, and procedures established in the state and federal conformity rules.

Air Quality Control Plan. A state and/EPA required plan for reducing and/or maintaining air quality pollutant levels in a nonattainment or maintenance area, and adopted by the state as a part of the State Implementation Plan (SIP).

APA. The Ada Planning Association

CAA. The federal Clean Air Act, as amended

CO. Carbon Monoxide, one of the air pollutants for which there exists state and federal ambient air quality standards, and for which Ada County is currently designated as a Not classified Non-Attainment area

DEQ. The State of Idaho, Department of Health and Welfare, Division of Environmental Quality

DOT. The United States Department of Transportation

Emission Inventory. A portion of the SIP which is an inventory of all mobile, area and stationary sources of a particular pollutant

EPA. The United States Environmental Protection Agency

FHWA. The United States Department of Transportation, Federal Highways Administration

FTA. The United States Federal Transit Administration IT'D. The Idaho Transportation Department

NAAQS. National Ambient Air Quality Standards -- those standards established pursuant to 42 U.S. C. 7409 of the CAA

Nonattainment area. Any area which is designated, pursuant to 42 U.S.C. Section 7407(d), as not meeting (or contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant

Pm_{10} . All particulate matter in the ambient air with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers as measured by a reference method based on Appendix J of CFR Part 50 and designated in accordance with 40 CFR Part 53 or by an equivalent method designated in accordance with 40 CFR Part 53

SIP. The Implementation Plan for the Control of Air Pollution in the State of Idaho 2

RESPONSIBILITIES

1. APA and DEQ will cooperate to the maximum extent possible in the development of Ada County's portion of the SIP for CO and PM_{10}.

2. DEQ shall be responsible for operating and maintaining the ambient air quality monitoring network in the Ada County nonattainment area, per State and federal ambient air quality monitoring requirements, and will conduct monitoring in areas significantly impacting air quality in Ada County as resources allow.

3. DEQ will regularly provide monitoring data, emission analyses and other summary analysis information to APA for purposes of air quality planning.

4. APA and DEQ shall collaborate on emission inventory development, necessary to meet EPA's requirements for the CO and PM_{10} emission inventories for Ada County's component of the SIP.

5. DEQ shall assist APA in the identification of SIP elements required for the development of Air Quality Control Plans -- taking advantage of DEQ knowledge of EPA regulations, and of DEQ technical expertise in air quality matters.

6. DEQ will provide technical assistance to APA in the development of Air Quality Control Plans, including the areas of: air quality modeling, emission factors and emission estimation methods, methodologies for determining environmental and other effects of adopted and/or implementable air quality control measures, control measures analyses, and meteorological conditions and assumptions.

7. APA will meet all applicable requirements of the joint EPA/DOT agreement for the CO and PM,, Air Quality Plan of Ada County's component of SIP, specifically including periodic updates, provision for all required public involvement and provision for DEQ review and comment on in-progress and final proposed products.

8. APA and DEQ agree to distribute draft and final transportation/air quality related documents and supporting materials, to provide timely reviews and comment on proposed products, to carefully consider the comments of the other agency, and to provide written responses when necessary and appropriate.

9. DEQ shall be responsible for adoption of Air Quality Control Plans as a component of the SIP, and for their submittal to EPA.

10. APA will produce Ada County demographic data and vehicle miles of travel estimates using DOT/EPA approved methodologies, and work with DEQ to make the data compatible with air quality modeling and units as needed.

11. APA will prepare and update every three to five years demographic forecasts for Ada County and make these forecasts available to DEQ on the standard air quality modeling grid.

12. APA shall be responsible for transportation planning, assumptions and for producing periodic transportation system forecasts, and shall make the results of these analyses available to DEQ.

13. DEQ shall use APA's demographics and travel forecast modeling results for emission inventories and all other air quality planning purposes within Ada County. Use of demographic data for air quality planning in Ada Co., from sources other than APA, may be used by DEQ with the approval of APA.

14. APA will facilitate contacts with local Government agencies within Ada County.

15. APA will perform background research and analysis on all reasonably available control measures, for mobile or transportation related sources in Ada Co., required. under EPA/DOT/DEQ guidelines to determine the applicability and feasibility of their implementation and to seek and obtain appropriate measures' adoption and implementation.

16. APA will prepare all required air quality conformity analyses and submit them to ITD, FTA and FHWA for approval.

Wallace N. Cory, Administrator
Division of Environmental Quality
State of Idaho

3/17/95
Date

Brent Coles, Chairman
Ada Planning Association Board

3/2/95
Date

Appendix G-8
1999 Sub-Memorandum Of Understanding Between DEQ And APA That DEQ Will Develop The CO Maintenance Plan

AIR QUALITY PLANNING SUBMEMORANDUM OF UNDERSTANDING

THIS SUBMEMORANDUM OF UNDERSTANDING IS MADE AND ENTERED INTO BY AND BETWEEN THE STATE OF IDAHO, DEPARTMENT OF HEALTH AND WELFARE, DIVISION OF ENVIRONMENTAL QUALITY, AND THE ADA PLANNING ASSOCIATION FOR THE PURPOSE OF SUPPLEMENTING A 1995 AGREEMENT BETWEEN THE PARTIES IN ORDER TO DEVELOP A *CARBON MONOXIDE AIR QUALITY MAINTENANCE PLAN*. THIS AGREEMENT IS EFFECTIVE AS OF JANUARY 1999 AND EXPIRES JULY 2001.

WTTNESSETH:

THAT, WHEREAS, Ada County is designated by the US Environmental Protection Agency (EPA) a nonattainment area for carbon monoxide.

WHEREAS, no violations of the Carbon Monoxide National Ambient Air Quality Standards have been measured in Ada County since 1986.

WHEREAS, the fully implemented control strategies (Vehicle Inspection and Maintenance program, cleaner federal automobile standards, transportation network system improvements and transportation demand management programs) have resulted in significant improvement to air quality since the late 1970's.

WHEREAS, the development of a *Carbon Monoxide Air Quality Maintenance Plan* and formal request to EPA for redesignation of the Northern Ada County Not Classified Carbon Monoxide Nonattainment Area is a local priority due to the continuing economic implications of nonattainment status and increasing emissions from population growth and vehicle use.

WHEREAS, the agencies responsible for air quality planning in Ada County, the Idaho Department of Health and Welfare, Division of Environmental Quality and Ada Planning Association, have limited resources to dedicate to this effort.

WHEREAS, the Idaho Department of Health and Welfare, Division of Environmental Quality and Ada Planning Association recognize the need to outline agency responsibilities for preparing this *Carbon Monoxide Air Quality Maintenance Plan.*

NOW, THEREFORE, in consideration of the above, the Idaho Department of Health and Welfare, Division of Environmental Quality and Ada Planning Association hereby enter into this agreement.

RESPONSIBILITIES

Both APA and DEQ will:

1. Cooperate to the maximum extent possible in the development of a *Carbon Monoxide Air Quality* M*aintenance Plan* and formal request to EPA for redesignation of the Northern Ada County Not Classified Carbon Monoxide Nonattainment Area.

2. Collaborate on development of a 1996 Ada County Carbon Monoxide Emissions Inventory.

3. Distribute draft and final documents and supporting materials and provide timely review and comment.

4. Collaborate on a public involvement process to disseminate information about the development the *Carbon Monoxide Air Quality Maintenance Plan* and its conclusions

5. Make every reasonable effort to resolve disagreements in plan development at a staff level. Issues requiring further resolution will be negotiated between the DEQ Regional Administrator from the DEQ Boise Regional Office, and the Executive Director of APA.

6. Agree this submemorandum terminates upon EPA approval of the *Carbon Monoxide Air Quality Maintenance Plan* or July 1, 2001 whichever occurs first.

7. Acknowledge that termination of this Agreement may take place at any time without cause upon thirty (30) days written notice to the other party, and specifying the date of termination. Cancellation of the Agreement by either party shall terminate the obligation or liabilities of the parties, except that the obligations or liabilities incurred prior to the termination date shall be honored.

APA will:

1. Produce Ada County demographic data and vehicle miles of travel estimates and work with DEQ to make the data compatible with air quality rnodeliga arid units as needed.

2. Facilitate contacts with local government agencies within Ada County.

3. Support a public involvement process to facilitate selection and adoption of new or revised control or contingency measures for addressing carbon monoxide pollution. Specifically, APA will provide support for a public involvement process for the proposed changes to the vehicle testing program.

4. Prepare the mobile emissions inventory and analyze control strategy options for the vehicle testing program using the MOBILE emissions estimation model. APA will coordinate this effort with DEQ and EPA.

5. Provide $80,000 in transportation planning funds in Fiscal Year 1999 to support development of the *Carbon Monoxide Air Quality Maintenance Plan.* APA will disburse up to $80,000 over the life of the Agreement on a cost reimbursable basis for costs related to development of the M*aintenance Plan,* provided that such costs are approved in writing by the APA Project Manager in advance of incurrence. APA will issue reimbursement on a monthly basis.

DEQ will:

1. Prepare the required technical documentation including: a 1996 Ada County Carbon Monoxide Emissions Inventory, Technical Analysis Protocol, and *Air Quality Maintenance Plan.*

2. Perform required technical analyses including: air quality modeling, emission factors and emission estimation methods, methodologies for determining environmental and other effects of adopted and/or implementable air quality control measures, control and contingency measures analyses, and meteorological conditions and assumptions.

3. Collaborate with APA on the development of the mobile emissions inventory including running the MOBILE emissions estimation model with support and assistance from APA.

4. Support a public involvement process to provide information on the *Carbon Monoxide Air Quality Maintenance Plan* and related air quality issues.

5. Adopt and submit to EPA the *Carbon Monoxide Air Quality Maintenance Plan* as a component of the *Implementation Plan for the Control of Air Pollution in the State of Idaho.*

6. Request written approval of expenditures related to the development of the *Maintenance Plan* from the APA Project Manager for up to $80,000 to be reimbursed under this Agreement. Written approval will be obtained before incurrence of expenses. DEQ will seek reimbursement by invoice on a monthly basis.

IN WITNESS WHEREOF, the parties have executed this agreement.

C. Stephen Allred, Administrator
Division of Environmental Quality
State of Idaho

042699
Date

Clair M. Bowman, Executive Director
Ada Planning Association

5/3/99
Date

Appendix G-9
Destination 2015 Long Range Transportation Plan, Chapter 11 - Public Transportation

CHAPTER 11 - PUBLIC TRANSPORTATION

BACKGROUND

Public transportation is an important element of Ada County's transportation system. It is essential to citizens who need access to jobs, education, medical care, shopping, and other activities. This component is a culmination of information from existing documents: *Regional Public Transportation Plan for Ada County,* January 1992; the long-range transit plan for Boise; and the draft final report for the Treasure Valley Alternative Transportation Analysis, November 1995. These planning efforts all involved community input to identify and develop transit alternatives.

PURPOSE

Many public involvement activities took place in transit planning over the last five years. This section details the vision identified through those activities to help the community and elected officials make better decisions on how to reach the vision. In public surveys and meetings, local citizens support regional transportation options being provided. During the 1 00-person Community Team process, representatives from local governments, neighborhood groups, businesses, stakeholder groups and randomly selected citizens developed a Vision Statement on alternative transportation. In September, 1995, the APA Board adopted the Vision Statement as follows:

> *"While the future transportation system will continue to serve primarily people traveling in automobiles, convenient transportation alternatives will be provided where practical which allow opportunities to travel to work, school, shopping, and other services within Ada County and in other parts of the Treasure Valley. The long-term, area-wide goal for these alternatives is 25% of travel, although levels may vary within the County depending on land uses and service alternatives. Public policies should favor development and use of travel alternatives.*
>
> *Vanpools, carpools, commuter buses, Park & Rides, high occupancy vehicle lanes, telecommuting, bicycle and pedestrian facilities, and other alternatives will be considered. Whenever practical, such alternatives will be offered or coordinated through the private sector to improve efficiency and lower costs."*

This public transportation component of *Destination 2015* identifies goals, service areas, and financing to help achieve this vision for the region. In addition, it extends that vision to interconnect Ada and Canyon Counties. While Ada County is recognized as the regional hub for employment and shopping opportunities, the Canyon County employment base has changed and grown over the years to increase travel trips between the two Counties. The transportation system is the framework upon which the fabric of the community can be woven. Mobility between these counties is an essential element in the economic welfare and future liveability of the region.

AREA DESCRIPTION

The description of this regional transportation area includes Ada County and its five cities: Boise, Eagle, Garden City, Kuna, and Meridian. In addition, it includes intercity connections from Ada County to the Cities of Caldwell, Middleton, and Nampa in Canyon County.

Ada County Highway District, a county-wide highway district, was established in 1971 and builds and maintains all non-State roadways. Boise and Garden City are service areas for THE BUS. The City of Boise was designated by the Governor of Idaho as the recipient of urbanized area transit funds.

TREASURE VALLEY

This section looks at one of three elements of long-range public transportation planning. The three areas are: **Treasure Valley** (Ada County and selected areas within Canyon County--Nampa, Caldwell, and Middleton); **Ada County;** and the **Boise Metropolitan Area.**

TREASURE VALLEY ALTERNATIVE TRANSPORTATION ANALYSIS (TVATA)

Needs for public transportation within Ada and Canyon Counties were identified to some extent in the Treasure Valley Alternative Transportation Analysis (TVATA). TVATA was created to evaluate transportation choices for intercounty travel between Ada and Canyon Counties, as well as other key travel corridors, and to develop an action plan for future direction.

A private consultant working with a multi-jurisdictional Steering Committee from the two counties has completed the initial analysis. The Steering Committee is currently considering his recommendations. A brief overview of the consultant's findings and recommendations follows:

TVATA recommends to modestly expand the existing transit system by targeting unserved areas, linking key origins and destinations, increasing frequencies, providing more connections between communities, expanding the carpool and vanpool programs, and offering incentives to encourage carpooling, vanpooling, and transit use (see Figure 1 1-1, Regional Transportation Concept). Also, it suggests the Union Pacific Railroad (UPRR) right-of-way should be protected for a future transit facility. A wide range of potential public uses could be made of this right-of-way including long-term fixed guideway. TVATA suggests the two counties need to "grow" into transit by developing building blocks and to add needed services and improvements over time.

While TVATA identifies several options to ensure coordination and operation of a public transportation system, it suggests a Regional Transit Authority (RTA) be created to serve as a focal point for community contact, to coordinate services, and to identify funding sources. This is discussed further in the following section on Ada County's current transit services and future transit needs.

During TVATA's development, there was no consensus on how transit operations should be funded. The analysis points out that funding transportation facilities and services, particularly for transit operations, is needed and remains one of the biggest challenges for Treasure Valley communities. TVATA identified possible funding sources for transit, many of which would require state and/or local actions. The most feasible transit funding options are a local sales tax or an employer tax. A 0.25% local sales tax in Ada County and parts of Canyon County would yield approximately $8.3 million annually.

TVATA suggests area planners and elected officials should work toward development of a broader, longer term assessment of capital and operating costs for regional transportation.

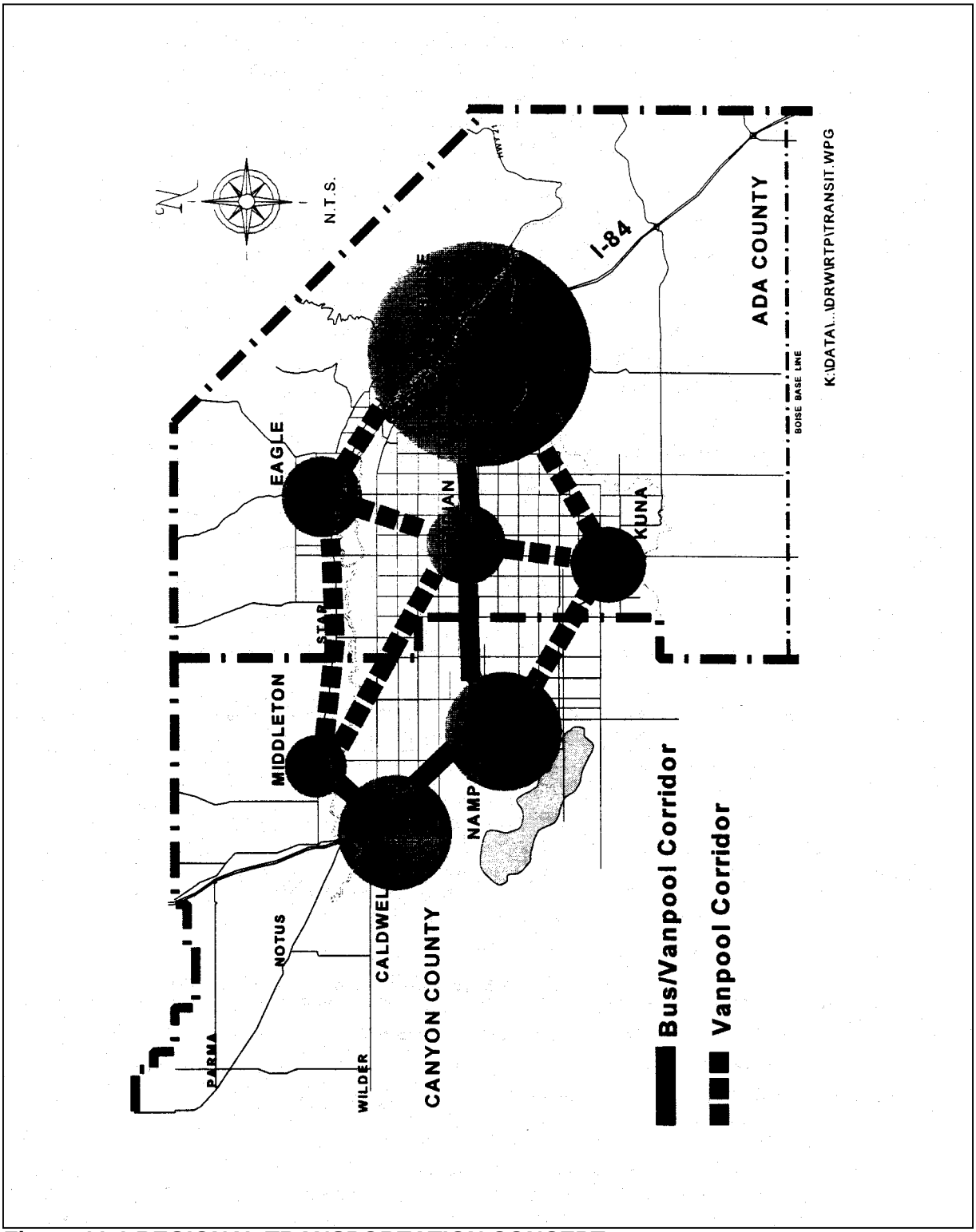

Figure 11-1 REGIONAL TRANSPORTATION CONCEPT

Financial Plan

The long-range regional transportation component is based upon adequate financial resources to provide urban-type services in the Treasure Valley area, particularly in the urbanizing Cities of Boise, Garden City, Meridian, Nampa, and Caldwell. Because the long-range regional transportation component envisions transit service beyond the abilities of local governments to support with property taxes, other sources of funding are necessary.

Tables 1 1-1 to 11-3 identify the total costs and estimated revenues necessary to deliver the recommended transit levels. The estimated total cost for the year 2015 in 1995 dollars is estimated to be over $23 million. Of his amount, approximately 20%, or $4,800,000, would come from fares and miscellaneous revenue. For the capital portion of the 20-year program, 80% of the cost is estimated to come from federal capital funds. That leaves a total funding deficit per year of approximately **$15,800,000**. This figure represents almost 69% of the total annual cost of the system. This figure is well in line with the dedicated funding portions of many transit properties throughout the Pacific Northwest.

Table 11-1: TOTAL COSTS

AREA	ANNUAL OPERATING COSTS	20-YEAR CAPITAL COSTS	TOTAL ANNUAL COSTS
Boise Metro	$15,575,000	$47,212,000	$17,935,000
Meridian	$899,000	$2,725,000	$1,039,000
Canyon County	$3,574,000	$10,833,000	$4,114,000
Totals	$20,048,000	$60,770,000	$23,088,000

Table 11-2: ANNUAL REVENUE ESTIMATES

AREA	FARES, MISC.	FEDERAL CAPITAL	TOTAL REVENUE
Boise Metro	$3,738,000	$1,888,000	$17,935,000
Meridian	$216,000	$112,000	$1,039,000
Canyon County	$858,000	$432,000	$4,114,000
Totals	$4,812,000	$2,432,000	$23,088,000

* See Table 11-3 for examples of dedicated funds and yields.

Table 11-3: EXAMPLES OF DEDICATED FUNDS

DESCRIPTION	RATE	YIELD
Sales Tax	0.42%	$15,840,000
Payroll Tax	0.40%	$16,080,000

This financial analysis assumed the growth rate of potential revenue sources (i.e., sales tax or payroll tax) was approximately equivalent to the anticipated inflation rate of 3%. For example, over the last ten years, excluding 1990 which had approximately 32% growth, sales tax increases

averaged 5% per year. The same with payroll tax; the current estimate is that employment in the Treasure Valley area would grow at approximately 2.4% per year for the next 20 years. In addition, the 2-3% that would be expected for annual increases would offset the inflation rate of 3%.

This financial analysis finds the recommended transit plan for Treasure Valley requires a dedicated funding source that would generate approximately $15.8 million per year in 1995 dollars. Examples of dedicated funding sources include sales tax or an employee payroll tax, each of which are used in other communities in the Pacific Northwest. A sales tax rate of 0.42% would yield the $15,800,000 necessary to support this plan, and a payroll tax of 0.4% would yield a similar amount. The financial component also depends heavily on the formation of a Regional Transit Authority (RTA) that would provide the transit service in the multi-county/multi-city jurisdictions envisioned in this plan.

The sales tax and/or payroll tax identified in this financial analysis are in line with the rates being used in Portland, Denver, Salt Lake, Reno or Spokane, and appear to be quite reasonable. To implement these revenue sources would require enabling legislation from the Idaho State Legislature and a local referendum.

ADA COUNTY

This section provides an overview of existing public transportation services in Ada County and three of its municipalities outside the Boise Metropolitan Area. It also identifies future transportation service needs in Ada County to provide a regional transportation system.

ADA COUNTY HIGHWAY DISTRICT

Commuteride

Ada County Highway District (ACHD) operates a carpool and vanpool matching program called Commuteride, and sponsors a number of small Park & Ride lots in Treasure Valley. The existing program budget is $679,800, of which approximately 36% comes from user fees for vanpools and revenue from employers. The rest of the funding comes from Federal funds and local matching funds. As demand for alternative transportation increased over the years, funding for the carpool and vanpool program also increased. Flexibility of ISTEA regulations allowed local jurisdictions to allocate additional Federal funds for alternative transportation. This is the action which Ada County Highway District has taken.

In 1995, approximately 70% of the Commuteride program funds were dedicated to the purchase, operation, and maintenance of the vans. Thirty vans are owned by ACHD with 25 vans in operation. Routes for two of the remaining five vans are being developed. The three remaining vans are used as replacement vans in case of emergency or maintenance requirements. Twenty- three vanpools serve approximately 270 riders from Boise, Mountain Home, Meridian, Kuna, Nampa, Caldwell, Emmett, Eagle, Payette, Fruitland, New Plymouth, and Ontario, Oregon. Two of the vans are operated through an ACHD employer program. This program allows the operation of these vans by a major employer exclusively for its employees in downtown Boise.

Vanpools depend on a stable group of riders to pay the operating costs by having a minimum of 12 riders and I driver to keep the vanpools self-supporting. Riders are sensitive to both price and

convenience, so a change in the cost or convenience differential between vanpooling and driving alone can attract or repel riders.

Commuteride's vanpool program has been very successful in providing transportation options to commuters. A summary of the program's success for FY 1995 is as follows:

- ❑ Total routes in operation as of September 30, 1995 - 22.
- ❑ Total new routes started by December 31, 1995 - 5.
- ❑ Total boardings for the FY 1995 - approximately 73,700.
- ❑ Average round trip length - 60.6 miles.
- ❑ Total route miles traveled - approximately 309,900.
- ❑ Total commuter miles traveled - approximately 2.3 million.
- ❑ Total vehicle miles saved - approximately 2.0 million.
- ❑ Gallons of gasoline saved - approximately 115,600.
- ❑ Reduction of carbon monoxide pollutants - approximately 89,300 pounds.
- ❑ Total commuter costs saved - $809,400 (based on AAA driving cost: 41.2 cents per mile).

In FY 1996, additional Federal funds are committed to purchase another ten vans. Routes and riders are currently being identified and the majority of the new vans will be running by October 1996. At the end of FY 1996, Commuteride will have a fleet of 40 vans. Because the fleet is growing rapidly, staff is exploring other options of operating and maintaining the fleet to increase operational efficiency. Currently, a major employer is operating and maintaining two vans to serve its employees. If this operation proves successful, other vans may be operated in a similar matter to streamline the work to run a successful vanpool program.

The carpool matching program assists approximately 2,900 clients from all the previously mentioned communities, plus areas as far away as Twin Falls. Both programs are marketed to employers throughout the year. More and more employers are developing employee programs to encourage the use of alternative transportation instead of a single-occupant vehicle (SOV). Some employers provide vanpool or transit subsidies, preferential carpool parking spaces, flextime, and various other incentives. The partnership between Commuteride and area employers has demonstrated the desire of both public agencies and private businesses to reduce the demand on the transportation system in the community.

This partnership between Commuteride and area employers should be explored further in the future. As Federal and local funds decrease over time, alternative funding sources need to be expanded. Currently, the program receives Congestion Mitigation/Air Quality funds (CMAQ - Federal) to purchase vans and do marketing campaigns, and Surface Transportation Program (STP) - Urban funds (Federal) to operate and administer the Commuteride Program. Local revenues (ACHD) are used to fund administrative positions to support and market the program. Fares pay for the operation of the vans and provide the local matching funds for the purchase of new vehicles.

The estimated costs to continue and expand the Commuteride program for the 20 year planning period is $14,132,000. The breakdown of program costs and funding sources are as follows:

Table 11-4: ESTIMATED COSTS AND FUNDING SOURCES FOR COMMUTERIDE

	ESTIMATED COST	FUNDING SOURCE
Administration	$4,968,000	Federal STP – Urban (100%)
Van Purchase	$3,836,000	CMAQ (80%), Local (20%)
Van Operation	$5,328,000	User Fees (100%)

The vanpool and carpool programs are very successful in reducing the number of vehicles on the roadway and provide various benefits to the region. Regional jurisdictions should actively support the Commuteride program, giving it strong political support and working to assure adequate and consistent funding.

Park & Ride Facilities

The mission statement for the *Ada County Park & Ride Location and Design Study, April 1994,* which includes site locations in Ada County and its surrounding counties, is:

> "*In the course of public debate, community leaders have determined that Boise needs to enhance its public transportation system and encourage more widespread use of ridesharing opportunities. Park & Ride facilities support community-wide efforts to increase ridership by making ridesharing more convenient, improving the level of service to existing customers, and reducing parking demand at major activ*ity centers."

While this mission statement targets the City of Boise, it also identifies the purpose and benefits of Park & Ride facilities for the region. Park & Ride facilities provide central collection points where individuals can park their vehicle or be dropped off, park their bike, or conveniently walk to and transfer to a carpool, vanpool, or bus to reach their destination. These facilities can be either designated or informal sites on public property or in joint-use facilities on private property, such as churches or retail shopping centers. By providing a convenient meeting location for commuters in Ada County and outlying communities, more commuters will be encouraged to carpool, vanpool, or use the bus where available.

Designated Park & Ride sites are signed to identify the location. If the site is located on private property, a specific area in the private parking lot may be identified for Park & Ride use and a cooperative agreement made between the property owner and administrator of the Park & Ride program, such as a transit district or transportation department. Other informal sites are not signed and operate under an informal agreement with the property owner to use a portion of the parking lot as long as it does not interfere with the daily operation of business or church activities. The size of the Park & Ride facility may vary from a few parking spaces in less traveled corridors or lightly populated areas to hundreds of parking spaces in high demand corridors of densely populated areas.

Nine existing Park & Ride facilities are identified by ACHD throughout the County: seven in Boise, one each in Meridian and Kuna. These lots are joint-use facilities, meaning the parking is

incorporated into available parking for churches or shopping centers. Additional Park & Ride lots operate throughout Southwest Idaho for commuters and are marketed by Commuteride. An additional 14 Park & Ride lots are located in the Cities of Caldwell, Nampa, Emmett, Middleton, and Mountain Home and on 1-84 at Exit 13 in Payette County. The majority of these lots are donated by local businesses and churches to assist commuters in ridesharing arrangements.

A private consultant prepared the results of an Ada County Park & Ride location and design study in April 1994. This plan does not intend to reinvent the wheel (i.e., identify new Park & Ride facilities), but to embrace this study as a starting point for future Park & Ride facilities. ACHD and THE BUS need to identify the demand for additional facilities and to grasp opportunities when they arise. Many times demand is identified through carpools or vanpools parking their vehicles along roadway right-of-ways or ad-hoc locations. Remnant parcels of right-of-way near freeway interchanges or on major roadways near major commercial or residential areas provide ideal Park & Ride locations. Other opportunities may include a major shopping center with an abundant number of parking spaces that are only needed during peak shopping periods. The property owner may wish to provide a community benefit and designate some parking spaces for a Park & Ride facility.

There are identified areas needing proposed Park & Ride facilities to serve as collector lots within the Treasure Valley. The areas listed in the *Ada County Park & Ride Location and Design Study, April 1994,* are for the Cities of Eagle, Meridian, Kuna, Nampa, Caldwell, Horseshoe Bend, Idaho City, Emmett, Mountain Home, and Southwest Ada County. No specific sites have been identified to date, but demand will drive the specific locations. Possible sites for collector lots may be in existing parks or other public locations such as Camels Back Park, Ivywild Park, Cassia Park, Milwaukee Park, and Ada County Fairgrounds. In addition, small collector lots could also be incorporated into the site design for large residential and commercial developments.

Peripheral lots are found on the edge of the Central Business District (CBD) or near other major activity centers. High activity areas where peripheral lots may be appropriate are Boise CBD, Bogus Basin, Boise Airport, Boise State University (BSU), and the Boise Towne Square Mail.

Potential sites for interceptor lots are identified at freeway interchanges near metropolitan boundaries and on State highways (SH). These potential sites include the Eagle Road, Meridian Road, Garrity Road, Franklin Road, Gowen Road Interchanges at 1-84 and SH 21/Eckert Road, SH55/Eagle Road, and SH 16/State Street.

While ACHD should seriously look at joint-use facilities (incorporating a Park & Ride facility into an existing commercial development), many Park & Ride facilities will need to be constructed at ideal locations like freeway interchanges and in the vicinity of major highway/roadway intersections. The estimated cost and funding sources for Park & Ride facilities for the 20 year planning period are shown in Table 11-5.

Table 11-5: ESTIMATED COSTS AND FUNDING SOURCES FOR REGIONAL PARK & RIDE FACILITIES

	ESTIMATED COST	FUNDING SOURCE
Interchange/Highway Park & Ride sites	$9,000,000	STP funds and/or CMAQ funds (80%), Local (20%)
Other Park & Ride sites	$6,000,000	STP funds and/or CMAQ funds (80%), Local (20%)
Total	$15,000,000	

Developing a comprehensive Park & Ride system will provide numerous community benefits: reduced traffic congestion, reduced parking demand at work sites and the CBD, and reduced energy consumption and air pollution. The local and regional jurisdictions should actively support the development of a regional Park & Ride program, provide strong political support, and work to assure adequate and consistent funding.

OTHER INTERCITY TRANSPORTATION SERVICES

The Cities of Boise and Garden City are the only cities within Ada County that are currently served by a local transit system. The other three communities, Eagle, Kuna, and Meridian, have limited transportation services available. The limited type of transportation services available include taxicabs, scrip taxicab service, senior center vans, and commuter vans.

Taxicabs

Approximately 13 major taxicab companies exist under regulation by the City of Boise and operate 50 taxicabs. Some of these taxicab companies provide service to communities outside of Boise. The taxi fare consists of a base charge and additional charges for mileage or waiting time. While taxicab companies are interested in creating hubs in these outlying areas, the cost benefit has not warranted this action to date.

Scrip Taxi Service

Two programs, Boise Scrip and Rural Scrip, are operated by Senior Programs and provide scrip to qualifying persons to purchase transportation. Scrip is a coupon system which allows qualifying persons to use taxis at a discount. Persons qualify by being 15 years or older and having physical or mental disabilities which prevent them from driving or using regular transit. Boise Scrip Program is funded through the City of Boise and received $4,620 per month during FY 1995. Rural Scrip Program received Federal funds through Ada County. Only as much scrip is issued as there is money to fund the programs. As the community grows and the need arises, more funding will be needed to continue this valuable transportation program.

Senior Center Vans

Senior Centers in Boise, Eagle, Garden City, Kuna, and Meridian each operate a van for seniors (55 and older) within their respective communities. The vans primarily provide transportation to and from the Senior Centers for meals. In Eagle, the Senior Center also provides transportation once a week to either Meridian, Boise, and Nampa. Meridian Senior Center provides weekly trips

to doctor's appointments, entertainment activities in Boise, or shopping activities in Nampa. These 1988 vans do not have lifts and will eventually need to be replaced.

Commuter Vans
As previously discussed, Commuteride operates numerous vanpools in Ada and Canyon Counties. Kuna, Meridian and Eagle are served by these vans. One van from Kuna serves downtown Boise trips. Three vans from Meridian serve downtown Boise and BSU trips. One van operates between Eagle and downtown Boise and another one is planned in the near future. This is a partnership created by the City of Eagle and ACHD.

Commuters R Us
While the majority of transit services in Treasure Valley are provided by public agencies, privately owned transportation companies are encouraged to provide transportation services throughout the region. In October 1995, a new commuter bus service, Commuters R Us, began daily operation between Nampa/Caldwell areas and Boise. The bus is privately owned, and costs are covered by user fees. Service is provided to downtown Boise, ParkCenter area, and BSU.

TRANSIT NEEDS AND RECOMMENDATIONS
Communities outside Boise and Garden City are not currently served by local transit systems. Key issues need to be evaluated to determine whether such local transit systems are cost effective. Characteristics of that community play a large part in whether the transit system succeeds or fails. Some of these issues include:

- ❏ Population and employment in the service area;
- ❏ Residential density; and
- ❏ Characteristics of the driving population, senior population, and household income.

Each community needs building blocks on which additional services ran be added. These communities do have the initial blocks being started; however, the demand has not created the need to develop a local fixed-route transit system. Population, employment, residential density, and household characteristics need to be carefully watched over the coming years to identify the direction each of these communities wishes to proceed in 20 years or more. Discussions are occurring county-wide on future transportation issues through the Treasure Valley Alternative Transportation Analysis (TVATA), which was discussed in the previous section. TVATA suggests:

- ❏ Improve and expand the existing local transit system (BTJS) as usage and demand develops;
- ❏ Start local service in Caldwell, Nampa, and Meridian;
- ❏ Provide peak-hour express route service on key corridors;
- ❏ Begin starter line/service on exclusive rights-of-way with supporting feeder bus service; and
- ❏ Consider applicable transit technologies for future needs.

Recently in Eagle, a transportation need was identified to provide intercity service between Eagle and Boise. Working with ACHD, a commuter van was started and a second van is planned. The City of Eagle and ACHD formed a partnership to operate and fund these vans. This is the first step toward developing demand for an intercity transit system.

Meridian which has an estimated population of 32,000 people for 2015 is a good candidate for development of intercity transit service in the near future. Three vanpools are currently operating between Meridian and Boise. The initial building block has been formed and transit service can be added when demand is warranted. As the region grows, undeveloped areas between Meridian and Boise will fill in and new transit opportunities may develop. The area is well beyond existing services by THE BUS, but cooperative agreements with the City of Boise or with private operators could be explored.

Numerous agencies in the region provide different transportation services. This discussion of intercity transit services shows the need for **one-agency** to: identify the travel demand; develop transit services; and identify transit funding. To accomplish this task, a Regional Transit Authority (RTA) should be formed to coordinate activities. In 1995, the Idaho legislature approved legislation for the establishment of RTAS. However, no funding mechanism was identified.

The organization of a RTA can take several forms and needs to be explored. The RTA would be the focal point for the coordination of all transit services in the region and the development of funding sources. Developing those funding sources many times create administrative challenges for smaller organizations like the senior centers and for the scrip programs. Park & Ride facilities, constructed in rights-of-way along major corridors in outlying communities, could be paid for by the RTA. Operations and maintenance of Park & Ride lots could be provided by the appropriate local government agency. Additional funds could be used to expand the vanpool services which are now managed by ACHD. The RTA concept is shown in the figure below.

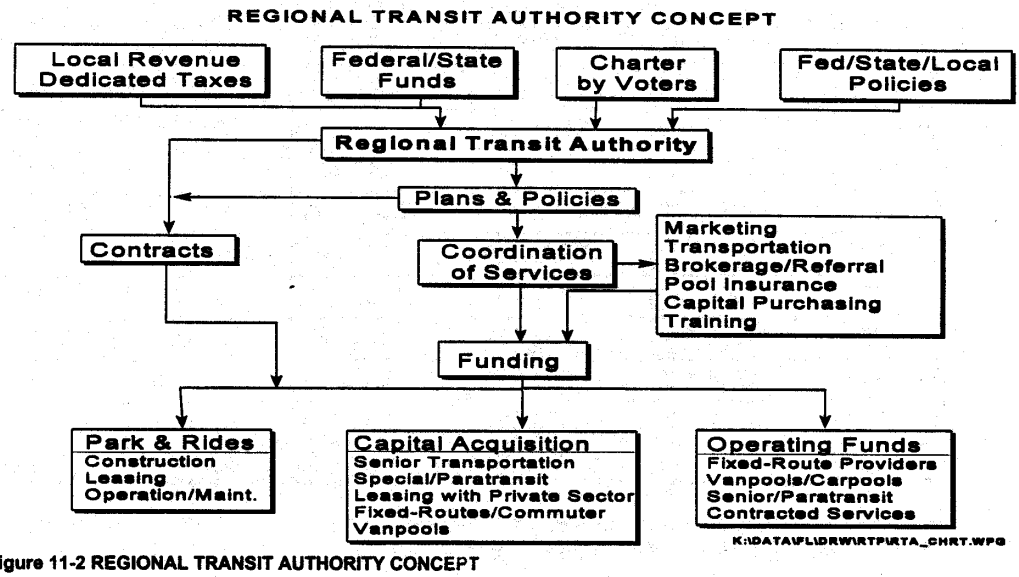

Figure 11-2 REGIONAL TRANSIT AUTHORITY CONCEPT

BOISE METROPOLITAN AREA

BOISE URBAN STAGES

In April 1973, the City of Boise began providing public transportation services shortly after a private provider stopped intra-city bus service within the city limits of Boise. Boise Urban Stages (THE BUS) is the City's transit provider. THE BUS is operated under contract by McDonald Transit Associates, Incorporated.

The area served by THE BUS has experienced a tremendous population growth during recent years. Between 1980 and 1990, the population of the City planning area increased by approximately 22.7%. The population of Ada County has grown 18.9% during that same period. During the past five years, the population in Boise City and Ada County has grown 22.4% and 23.4%, respectively. The population for the Boise City planning area in 2015 is estimated to be 260,680 and Ada County population is expected to be approximately 363,000.

Both fixed-route and paratransit services (known as ACCESS) are operated by THE BUS in a service area which covers approximately 51.5 square miles. THE BUS serves a current Boise City population of approximately 154,000.

THE BUS is funded by transit fares, property taxes collected and appropriated to THE BUS by the City of Boise, Section 9 funds through the Federal Transit Administration (FTA) and miscellaneous sources. Federal funds for THE BUS have been declining for several years. This trend is expected to continue and it is possible all federal operating funds may be eliminated within the next three to four years. Not only does the City of Boise need to identify funding sources to expand THE BUS, sources need to be found to keep THE BUS service at the current level as federal funds diminish.

Table 11-6: BUS REVENUES

YEAR	FEDERAL	LOCAL	FAREBOX	OTHER	TOTAL
1986	$643,450	$672,545	$260,096	$103,432	$1,679,523
1987	$683,087	$846,278	$242,828	$97,370	$1,869,563
1988	$624,130	$948,843	$243,171	$74,821	$1,890,965
1989	$731,278	$822,996	$241,880	$55,987	$1,852,141
1990	$691,781	$773,378	$223,998	$73,474	$1,762,631
1991	$851,785	$811,593	$239,500	$86,555	$1,989,433
1992	$803,130	$1,162,128	$304,806	$33,806	$2,303,530
1993	$766,128	$1,281,271	$329,754	$103,799	$2,480,950
1994	$877,360	$1,499,854	$352,779	$236,655	$2,966,648
1995	$671,193	$1,585,978	$500,609	$233,792	$2,991,572

Note: Revenues do not include those for capital acquisitions.
Source: Boise City Finance/Annual Section 15 Reports.

Current Services

ACCESS

Paratransit service, known as ACCESS, operates a demand-responsive fleet of vehicles for people with disabilities who are unable to ride the fixed-route system. ACCESS currently operates five vans Monday through Friday from 5:15 a.m. to 7:45 p.m. and from 7:45 a.m. to 6:15 p.m. on Saturday.

Ridership on ACCESS has increased significantly during recent years. During Fiscal Year (FY) 1995, ACCESS transported 20,219 passenger trips, up 13.9% from the previous year and 48.5% from FY 1993.

The number of trips provided by ACCESS will continue to increase as THE BUS meets the requirements promoted by the FTA in response to the Americans with Disabilities Act of 1990. The regulations prohibit transit systems from constraining capacity on door-to-door services for people with disabilities.

THE BUS will purchase six new ACCESS vans in FY 1996. Four of the new vans will be replacement vehicles and two will be used for expansion in an effort to meet the increasing demand for service.

The hours of service on ACCESS will expand as service hours on THE BUS'fixed-route system are expanded.

Fixed Route Service

THE BUS currently operates 18 regular fixed routes Monday through Friday that link residential areas with major work sites, downtown Boise, hospitals, and shopping centers and mail. The primary focus of THE BUS'fixed route service is downtown Boise, with 14 routes connecting the Central Business District (CBD) with points located throughout the City. Both BSU and Boise Towne Square Mail serve as minor hubs, with eight routes serving BSU directly and three routes providing direct service to the mail.

The Monday through Friday routes operate with 30 minute headways during peak periods (6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.) and with 60 minute headways off-peak. The span of service is from 5:15 a.m. to 7:45 p.m., a total of 14.5 hours per weekday.

Seven routes operate on Saturday with 45 minute headways. With the exception of one route, all of the Saturday routes run differently from those operated on weekdays. The span of Saturday service is 7:45 a.m. to 6:15 p.m., 10.5 hours.

Fares for THE BUS are recommended by the Mayors Transit Advisory Committee (MTAC) and adopted by the Boise Mayor and City Council. Fares are set in accordance with the need for local revenues. BSU and the Boise School District have contracts with THE BUS for their students (college and high school only), employees and faculty members to ride free on THE BUS with a picture identification card. The current fare structure is shown in the following table.

Table 11-7: EXISTING TRANSIT FARE STRUCTURE

CATEGORY	CASH	TRANSFER	MONTHLY PASS
Adult	$.75	Free	$27.00
Elderly	.35	Free	13.50
Handicapped	.35	Free	13.50
Youth (6-18)	.50	Free	18.00
Child under 6	Free	Free	NA

Cash fares have not increased since August 1992 when they were raised from $.50 to $.75. Monthly pass prices were increased in November 1995.

Table 11-8: TRANSIT FARE STRUCTURE

YEAR	ADULT CASH ($)	E&H CASH ($)	ADULT PASS ($)	E&H PASS ($)
1975	0.25	0.10	8.75	
1980	0.25	0.10	8.75	
1982	0.50	0.10	17.50	
1983	0.55	0.25	16.00	
1985	0.55	0.25	16.00	7.50
1991	0.50	0.25	16.00	10.00
1992	0.75	0.35	24.00	13.00
1995	0.75	0.35	27.00	13.50

In FY 1995, the system carried 1,319,983 passengers. This represents a 26% increase in passengers over FY 1994 and a 56% increase over FY 1993. Since 1990, ridership has more than doubled.

Figure 11-3 RIDERSHIP LEVELS

THE BUS has a fixed-route fleet of 36 buses, 22 of which are powered by compressed natural gas. Two of the other 14 buses will be replaced in FY 1996 with small vans which will operate on the BSU campus. All of the remaining 12 buses are beyond their useful life and scheduled for replacement over the next three to four years. These buses will be funded in part by CMAQ funds. The flexibility of the ISTEA has allowed the use of Federal funds for transit and alternative transportation purposes.

Long-range Regional Transit Planning Process

Two significant shifts in the Treasure Valley have required THE BUS to reevaluate how transit services should be provided to better meet the needs of current transit passengers and to attract potential new riders. Both demographic shifts within the urban area and the growing number of employees working in Boise, but living outside the Boise area (particularly in Meridian, Nampa and Caldwell), provided the impetus for a transit planning process.

In 1992, *The Regional Public Transportation Plan for Ada County* was developed by APA. The conclusion of that planning process was for public transportation to meet the needs of area residents, it must be approached from a regional perspective. Further, the study stated the initial region for public transportation should be all Ada County. Following the establishment of a functional system in this region, expansion into surrounding areas may be possible.

As a result of the conclusions in the *Regional Public Transportation Plan for Ada County* and the need to address the movement toward suburbanization, THE BUS began the *Long-Range Regional Transit Plan,* a three-phase study which will focus first on transit services in the City of Boise, then on Ada County and finally on services needed in adjacent counties.

Public Involvement and Data Collection Processes

During the last half of 1994 and the first part of 1995, THE BUS conducted extensive public involvement and data collection efforts. This was done to determine what changes were needed in the system to better meet the needs of current passengers and to attract current non-riders.

The public involvement and data collection efforts were guided by a Steering Committee appointed by the Mayor's Transit Advisory Committee (MTAC). It included 25 members who represented the diverse needs and interests of Boise's citizens. The Steering Committee gathered input received from seven neighborhood meetings, nine meetings held at major employment site/areas, a telephone rider survey, a non-rider telephone survey, and three community-wide meetings. A final community-wide meeting was held just prior to the implementation of the first phase of improvements.

The public involvement and data collection processes were designed to answer three main questions including:

- How close does the bus need to come to your home for you to consider public transit a viable alternative to the private automobile?
- How frequent must the bus run both at peak and non-peak times for you to consider riding?
- Where do you want to go on the bus?

During the public involvement and data collection portions of the project, nearly 2,000 people provided input to the Steering Committee and THE BUS staff. The major findings are outlined below:

In terms of route frequency, 15-20 minute headways during peak periods are highly desirable among all groups, but especially among non-riders. Most indicated the maximum acceptable frequency during the peak periods would be 30 minutes, the same as is currently offered by THE BUS. Also, most current riders said 30 minute frequency during the off-peak hours is highly desirable as opposed to the 60 minute frequency now offered.

In terms of how close a bus must come to their home in order for them to consider riding, most Boiseans indicated a willingness to walk further than the three blocks shown by national statistics to be the maximum walking distance for bus riders. While 25% said they would walk only up to three blocks, nearly 45% of respondents said they would walk four, five or more blocks.

From the answers to the question, "Where do you want to go?", it was clear there are five major destination areas in Boise where transit riders would like to go. These include downtown, BSU, Micron and surrounding business and retail centers, Hewlett Packard and surrounding businesses, and Boise Towne Square Mail and surrounding retail establishments.
In addition to the three primary questions, information was obtained on the hours service should operate, the amount of time people are willing to spend traveling on buses, and the number of transfers people are willing to make.

While a few people needed transit service to begin as early as 5:00 a.m., the largest percentage said a start time of 6:00 a.m. would meet their travel needs. At the time of the survey, THE BUS stopped running some routes as early as 6:15 p.m. and stopped all route service at 8:45 p.m. Nearly everyone said later evening service should be provided. Most wanted service until 9:00 P.M. to 10:00 P.M.

Most people said they would expect to spend more time on a bus than in their own car. However, most said they would be willing to ride only one and a half to two times longer on the bus than in their car.

Finally, 41 % of current riders said they would be willing to make two transfers on a single trip. Most non-riders were willing to make only one transfer, and only if the wait time at the transfer point was no more than ten minutes.

Steering Committee Recommendations

The Steering Committee recommended building a hybrid mixture of high frequency/high route density system over a 15-year period. This hybrid route structure consists of 31 routes and requires 158 buses. The routes include both crosstown routes and circular routes which operate both clockwise and counter-clockwise to provide high levels of service within neighborhoods and to the nearest transit hub.

This system, as originally designed and evaluated, would provide 4,127,150 passenger trips at a total operating cost of $22.1 million. The capital cost to operate such a system would be nearly $50 million.

The committee recommended the system be implemented in a phased approach. First, the current spoke and wheel system would be changed immediately to include more crosstown connections and greater transfer options outside the downtown area.

Over the next six years, the committee recommended THE BUS should add two or three additional routes, significantly improve frequencies to include 20 minute peak-hour frequencies, 30 minute off-peak frequencies, and expand service hours to 9:00 p.m. on Monday through Thursday and to 10:00 p.m. on Friday and Saturday.

Finally, the modified spoke and wheel route structure would transition to the hybrid route structure over the next nine-year period. Also during that period, peak-hour frequencies would improve to 10-1 5 minutes.

The committee suggested all transit improvements be dependent upon identification of a dedicated source(s) of funding for transit operations and capital. Their recommendation included several funding sources which would need to be combined to fund transit. These include:

- ❑ Local option sales/service tax;
- ❑ Employer/merchant contributions;
- ❑ Fare/ridership incentives;
- ❑ Revenue/general obligation bonds;
- ❑ Impact fees (through ACHD); and
- ❑ State revenue sharing.

Long-range Transit Plan for Boise

Plans for Service Improvement

In general, the long-range transit plan for Boise mirrors the recommendations made by the Steering Committee. However, a number of adjustments have been made to the Steering Commiftee's recommendation to develop the final long-range plan.

First, the alternatives evaluated by the committee included FY 1994 Boise Urban Stages ridership and cost-per-mile data. Significant improvements were made in FY 1995 both in terms of ridership and cost-per-mile. These updated numbers significantly changed both the ridership projections and costs for the future system.

Also, adjustments were made to off-peak service. The committee recommended all routes be operated both during peak and off-peak hours. The final plan includes the elimination of 12 of the 31 routes during off-peak hours. These routes will provide counter-clockwise service for circular routes during the peak periods only.

As a result of these adjustments to the committee's recommendations, the hybrid system to be implemented will require 158 buses and should generate an annual ridership of 5,995,500 passenger trips at a total cost of $15,574,700. The net operating cost (after fares) will be

$11,697,800. The capital cost will be slightly more than $47 million. The funding recommendations identified by the committee will be pursued.
The projected ridership estimates are contingent upon the implementation of aggressive travel demand management measures and the adoption of transit oriented development land use policies.

Implementation of Boise's Long-Range Transit Plan
The first step toward implementing the *Long-Range Regional Transit Plan* was implemented on January 15, 1996 when a modified spoke and wheel route structure was introduced by THE BUS (see Figure 11-4).

In general, the new routes provide shorter travel times primarily by eliminating many downtown transfers. Besides the traditional downtown transfer hub, both BSU and the Boise Towne Square Mail serve as minor hubs for transit routes. Additionally, two new crosstown routes on Overland Road and Glenwood Street include improved opportunities for east/west and north/south travel and transfer options outside the downtown area. These new transfer sites will require capital improvements: shelters, pull-outs, information kiosks, etc.

In addition, the increased fleet will require expansion/relocation of the current maintenance/administration center now located on Front Street near downtown Boise. A site near the airport has been selected and is already in use as a fueling station.

Also in January, an all-new Saturday route system was introduced. While many of the Saturday routes continue to serve downtown Boise, the primary hub for transit service on Saturdays is Boise Towne Square Mail.

During the next few years, the primary transit improvements will be to increase frequencies both at peak and off-peak and to expand service hours. Peak-hour frequencies will be increased to 20 minutes and off-peak frequencies to 30 minutes. Service hours will be expanded to 10:00 p.m. on Monday through Thursday and to I 1:00 p.m. on Friday and Saturday.

In addition to these primary improvements, minor improvements will be made to the new route system including addition of a counter-clockwise State Street route, a Veteran's Memorial/Curtis Road crosstown route, and a Gowen Road route.

Once these improvements are made, the route system will be transitioned to the hybrid route system and peak-hour frequencies will be improved to 10 to 15 minutes (see Figure 11-5).

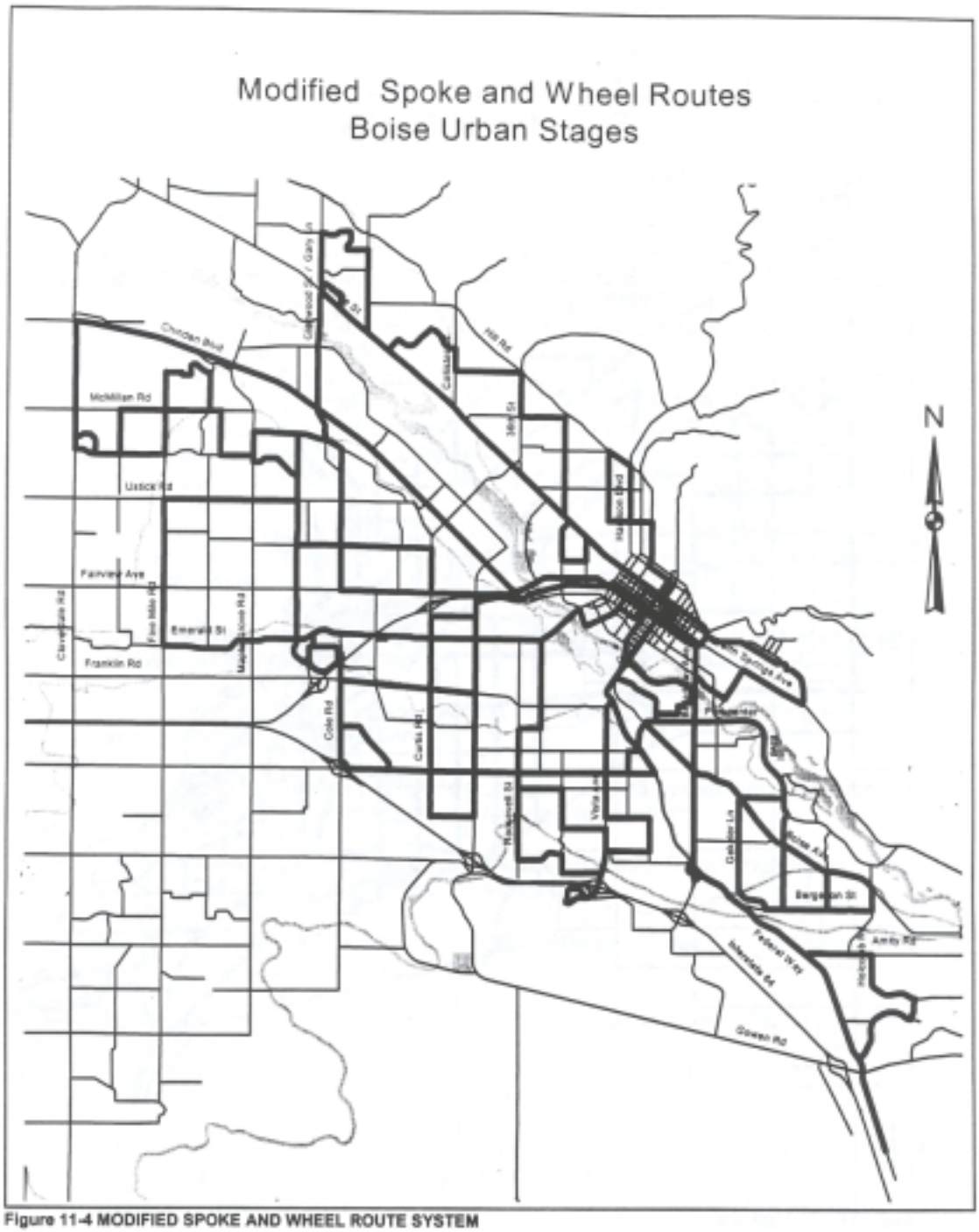

Figure 11-4 MODIFIED SPOKE AND WHEEL ROUTE SYSTEM

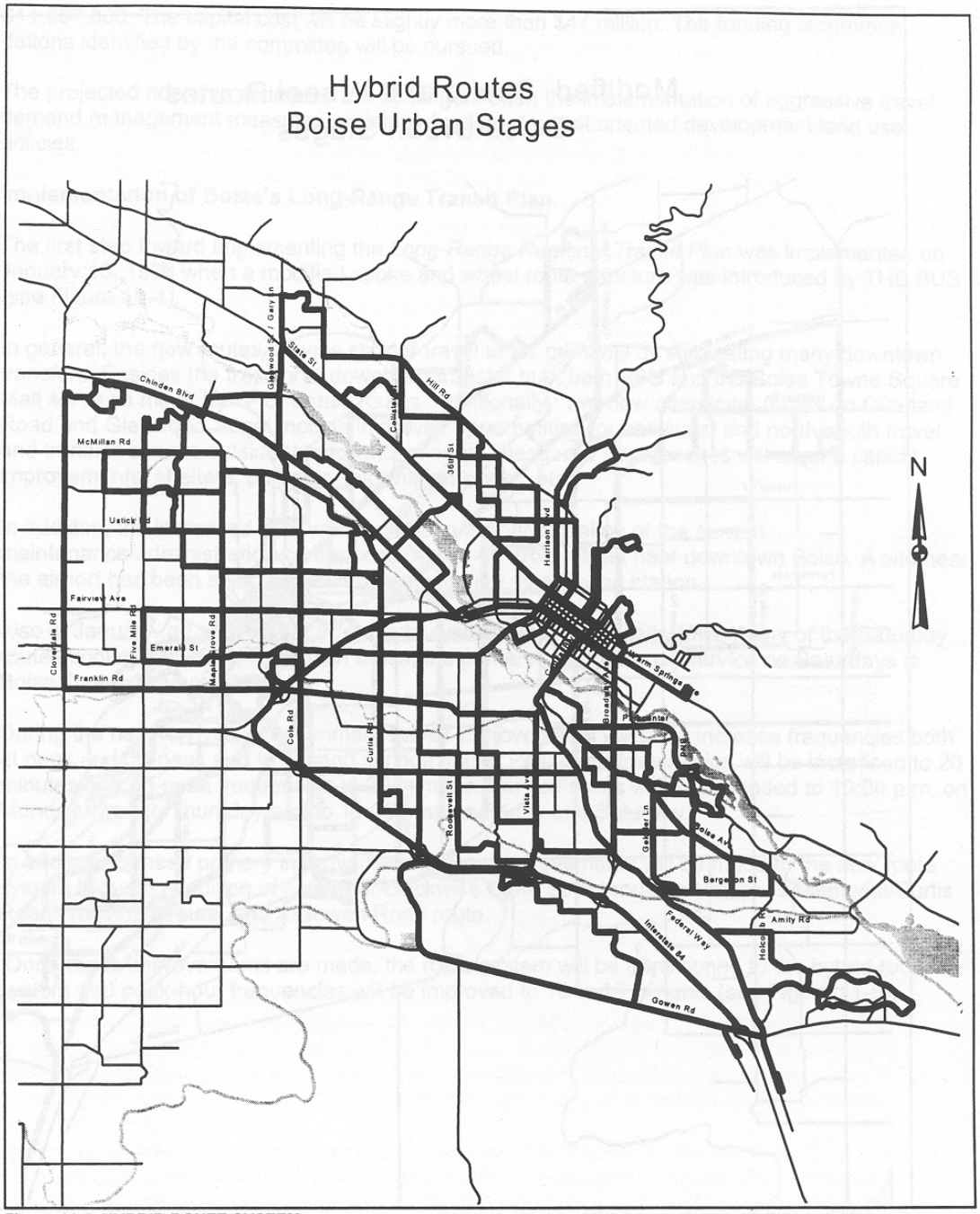

Figure 11-5 HYBRID ROUTE SYSTEM

POLICIES

This public transportation component of *Destination 2015* looks at transportation needs at three levels: intercounty, county-wide, and Boise Metropolitan Area. This creates a comprehensive regional transportation system. It strives to meet the vision of obtaining 25% of the travel by alternative transportation for the region. Policies to meet this vision are:

1. Form a Regional Transit Authority to coordinate all transit services in the region and develop dedicated funding source(s) for those transit services.

2. Assist in development and implementation of the Treasure Valley Alternative Transportation Analysis recommendations. While no recommendations have been approved by the Steering Committee to date, the analysis recommends to:
   a. Modestly expand the existing transit system by targeting unserved areas (Nampa/ Caldwell area and Meridian);
   b. Link key origins and destinations;
   c. Increase frequencies;
   d. Provide connections between communities; and
   e. Offer incentives to encourage transit use.

It also suggests protecting Union Pacific Railroad right-of-way for a future transit facility.

3. Develop building blocks (i.e. start with vanpools/buses, then gradually build to a fixed guideway transit system) which can be increased to produce a comprehensive transit system that meets regional needs.

4. Support continuation and expansion of the Commuteride Program and work to assure adequate and consistent funding.

5. Support development and implementation of a regional Park & Ride Program to serve transit, carpool, and vanpool services.

6. Support implementation of the hybrid route for THE BUS system and the expansion to and funding of 158 buses for the Boise Metropolitan Area.

7. Support the operation and funding of the Boise and Rural Scrip Programs and the numerous vans operated through local Senior Centers.

8. APA will work with local employers and governments to foster the use of alternative transportation through employee benefits.

9. APA will develop and support legislation for funding public transportation.

10. APA will assist local governments when requested in developing land use policies and designs to foster alternative transportation.

11. APA will assist local governments, in cooperation with businesses, with the development of parking strategies to encourage use of alternative transportation.

Appendix G-10
Treasure Valley Regional Public Transportation Authority (VIATrans) Goals, Objectives, and Policies

Treasure Valley Regional Public Transportation Authority (TVRPTA)
Goals, Objectives, and Policies

This document lays out goals, objectives, and policies for TVRPTA. Policies, shown under each objective, are specific actions intended to support the more broadly defined objectives.

Goal:
Establish a fully coordinated, multi-modal, cooperatively funded public transportation system.

Objective 1:
The TVRPTA will provide and maintain coordination between all agencies that now provide transportation services, as well as Ada and Canyon Counties, and all the incorporated cities within those counties.

1. Contact all government entities providing funds to public transportation services within TVRPTA jurisdiction.
2. Identify additional stakeholders who should be at the TVRPTA table as board members or advisors, etc. and extend formal invitations. Attend their meetings as a liaison.
3. Develop and implement a plan to contact public transportation providers.
4. Invite private providers to participate in joint development of effective TVRPTA/private providers' coordination strategies.
5. Define and implement a public outreach plan.
6. Define "coordination" and implement.

Objective 2:
The TVRPTA will administer, to the extent possible, all modes of public transportation. This would include buses, a light or commuter rail, van and car pools, subsidized taxi services, and other services described under Idaho code.

1. Prepare a short-term management plan.
   a. Open a bank account and obtain a sales tax number.
   b. Create a TVRPTA website and e-mail address.
   c. Define costs for project management, including staff costs (salary plus fringe benefits) and direct costs (postage, printing, etc.).
   d. Identify cost-sharing alternatives and recommend one or more options to Board.
   e. Begin to implement the short-term management plan.
   f. Hire or contract project manager.
2. Create an inventory of all current service providers, their capital assets and ridership.

3. Define and establish the structure of TVRPTA. What services should TVRPTA directly administer and what should be handled through other administrative functions?
4. Define "exclusive jurisdiction" and implement the definition.
5. Develop a resource book for use by Board members and others detailing public transportation services and TVRPTA goals and policies.
6. Develop the transit development plan - FY2000.
   a. Determine needs and issues in the region.
   b. Define the target markets.
   c. Design services for those markets.
   d. Design performance standards for services to assist in evaluating effectiveness and efficiency.
   e. Determine the capital needs for those services.
   f. Determine the cost of services and capital and revenue sources.
   g. Develop milestones for implementation.

Objective 3:

TVRPTA will seek a cooperatively funded public transportation system which emphasizes equity and efficiency.

1. Inventory revenues and expenditures for public transportation services that are under the jurisdiction of TVRPTA.
2. Identify the manner in which TVRPTA inter-relates with grantors and grantees for those funds.
   a. Identify those sources for which TVRPTA should be the designated recipient and take appropriate action to implement.
   b. Where recipient status is irrelevant, develop interagency agreements.
3. Identify new funding options and pursue appropriate legislation or other enabling authority.

K:\Data\WP\TVRPTA\POLICIES\Goals2

Appendix H.
Public Comment, Public Hearing, and Response

H-1 Legal Notification of Public Comment Period

H-2 Public Comments Received

H-3 Transcript of Public Hearing

H-4 Responses to Comments

Appendix H-1.
Legal Notification of Public Comment Period

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton, Boise, ID 83706-1255, (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

October 23, 2001

To all parties interested in the Northern Ada County Carbon Monoxide Limited Maintenance Plan

The Department of Environmental Quality (DEQ) is scheduling a public hearing during the regular thirty (30) day comment period on this project. The attached legal notice includes more detailed information on the hearing and comment period, and where you can view the proposed plan.

The public hearing is scheduled for November 27 at 7:00 p.m. in the Department of Environmental Quality, Conference Room B, located at 141 0 N. Hilton, Boise, Idaho. Written comments will be accepted until 5:00 p.m., November 28, 2001.

If you have any questions about the comment period or hearing on this proposed permit, please contact the Department of Environmental Quality at (208) 373-0253.

Thank you for your interest.

Gary Reinbold, M.A.
Air Quality Analyst
State Air Quality Division
Department of Environmental Quality

GR/

Enclosure

cc: COF
PC file

NOTICE OF INTENT TO AMEND A STATE PLAN REGARDING CARBON MONOXIDE (CO) AIR QUALITY IMPROVEMENT IN THE NORTHERN ADA COUNTY NONATTAINMENT AREA

Notice is hereby given that the State of Idaho Department of Environmental Quality (DEQ) has scheduled a public comment period from October 25 through November 28, 2001. DEQ will conduct a public hearing on Tuesday, November 27, 2001 at 7:00 p.m. in Conference Room "B" of the DEQ offices at 1410 North Hilton, Boise.

The purpose of the hearing and comment period is to receive comments from the public on the Carbon Monoxide Limited Maintenance Plan. This plan was prepared to meet Environmental Protection Agency requirements to support redesignation of the Northern Ada County Not-Classified Carbon Monoxide Nonattainment Area to Attainment status. Northern Ada County, Idaho was designated as a Nonattainment Area for carbon monoxide in 1978. An Air Quality Improvement Plan (AQIP) was submitted to EPA in 1980, and again in 1984. The current AQIP is a minor revision of the 1984 Plan, submitted in 1994. Given reductions in the ambient carbon monoxide concentrations and the absence of any exceedances of the standards in almost a decade, the State of Idaho is now submitting a Limited Air Quality Maintenance Plan, and requesting redesignation to attainment.

The Northern Ada County Not-Classified Carbon Monoxide Nonattainment Area consists of that portion of Ada County that is north of the Boise baseline (43 degrees North latitude). Areas to the north, east, and south of the Nonattainment Area are either unpopulated or are separated from the Nonattainment Area by natural barriers. Canyon County, to the west of the Nonattainment Area, is populated and has significant sources of carbon monoxide (CO). Although it is in the same airshed, its contributions to carbon monoxide levels in the Ada County Nonattainment Area are considered negligible due to the distance involved and the ready dispersion of carbon monoxide. However, Canyon County does contain a single major point source that is located within the 25-mile radius of Ada County, and is therefore included in the Ada County analysis.

Written comments and data concerning this action are encouraged and will be accepted by the Department until 5:00 P.M., MST November 28, 2001. Comments transmitted by e-mail or facsimile will also be accepted up to the deadline. Written comments will be received by DEQ at the following address:

Gary Reinbold, Air Quality Analyst
Idaho Department of Environmental Quality 1410 North Hilton
Boise, Idaho 83706
Phone: (208) 373-0253 FAX: (208) 373-0154
E-Mail: greinbol@deq.state.id.us

Copies of the Plan are available at the above address, or at the following locations:

DEQ Regional Office	Boise Public Library
1445 North Orchard	715 South Capitol
Boise, ID 83706	Boise, ID 83702 Phone: 373-0550

If you have any questions regarding this notice or the Plan, please contact Matthew Stoll at the DEQ Regional Office.

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton, Boise, ID 83706-1255, (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

October 24, 2001

Boise Public Library
715 S. Capitol
Boise, ID 83702

Dear Librarian:

Enclosed are three public comment packages of information concerning the Northern Ada County Carbon Monoxide Limited Maintenance Plan. The draft plan is issued by the Department of Environmental Quality.

Please have the packages available for public review through December 2001. We suggest that the large comment package with appendices be available to be checked out for in-library use only. The other two smaller versions can be made available for overnight checkout.

Thank you for your cooperation and assistance. Please contact me in Boise at (208) 373-0253 if you have any questions.

Sincerely,

Gary Reinbold, M.A.
Air Quality Analyst
State Air Quality Division

GR/fw

Enclosures

cc: COF
PC file

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton, Boise, ID 83706-1255, (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

October 24, 2001

Matthew Stoll
Boise Regional Office
1445 N. Orchard
Boise, ID 83706

Dear Mr. Stoll:

Enclosed is a copy of the public comment package concerning the Northern Ada County Carbon Monoxide Limited Maintenance Plan. The comment period will run from October 25 through November 28, 2001. 1 have listed your office as a location to review the package along with the Boise Public Library.

A hearing has been scheduled for November 27, at 7:00 pm, at the DEQ State Office in Conference Room B.

If you have any questions please contact me at (208) 373-0253.

Thanks for your help.

Sincerely,

Gary Reinbold, M.A.
Air Quality Analyst
State Air Quality Division
Department of Environmental Quality

GR/

Enclosure

cc: COF
PC file

News and Notices

State of Idaho Department of Environmental Quality

Media Contact

Matt Stoll
DEQ Boise Regional Office
(208) 373-0550

View air quality maintenance plan (pdf 394 kb, 47 pages)

View appendices

Submit public comment via email

Return to Previous Page

October 26, 2001

DEQ seeks comment on draft air quality maintenance plan for northern Ada County

BOISE — The Idaho Department of Environment Quality (DEQ) is seeking public comment on a draft air quality maintenance plan for northern Ada County.

DEQ is proposing to designate northern Ada County as an attainment area for carbon monoxide. The draft plan provides documentation required by the U.S. Environmental Protection Agency (EPA) to support attainment status.

Northern Ada County was designated a nonattainment area for carbon monoxide in 1978. As a result of air quality improvements, ambient carbon monoxide concentrations have been reduced and no exceedances of standards have been recorded in nearly a decade.

Copies of the plan, entitled "Northern Ada County Carbon Monoxide Limited Maintenance Plan," are available for review at:

- DEQ's State Office, 1410 N. Hilton;
- DEQ's Boise Regional Office, 1445 N. Orchard;
- Boise Public Library; and
- DEQ's web site in pdf format: View Air Quality Plan | View Appendices.

Public comment will be accepted through Wednesday, November 28, 2001.

Questions, comments, and requests may be submitted using the email form below or directed to:

Gary Reinbold
DEQ State Office
1410 North Hilton
Boise, ID 83706
Email: greinbol@deq.state.id.us.

Public Comment Form

Name:

Email:

Affiliation:

Comments:

The Idaho Statesman

P.O. Box 40, Boise, Idaho 83707-0040

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OCT 29 2001
DEPARTMENT OF ENVIRONMENTAL QUALITY
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LEGAL PROOF OF PUBLICATION

Account #	OT1#	Identification	Amount:
047653	549841	LEGAL NOTICE	$109.00

Ordered by:	P.O. #	Rate	Run Dates
GARY REINBOLD		TT	October 25, 2001

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY
1410 NORTH HILTON
BOISE, IDAHO 83706-1255

Number of Lines: 53 X 2

Affidavit	Legal #
1	11798

JANICE HILDRETH, being duly sworn, deposes and says: That she is the Principal Clerk of *The Idaho Statesman*, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein, and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto: that said notice was published in *The Idaho Statesman*, in conformity with Section 60-108, Idaho Code, as amended for: ONE

[ ] consecutive weekly [X] single
[ ] consecutive daily [ ] odd skip
insertion(s)

beginning with the issue of: OCTOBER 25, 2001
and ending with the issue of: OCTOBER 25, 2001

Janice Hildreth

STATE OF IDAHO)
)ss
COUNTY OF ADA)

On this 25 day of OCTOBER in the year of 2001 before me, a Notary Public, personally appeared before me Janice Hildreth known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that she executed the same.

PAMELA J. CLAUNCH NOTARY PUBLIC STATE OF IDAHO

Pamela J. Claunch

Notary Public for Idaho
Residing at: Boise, Idaho
My Commission expires: 6/20/06

LEGAL NOTICE
NOTICE OF INTENT TO AMEND A STATE PLAN REGARDING CARBON MONOXIDE (CO) R QUALITY IMPROVEMENT IN THE NORTHERN ADA COUNTY NONATTAINMENT AREA

Notice is hereby given that the State of Idaho Department of Environmental Quality (DEQ) has scheduled a public comment period from October 25 through November 28, 2001. DEQ will conduct a public hearing on Tuesday, November 27, 2001 at 7:00 p.m. in Conference Room "B" of the DEQ offices at 1410 North Hilton, Boise.

The purpose of the hearing and comment period is to receive comments from the public on the Carbon Monoxide Limited Maintenance Plan. This plan was prepared to meet Environmental Protection Agency requirements to support redesignation of the Northern Ada County Not-Classified Carbon Monoxide Nonattainment Area to Attainment status. Northern Ada County, Idaho was designated as a Nonattainment Area for carbon monoxide in 1978. An Air Quality Improvement Plan (AQIP) was submitted to EPA in 1980, and again in 1984. The current AQIP is a minor revision of the 1984 Plan, submitted in 1994. Given reductions in the ambient carbon monoxide concentrations and the absence of any exceedances of the standards in almost a decade, the State of Idaho is now submitting a Limited Air Quality Maintenance Plan, and requesting redesignation to attainment.

The Northern Ada County Not-Classified Carbon Monoxide Nonattainment Area consists of that portion of Ada County that is north of the Boise baseline (43 degrees North latitude). Areas to the north, east, and south of the Nonattainment Area are either unpopulated or are separated from the Nonattainment Area by natural barriers. Canyon County, to the west of the Nonattainment Area, is populated and has significant sources of carbon monoxide (CO). Although it is in the same airshed, its contributions to carbon monoxide levels in the Ada County Nonattainment Area are considered negligible due to the distance involved and the ready dispersion of carbon monoxide. However, Canyon County does contain a single major point source that is located within the 25-mile radius of Ada County, and is therefore included in the Ada County analysis.

Written comments and data concerning this action are encouraged and will be accepted by the Department until 5:00 P.M., MST November 28, 2001. Comments transmitted by email or facsimile will also be accepted up to the deadline. Written comments will be received by DEQ at the following address:

Gary Reinbold, Air Quality Analyst
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706
Phone: (208) 373-0253
FAX: (208) 373-0154
E-Mail: greinbol@deq.state.id.us

Copies of the Plan are available at the above address, or at the following locations:

DEQ Regional Office
1445 North Orchard
Boise, ID 83706
Phone: 373-0550

Boise Public Library
715 South Capitol
Boise, ID 83702

If you have any questions regarding this notice or the Plan, please contact Matthew Stoll at the DEQ Regional Office.

Pub. Oct. 25, 2001 11798

Department of Environmental Quality • October 26, 2001 • For Immediate Release

NewsRelease

DEQ seeks comment on draft air quality maintenance plan for northern Ada County

MEDIA CONTACT

Matt Stoll
DEQ Boise
Regional Office
(208) 373-0550

BOISE — The Idaho Department of Environment Quality (DEQ) is seeking public comment on a draft air quality maintenance plan for northern Ada County.

DEQ is proposing to designate northern Ada County as an attainment area for carbon monoxide. The draft plan provides documentation required by the U.S. Environmental Protection Agency (EPA) to support attainment status.

Northern Ada County was designated a nonattainment area for carbon monoxide in 1978. As a result of air quality improvements, ambient carbon monoxide concentrations have been reduced and no exceedances of standards have been recorded in nearly a decade.

Copies of the plan, entitled "Northern Ada County Carbon Monoxide Limited Maintenance Plan," are available for review at:

- DEQ's State Office, 1410 N. Hilton;
- DEQ's Boise Regional Office, 1445 N. Orchard;
- Boise Public Library; and
- DEQ's web site in pdf format at http://www2.state.id.us/deq/air/air1.htm.

Public comment will be accepted through Wednesday, November 28, 2001.

Questions, comments, and requests may be directed to:
Gary Reinbold
DEQ State Office
1410 N. Hilton
Boise, ID 83706
Email: *greinbol@deq.state.id.us.*

End

Appendix H-2.
Summary of Public Comments

Thurs, 10-24-01

GARY —

THANK YOU FOR YOUR "CUSTOMER SERVICE" IN OBTAINING THIS DOCUMENT FOR MY PERUSAL.

PLEASE NOTE CORRECT(ED) ADDRESS AND PHONE NO. OF ADA COUNTY AIR QUALITY BOARD ON PAGE APPENDIX B-2.

I SUGGEST YOU DOUBLE-CHECK IF THE ADDRESS OF COMPASS IS THE NEW LOCATION (IN MERIDIAN) IF IT IS LISTED ANYWHERE IN THIS DOCUMENT.

KEEP ON KEEPING ON.

Warren Beale
ADA AIR QUALITY BOARD MEMBER

From: Cherie Cole
To: "greinbol@deq.state.id.us"
Date: 10/26/01 1:12 PM
Subject: Air Quality Hearing – Redesignation – November 27, 2001

From a notice received from the DEQ earlier this week:

"Notice is hereby given that the State of Idaho Department of Environmental Quality (DEQ) has scheduled a public comment period from October 25 through November 28, 2001. DEQ will conduct a public hearing on Tuesday, November 27, 2001 at 7:00 p.m. in Conference Room "B" of the DEQ offices at 141 0 North Hilton, Boise."

"The purpose of the hearing and comment period is to receive comments from the public on the Carbon Monoxide Limited Maintenance Plan. This plan was prepared to meet Environmental Protection Agency requirements to support redesignation of the Northern Ada County, Not-Classified Carbon Monoxide Nonattainment Area to Attainment status." (my emphasis. I believe this means the removal of existing protections?) "Northern Ada County, Idaho was designated as a Nonattainment Area for carbon monoxide in 1978. An Air Quality Improvement Plan (AQIP) was submitted to EPA in 1980, and again in 1984. The current AQIP is a minor revision of the 1984 Plan, submitted in 1994. Given reductions in the ambient carbon monoxide concentrations and the absence of any exceedances of the standards in almost a decade, the State of Idaho is now submitting a Limited Air Quality Maintenance Plan, and requesting redesignation to attainment." (my emphasis in bold again)

There's more text about the airshed and Canyon County's impacts on Ada County air quality, negligible they say in regard to carbon monoxide. But does have a single major point source of pollution within the 25 miles radius of Ada County, so therefore included in the Ada County analysis. I'm wondering, if I can smell the factories in Nampa right up against the Boise Front foothills, then surely a percentage of the carbon monoxide or other harmful pollutants are indeed a part of the Ada County area of impact by way of an easterly drift?

I do hope DEQ will lift their heads from paper reports and rely on their vision and sense of smell to tell them the air quality is significantly worse than it was in 1994, especially in the oldest parts of town, including Downtown and the Boise River. I'm dreading the long, dark, dirty inversions again this winter, and the traffic fumes are already burningly intense in the mornings. Before they give the development industry the nod with an "Attainment" reclassification, they should think about the next growth boom that is expected soon from the East because of the bombings. Cumulative impacts from uncontrolled development and traffic will occur, and the public process to replace a quality control classification will be too slow to protect the community from the increasing damages. Anyway, thaws my Cassandra view on this reclassification issue. C. Cole

From: Steve Hulme
To: "greinbol@deq.state.id.us"
Date: 10/30/01 1:15 PM
Subject: Northern Ada County Nonattainment

30 October, 2001

I am a lifelong citizen of Ada County (48 years), and am writing to comment on the proposal to revise the status and/or plan for improving air quality in northern Ada County.

As a year-round Boise bicycle commuter and healthy human organism, I depend on an abundant supply of clean air, year 'round. And I've been very grateful that we have had relatively few "bad air days" over the last decade or so. Some of the credit certainly has to be given to those who have developed and implemented a clean air plan. Especially
in light of the ever-increasing population in the area.

HOWEVER... I don't feel this is the time to relax those standards, or declare that the victory has been won. We need ongoing diligence. More cars are on the roads in Ada County than ever before.

I feel the fact that I'm a relative "old timer" gives me a perspective that many of the newcomers don't have. The unique climatic conditions of Boise Valley certainly contribute to the occasional bad day. Despite all our efforts to limit pollution in the atmosphere, all we need is the infamous air inversion (usually occurring in winter), when warm air traps the cold, dirty air in the valley, and we could have a week or two
of really badly-polluted days. As bad as any big city. So it is certainly in our best interest to do everything possible to limit the amount of pollution that can be trapped in such conditions.

I, for one, am grateful for what the Department of Environmental Quality has done, and urge your continued diligence.

Sincerely,
Steve Hulme
4623 Camas St.
Boise, ID 83705
208/384-6067 - office
208/343-5098 – home

From: Ruth P. Wright
To: "greinbol@deq.state.id.us"
Date: 11/13/01 10:20 AM
Subject: Air Quality

Dear Mr. Reinbold,

I am writing to respond to the notice to amend the State Carbon Monoxide Air Quality.

The year we had 59 days of winter with no sun and air pollution was so high I developed asthma. I was a teacher (I am now retired) and watched as children at recess were coming in with all sorts of respiratory reaction to the foul air. We ended up not going out on days of foul air.

It was a shock in an Idaho that had the reputation for clean water and clean air. Now I have to be very cautious about sleeping with a window open. I like a cool room for sleeping. My neighbors are elderly and heat their home with a wood burning furnace. When it gets cold I have to sleep without fresh air. I realize how important clean air is to the public health.

I am concerned that changes in the state plan will bring lower standards. I would implore you to maintain the highest healthy standards possible throughout the area for our health.

Thank you.
Sincerely,
Ruth P. Wright

From: Candy Odiorne
To: "greinbol@deq.state.id.us"
Date: 11/14/01 9:48 AM
Subject: Draft Air Quality Maintenance Plan for Ada County Public Comments

The air quality in the part of northern Ada County in which I live and through which I commute has deteriorated markedly since we moved to Idaho in 1989. It helps that the subdivision in which I live prohibits the burning of wood stoves, but in areas where there is no such prohibition the smoke hangs in the air, posing a health hazard not only to humans but to animals as well.

At the barn where I board my horse, the animals get what I call "toxic snot syndrome" in the spring and the fall when, in addition to wood smoke all over the valley, there is unrestricted ag burning (containing God knows WHAT kinds of toxic chemicals), not to mention the unrestricted burning of trash and yard debris by residents.

Many horses at the barn where my horse is boarded develop bad coughs (which my vet tried to tell me was "COPD," but which go away when the air clears up) and the skin around their nostrils is BURNED by whatever is in their nasal discharge. I have been around horses all my life and I have NEVER witnessed anything like this.

My husband and I, who never had allergies before moving to Idaho, now can't go anywhere (except out of state!) without Claritin. SW Idaho's dry climate tends to heighten one's sensitivities to allergens, but when exacerbated by the ground-hugging smoke the results are quite unbearable. In addition to the coughing horses, I have NEVER seen as many children with allergies and asthma as I have seen in this area. If I am suffering this much as an adult, it must be murder on infants and small children. But I suppose it is good for business, as the doctors who put drains in the ears of toddlers must be up to THEIR ears in fee income.

I don't understand why Idaho is so reluctant to curb dangerous air emissions, but I don't believe you would get much argument that this unrestrained burning in an area prone to temperature inversions is harmful to living organisms (both two- and four-legged) and I strongly urge you to DO SOMETHING ABOUT IT.

If left unchecked, our air quality is only going to deteriorate further and more rapidly as the population expands, degrading the "quality of life" we brag about so proudly.

When I lived in Denver in the 1960's and 1970's, the county finally prohibited the use of backyard incinerators, although the air quality prior to the burn ban could not be described as anywhere near as bad as it is here. In southwest Idaho, MANY back yards, both corporate and private, are being used as incinerators - and those downwind apparently have no rights whatsoever. We are fed up and angry. I have never been an activist of ANY kind but I am ready to become one over this issue! This is one issue we will be watching closely and with great interest.

From: Jo Kirkpatrick
To: "greinbol@deq.state.id.us"
Date: 11/17/01 3:28 PM
Subject: Public comments on redesignation of attainment rule for CO

Dear DEQ

I write to state that we need redesignation. It would bring the area into attainment of the CO standard, which has not been violated for about 10 years.

The escalation of auto and truck traffic in this area and predicted future escalations are daunting. CO humps up in pockets and does not disperse readily. Where I live, Boise's north end, in winter the CO from commuter traffic on their way to work and on return--which is due to expand exponentially with all the build out to the west--has become much worse than it was when I moved here 7 years ago. Going out for a walk or run in the morning is inadvisable--you can easily choke on the stink of car exhaust. In that exhaust is CO aplenty. Why permit the air quality in this area to just deteriorate endlessly? Soon the inner city--which I consider the north end is part of--will just be a sump of degraded housing and run-down neighborhoods as more middle class people (who are the ones that maintain neighborhood quality) move away to save their kids and or themselves and their senior kinfolk from asthma and toxic air poisoning.

Please do not eliminate the protective non-attainment air quality status. Be civic minded--save the city.

Jo Kirkpatrick
2005 N 17th St
Boise, ID 83702
383-0548

From: Jo Kirkpatrick
To: "greinbol@deq.state.id.us"
Date: 11/21/01 9:58 AM
Subject: Draft Air Quality Maintenance Plan for Ada County Public Comments

I write as a Boisean who lives in the north end to urge that DEQ retain current designation which protects the Boise valley area from CO to some extent. Other types of management would do an even better job, such as getting the legislature to pass a law requiring all Ada/Canyon autos to have emission tests every year!

Living here one block from Harrison Blvd is a nightmare during the commute hours especially in winter months--the stink of auto exhaust is penetrating. CO just clumps, it doesn't disperse easily. A cloud of it hangs over our area every working day.

With the extrapolated buildout to the west and projected thousands of new commuters added to existing traffic, with out the protective non-attainment status this situation could get a hell of a lot worse.

I am an elder, and like many of us I am susceptible to asthma and other respiratory conditions which are continually exacerbated by auto exhaust and air pollution. Preserving air quality in reference to traffic and roads is a MUST for everybody's health.

For once do us citizens a favor: don't allow the current designation to lapse.

Jo Kirkpatrick
2005 N 17th St
Boise 83702
383-0548

From: Cherie Cole
To: "greinbol@deq.state.id.us"
Date: 11/26/01 1:25 PM
Subject: Testimony – Redesignation hearing 11/27/2001

November 26, 2001

Dear Sirs & Madams:

I am writing in opposition to the removal of the protective "Non-attainment" status of our region's air quality. I believe the cumulative impacts of the recent heavy, (46%), valley-wide growth and ongoing growth have not been fully calculated, and will surely cause a local increase in respiratory diseases, deaths, indigence, and other social costs in the future. I think it is foolish to remove existing health protections, especially when it is
realistic to believe those risks will remain or return in the very near future.

The length of time and the costs to reinstate this or other protections will be wasted money, at the same time no legal motivation will remain in place for regional planning to reduce the sources of pollution.

While a decrease in some toxins may seem to justify a temporary reclassification, increases in other related toxins and/or particulates are very apparent to those of us living here for longer periods of time. Perhaps our area was not tested as thoroughly as needed for the people here. The quality of air has radically declined around our home near the Boise Front and Downtown in recent years. Drifts and stenches that we never experienced before are now happening too often. We can see grey clouds of pollution
lying on the street several feet deep, and the new levels of particulate dirt on hundreds of homes in our area has ruined many paint jobs. Surely some of the odorless toxins are carried into or concentrated in places these other pollution drifts go?

I believe several of those requesting the removal of Non-Attainment Status have been motivated by greed and politics. Our environmental protection agencies must be more far-sighted than that, being responsible for the health of generations of entire populations.

For the sake of the people and the future of this valley, please do not eliminate any existing health protecting classifications.

Thank you for your consideration.

Cherie Cole
1221 N. 15th
Boise, Idaho 83702
208-345-3246

From: Lark Corbeil
To: "greinbol@deq.state.id.us"
Date: 11/26/01 3:57 AM
Subject: co2 non-attainment status testimony

Hello,

I*m hoping to be able to attend the meeting tomorrow however wanted to get my comments considered in case I*m unable to make it.

There are some serious flaws in the proposed CO Limited Maintenance Plan that must be addressed satisfactorily in order to move forward with this plan. Most importantly, the old maintenance plan had ridesharing and transit listed as contingency measures to be triggered upon any exceedances. This proposal needs to reinstate them on page 40.

In addition, the data is 6 years old. How relevant and accurate will this be as an indicator for the future? It*s not a pleasant word but lives are actually at stake so I*ll use it--the limited plan needs to REQUIRE the use of an emissions budget. On the bottom of page 21, the percentages quoted for total reduction credit are more than 100%

Thank you for your devotion to making Treasure Valley air clean and healthy for us and generations to come.

Best regards,

Lark Corbeil
344-2402
2700 Hillway Dr., Boise, Idaho, 83702

From: Matthew Moore
To: "greinbol@deq.state.id.us"
Date: 11/27/01 4:37 PM
Subject: Review and Comments on No. Ada County Limited Maintenance Plan

Importance: High

Gary,

Please include the following comments in the record for the above plan.

- All references to APA or Ada Planning Association should be changed to COMPASS.
- On page 39, under section V.F.1.a. (Conformity. Hot Spot Analysis), the Idaho Transportation Department (ITD) would propose to work cooperatively with IDEQ through Mike Edwards, to update the text in this section to reflect the implementation and use of "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho (09/04/01) for the purpose of determining transportation project's potential or actual air quality impacts and/or emissions. This guidance document, developed jointly by ITD, IDEQ and the Federal Highway Administration, serves to assure that localized carbon monoxide emissions are addressed. Similarly, it provides the necessary review and analysis of transportation projects for project-level transportation conformity purposes.
- Also on page 39, under section V.F.1.b and c, ITD would respectfully request text be updated to reflect the implementation and use of "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho (09/04/01) for the purpose of determining transportation project's potential or actual air quality impacts and/or emissions.
- Finally, all references to proposed projects causing increases in CO concentrations exceeding the NAAQS or increases in CO generally, ". . mitigation measures are required," within V.F.1.a-c should include the caveat "wherever feasible." It is impossible to make a blanket statement that mitigation measures are always available, reasonable or feasible in all cases.

Thank you for the opportunity to comment. Please contact me directly for any clarifications.

Matthew E. "Matt" Moore, M.A.
Senior Transportation Planner
Transportation Planning Division
Idaho Transportation Department
Post Office Box 7129
Boise, ID 83707-1129

208.334.8296-Voice
208.334.4432-Fax

mmoore@itd.state.id.us

http://www2.state.id.us/itd/planning/reports/cmaq/cmaq.html

From: Beth Baird, City of Boise
To: "greinbol@deq.state.id.us"
Date: 11/28/01 10:44 AM
Subject: Review and Comments on No. Ada County Limited Maintenance Plan

Below are a few comments related to the updating issues and the airport fire training facility that we have already discussed.

1. Page 25. Last two bullets. More recent ridership figures are available. Kevin Bitner at BUS can provide these.

   The 2015 plan was outdated by the 2020 plan. It was completed in 2000 and approved in 2001. Also you may what to indicated that the Treasure Valley Regional Public Transprotation Authority is called VIATrans. The Treasure Valley Transit developoment Plan will be completed in 2002.

2. page 39 Analysis of Regionally Significant The defination of regionally significant has changed since 1999. In October 2001 the ICC voted to change the defination.

3. Appendix A-1 page 25-29 It might be added that the open burning at the airport is for fire fighting training. page 25.

   The airport never really had a permit to construct for the fire training facility. It might be better to say--" Limits were established (I'm not sure of the date.of the original Director's exemption) that restricted fuel use to 54,300 gallons/yr....". page 28, second the the last sentence in a.

From: Jon Mason, Boise City Councilman
To: "greinbol@deq.state.id.us"
Date: 11/28/01 3:29 PM
Subject:

Hi Gary,

I have attached my comments. Getting through all the appendices and report was painful, and a significant deterrent to public comment.

I think DEQ should delay publishing this to include the 1999 emissions inventory, which appears more professionally prepared.

Thanks for your help.

Jon Mason

November 26, 2001

Gary Reinbold
DEQ State Office
1410 N. Hilton
Boise, Idaho 83706

Subject: Comment on Draft Air Quality Maintenance Plan

Dear Gary Reinbold;

I have concerns on a number of issued raised in this draft:

1. If the 1994 revision of the Air Quality plan is good for 10 years, why is DEQ pushing this Plan through early? More importantly, why is DEQ using 6-year-old emissions inventory when you have just completed a more reliable 1999 emissions inventory?
2. Why is the Air Quality Board being told to not make changes in vehicle emissions testing program when DEQ, without justification, intends to eliminate the transit and rideshare measures in the plan. There is little evidence that DEQ recognizes that VMT is driving CO emissions. CO accumulates during the commute hours, and converting SOV to vanpools and rideshares effectively reduces VMT, and CO emissions.
3. With the dramatic improvement in automotive engine management (combustion control) over the last 30 years, future improvements in automotive emissions will be limited to the replacement of old commuter cars with newer, low polluting vehicles. The Air Quality Board recognizes the importance of the vehicle inspection and maintenance as commute vehicles age.
4. The first 4 control measures listed on pages 21 and 22 appear ineffective as control measures for the future, and DEQ must rely on the next 3 for any future exceedance.
5. The numbers DEQ uses for CO reductions conflict between pages 22 and 26.
6. DEQ provides a weak analysis of the City of Kuna compliance with vehicle emissions testing on page 27. DEQ can determine how many vehicles are registered in the City, which can be confirmed by the Air Quality Board notices sent. AQB also keeps records of those vehicles tested. Where are the results?
7. There is no indication which, if any, of the July 2000 and January 2001 modification will provide an additional 19,073 kg/day reduction in emissions, stated on page 27.
8. In the Contingency Plan on page 36, the use of oxygenated fuels has proven to be a joke in light of modern engine management technology. A better contingency measure recognizes that VMT is driving CO emissions. CO accumulates during the commute hours, and converting SOV to vanpools and rideshares effectively reduces VMT, and CO emissions.

I hope these discrepancies will be addressed.

Sincerely,

Jon Mason
City of Boise
Jmason@cityofboise.org

cc: Stephen E. West, Regional Administrator
Clair Bowman, COMPASS

From: Steven L. Olsen, Representative of Emission Control Station Owners
To: "greinbol@deq.state.id.us"
Date: 11/28/01 4:38 PM
Subject: Draft Air Quality Maintenance Plan for Ada County Public Comments

This letter summarizes my client's opposition to the Idaho Department of Environmental Quality's Limited Maintenance Plan and Request for Re-Desigantion to Attainment for the Northern Ada County Carbon Monoxide Not-Classified Nonattainment Area (Limited Maintenance Plan).

As indicated in the public hearing last night, I represent several emission testing station owners who test automobiles and trucks pursuant to Ada County's vehicle inspection and maintenance program. My clients do not believe that the Environmental Protection Agency should adopt a plan which will allow Ada County to change its testing program from an annual testing to a biennial (every two years) program. Their opposition to the proposed Limited Maintenance Plan is based on the following factors:

1. The proposed Limited Maintenance Plan notes on page 26 that: "For 1995, a reduction of 32,889 kg per day of carbon monoxide can be attributed to the Ada County vehicle inspection and maintenance program. This equates to 16.2% of total daily carbon monoxide emissions. . . . The vehicle inspection and maintenance program, operated by the Ada County Air Quality Board (AQB), was instituted in 1984. Vehicles registered in Ada County are required to pass the emissions test or face revocation of registration. Subsequent to the implementation of the vehicle inspection and maintenance program, exceedances of the eight-hour Carbon Monixide NAAQS dropped steadily, from 15 in 1983, to zero only four years later.

The Limited Maintenance Plan acknowledges that the Ada County Vehicle and Inspection Program has had a very positive impact on carbon monoxide emissions in Ada County. Since 1984, that Plan has required an annual testing of all vehicles. If the EPA allows Idaho to adopt a program which allows biennial testing rather than annual testing, the air quality in Ada County will suffer.

The EPA should require Idaho to continue with its program of annual testing because such a program would be more protective of air quality, a fact acknowledged by the Idaho Department of Environmental Quality in its proposed Limited Maintenanct Plan. On page 5 of Appendix B-1 attached to the Limited Maintenance Plan, it is noted that: "Moving from annual to biennial (every other year) testing was planned to begin in July of 2000, and the Emissions Inventory reflects this change. The Mobile 5b model used to estimate emissions interprets this change to result in slightly increased carbon monoxide emissions, as vehicles with excessive emissions would potentially not be repaired as often. However, the implementation of this change is still under discussion. Since remaining an annual test is actually more protective of air quality, no changes will be made to emissions projections or planning.

As this excerpt suggests, no changes should be made to the annual program for emissions testing currently in effect in the State of Idaho.

In the report presented in support of the Limited Maintenance Plan, it is noted that: "The EPA assumes that levels will not increase past the health-based standards, given that existing control measures remain in effect." Again, existing control measures in effect, include an annual, not a biennial testing of motor vehicles in Ada County, Idaho. This control measure should remain in effect so that the citizens of Ada County will have a better standard of air quality than simply the minimum requirements imposed by the EPA.

Submtitted this 28th day of November, 2001.

Steven L. Olsen

Community Planning Association
of Southwest Idaho

November 28, 2001

Matthew Stoll, Regional Airshed Manager
Idaho Department of Environmental Quality
1445 N. Orchard
Boise, Idaho 83706

Dear Matt:

I would like to express COMPASS' Board support for the "Limited Maintenance Plan and Request for Re-Designation to Attainment for the Northern Ada County Not-Classified Nonattainment Area." COMPASS is committed to improving air quality in the Treasure Valley and we believe this plan is a significant step toward that goal.

COMPASS is the lead transportation planning agency for the current non-attainment area and, as such agrees to continue to oversee the Interagency Consultation Committee specified in the Plan. Furthermore, COMPASS agrees to perform all conformity analyses contemplated by the Plan.

In short, the COMPASS Board endorsed this Limited Maintenance Plan to ensure that Carbon Monoxide levels remain below the National Ambient Air Quality Standards or limits. We urge its immediate submittal to the Environmental Protection Agency and their prompt approval.

Sincerely,

Clair M. Bowman
Executive Director

pc: 651.01
COMPASS Board of Directors
JR:dw T:\800envplnpro\Air Quality\co-mainpln\Support Letter for Plan.doc

800 South Industry Way • Suite 100 • Meridian, Idaho 83642 • (208) 855-2558 • Fax (208) 855-2559 • www.compassidaho.org

Appendix H-3.
Transcript of Public Hearing

DEPARTMENT OF ENVIRONMENTAL QUALITY

BOISE REGIONAL OFFICE

Carbon Monoxide Limited)
)
Maintenance Plan for)
)
Northern Ada County)
_____)

LARRY F. WEEKS
Hearing Officer

PUBLIC COMMENTS

NOVEMBER 27, 2001

7:00 P.M.

BOISE, IDAHO

BURNHAM, HABEL & ASSOCIATES, INC.
Certified Shorthand Reporters

ORIGINAL

Reported By
Robyn Dane,
CSR

Post Office Box 835
Boise, Idaho 83701
(208) 345-5700 • FAX 345-6374 • 1-800-867-5701

BE IT REMEMBERED that the Public Comment Hearing for the Carbon Monoxide Limited Maintenance Plan was held at the offices of the Department of Environmental Quality, Boise Regional Office, located at 1410 Hilton Street, Boise, Idaho, before Robyn Dane, a Certified Shorthand Reporter and Notary Public in and for the County of Ada, State of Idaho, on Wednesday, the 27th day of November, 2001, commencing at the hour of 7:00 p.m. in the above-entitled matter.

A P P E A R A N C E S

For DEQ: Karin Hendrickson
Air Quality Program Development Specialist
1445 North Orchard
Boise, Idaho 83706

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P R O C E E D I N G S

INTRODUCTORY STATEMENT

HEARING OFFICER: Let the record show that I am Larry Weeks, the designated hearing officer for the Department of Environmental Quality, Boise Regional Office. It is seven o'clock p.m. on the 27th day of November 2001.

We are in Conference Room B of the Department of Environmental Quality in Boise, Idaho. This is the time and place set to receive oral comments on the revisions to the state implementation plan. The revision we will be dealing with is with a carbon monoxide limited maintenance plan for northern Ada County.

For the audience's information, the state implementation plan is a plan required by federal law to be developed and implemented by a state to meet national ambient air quality standards.

The purpose of this proceeding is to gather the facts, views, or arguments from all interested persons relative to the revisions so that they may receive consideration by the department.

I will accept written statements or documents at the hearing this evening, if relevant and signed by

the persons presenting them. The materials will be included as exhibits in the record, which will be transmitted to the Department of Environmental Quality following the close of the public comment period.

Let the record show that an affidavit is on file regarding publication of the legal notice of the opportunity for public comment at least 30 days prior to the close of the scheduled comment period as specified in Title 40, Code of Federal regulations, Part 10 51.102(d).

Such publication was made in the Idaho Statesman on October 25, 2001. Such publication included notice of this public hearing. This publication was timely made, and other necessary notice requirements have been met.

As an informal proceeding there is no right to cross-examine a person offering a comment, nor is there a right to counsel or subpoena. No objections or procedures of a technically legal nature will be received. As the hearing officer I am the sole regulator of the course of the presentations, including but not limited to a determination that the comments are outside the scope of the rules or that comments are unduly repetitious.

I am not here to answer questions or to

explain any part of the proposed plan, although I myself might ask questions to further explore or amplify the information presented.

All those interested parties attending this proceeding are asked to sign in on the roster by the entrance indicating a desire, if any, to make an oral presentation. I ask that you try to limit your comments to five minutes.

After a brief statement by the department representative, which will summarize the information upon which the proposed action is based, each person will be given an opportunity to speak at least once prior to any person being heard a second time.

I will remind you that this hearing is on a proposed revision and that only comments concerning that topic may be considered. At this time the department's statement will be read into the record followed by the oral presentations.

STATEMENT BY THE DIVISION OF ENVIRONMENTAL QUALITY

MS. HENDRICKSON: My name is Karin Hendrickson. I'm an air quality analyst for the Boise Regional Office, the Department of Environmental Quality. My testimony will briefly outline the actions

leading to this hearing, the reasons for the development of the carbon monoxide maintenance plan, and how the department will respond as to the comments received at this hearing.

The background for the plan. Given the reductions in the ambient carbon monoxide concentration and the absence of any exceedances of the standards in almost a decade, the state of Idaho intends to petition the Federal Environmental Protection Agency for redesignation to attainment.

DEQ has developed a limited air quality maintenance plan which outlines the steps to be taken to be sure that carbon monoxide levels stay below the national ambient air quality standard or limits.

Northern Ada County was designated as a nonattainment area for carbon monoxide in 1978 based on measured violations of the national ambient air quality standards. An air quality improvement plan was submitted to EPA in 1980 and again in 1984. The currently applicable air quality improvement plan submitted in 1994 is a minor revision of the 1984 plan.

The northern Ada County carbon monoxide nonattainment area consists of that portion of Ada County that is north of the Boise baseline, 43 degrees north latitude. Contributions to carbon monoxide levels

in the Ada County nonattainment area from outside the nonattainment area are considered negligible due to the ready dispersion of carbon monoxide.

In addition, areas to the north, east and south of the nonattainment area are either separated from the nonattainment area by natural barriers to air movement or unpopulated, with few sources of carbon monoxide.

The Idaho Department of Environmental Quality operates a permanent carbon monoxide gas analyzer in downtown Boise. Saturation studies have shown that this site consistently records the highest carbon monoxide concentrations in the nonattainment area.

The steady downward trend in carbon monoxide concentrations has been measured in Ada County. Only one exceedence of the eight-hour national ambient air quality standard has been recorded since 1986. This was recorded in January of 1991.

Northern Ada County qualifies to submit a limited maintenance plan because levels in recent years have been much lower than the standards. The design value -- the second highest eight-hour carbon monoxide concentration measured in eight consecutive quarters based on the years 1995 and 1996 -- is below 7.65 parts per million, or 85 percent of the standard.

In a limited maintenance plan, the submitting agency is not required to conduct the rigorous and costly modeling work or to develop an emissions budget.

The EPA assumes that levels will not increase past the health-based standards, given that existing control measures remain in effect. The EPA also requires a contingency plan that outlines additional measures that will be taken if levels do begin to rise to further ensure the protection of the standards.

The downward trend in carbon monoxide levels in Ada County cannot be attributed to economic downturns. The area has experienced tremendous growth, resulting in an increased number of emission sources.

The downward trend in carbon monoxide levels in Ada County cannot be attributed to exceptional weather conditions either. The extended temperature inversions and stagnant air masses that are important in the buildup of particulate matter air pollution have decreased in the last decade; however these conditions do not play the same role in carbon monoxide accumulation.

The area has seen its highest carbon monoxide levels when rush-hour traffic coincided with short-term lower level temperature inversions. The frequency of these short-term lower level temperature inversions have

actually increased in recent years.

Contents of the maintenance plan. The maintenance plan must include an emissions inventory to quantify the amount of carbon monoxide being emitted in this area, a commitment to continue monitoring carbon monoxide levels, and assurance that existing control measures will remain in effect.

The control measures in this plan include the vehicle emissions testing program. Transit and ride-share measures were included in previous plans but have been offset by improvements to the vehicle emissions testing program for this effort.

While transit and ride-share unquestionably help to reduce carbon monoxide emissions, they are essentially unenforceable and are therefore inappropriate for use as identified control measures. The plan must also include details on how the progress of the maintenance plan will be tracked.

For this plan, a comprehensive review of the assumptions, demographic data, and estimated vehicle miles traveled used to develop the emissions inventory will be conducted by 2005 to determine whether the assumptions are still reasonable and descriptive of actual conditions.

If actual growth of carbon monoxide emissions

exceeds projected growth by 20 percent or more, or if relative contributions from source categories in comparison with other source categories change by percent or more, an update to the emissions inventory will be prepared.

Based on this data, DEQ will work with EPA Region 10 to determine if a revision of the maintenance plan is necessary. The maintenance plan must also include contingency measures that will be activated if carbon monoxide levels reach a specified trigger. For this plan, triggers will be activated if eight-hour average concentrations of eight parts per million are measured on four or more days within a single winter season or if an exceedence of the national ambient air quality standards -- set in an eight-hour average of nine parts per million -- occurs.

If contingency measures are triggered, all motor vehicle fuels dispensed within the nonattainment area will be required to contain a minimum of 10 percent ethanol. This plan also provides the option to negotiate a different measure with EPA should another, more effective option be identified.

With respect to demonstration of compliance with transportation conformity requirements, a constraining emissions budget is not required under a

limited maintenance plan; however, COMPASS, the local metropolitan planning organization responsible for transportation planning and conformity determinations, has agreed to continues the use of build/no build analysis for planning purposes.

In addition, COMPASS or the construction project sponsor must also conduct analyses of hot spots and regionally significant projects.

Comment and review. Once the public comment period closes on November 28 at five o'clock p.m., Mountain Standard Time, the department will respond to all comments in a public comment response package. This package will consist of the transcript from this hearing, the hearing officer's certification, all written public comments received during the comment period, and responses to those comments.

The response package will be made available to the public at the Boise Public Library and the Department of Environmental Quality, Boise Regional Office. The department will review and respond to all comments received during the public review process.

The department will then determine whether or not to submit the plan to the EPA. If a determination is made to submit the plan, it will be finalized and recommended for inclusion in the state

implementation plan. It will then be submitted to the Environmental Protection Agency for their approval.

If this document receives EPA approval, the area will then be redesignated to a maintenance area for carbon monoxide, and the maintenance plan will become the applicable air quality plan for the area.

If the EPA does not approve of the maintenance plan, the department will revise the maintenance plan to address identified deficiencies. The plan would then undergo the public review process again before being submitted to the EPA.

The department is very interested in hearing comments about this carbon monoxide maintenance plan. No one should feel that they must have detailed technical knowledge of a document in order to provide useful comments. The department takes public input very seriously, and your comments are appreciated.

We are constrained in this hearing to consider only comments relevant to this carbon monoxide maintenance plan itself.

HEARING OFFICER: Thank you. To begin, I will call upon persons in order who indicated on the roster a wish to be heard. Since these proceedings are being recorded, I ask that those who wish to make oral presentations come forward, next to the court reporter,

preceding their comments with their name. And please spell your last name. And first on the list would be Sharon Ullman.

STATEMENT BY SHARON ULLMAN

MS. ULMANN: My name is Sharon Ullman. I am an Ada County commissioner, and I am the commission's representative on the Air Quality Board. I'm not here representing the Air Quality Board tonight.

The views I express are my own. I am concerned about our ability to locally control our air quality program, and because of that concern want to see a plan adopted as quickly as possible by the EPA that will allow us to make revisions to our air quality program, our emissions testing program, that will still provide for clean air at the lowest cost and least inconvenience to the public.

Specifically we've talked on the Air Quality Board about going to biannual testing and possibly ultimately exempting vehicles for the first three to five years because they don't seem to contribute a significant degree to our air quality problem.

It's my understanding that if this plan -- or when this plan is adopted by EPA that we can go to

biannual testing.

We've also talked about the possibility of vehicles that fail their emissions test in any given year being required to test again the following year because we do have a very high level of vehicles that fail one year and then are brought into compliance. There's a high level of them failing the following year. But we also have a lot of vehicles that pass year after year after year, and so we have discussed on the Air Quality Board the issue of not inconveniencing people every year if there doesn't seem to be good reason.

We've also talked about requiring vehicles before they are transferred -- title is transferred from a dealer, whether they're new or used vehicles, to require them to be tested before that title is transferred because we have vehicles being brought in from out of state with either altered emissions control equipment or no emissions control equipment, and that we think that we could save people a lot of heartache and cost by requiring testing before that title is transferred.

HEARING OFFICER: Thank you, commissioner. Do you have any written documents you want to submit?

MS. ULLMAN: No, I do not.

HEARING OFFICER: Thank you. Dale Tankersley.

STATEMENT BY DALE TANKERSLEY

MR. TANKERSLEY: I'm Dale Tankersley, T-a-n-k-e-r-s-l-e-y. I live in Boise. I have for 35 years. My main concern here is the issue of mandating ethanol into gasoline.

Now, our economic slump caused me to do my patriotic and civic duty, so I went out and bought me a $25,000 automobile, which I'm sure the sales tax put a little bit in governor Dirk's tin cup, some money in the profit of the dealer, probably some money in the profit of the manufacturer.

And here's the owner's manual. And on page 190 of this brand-new car it says, "Do not use fuel containing methanol. It can damage critical fuel system components."

And then over on page 195 -- and we're all here in Idaho, we're interested in this because we know we've been gouged on gasoline prices. But it says, "Using fuel blended with alcohol may lower fuel economy."

So unless somebody wants to indemnify me that I won't destroy that engine or the components, I think it's sad. And I'm sure there's probably not only hundreds but perhaps thousands of these automobiles

running around here that's not supposed to use that stuff.

And besides that -- well, I better not say it. Thank you.

MR. BEAN: My name is Warren. Last name is Bean, B-e-a-n.

HEARING OFFICER: Sorry. Go ahead.

MR. BEAN: I was just curious. The manufacturer of the automobile that has this restriction on it?

MR. TANKERSLEY: It's Ford Motor Company.

MR. BEAN: Interesting. Thank you, sir.

HEARING OFFICER: Dale Keys?

STATEMENT BY DALE KEYS

MR. KEYS: My name is Dale Keys, and this is the first time I've ever testified at one of these hearings, and I'm just getting over a major bronchial infection, which has nothing to do with air quality, I don't think, but -- so that's just coincidence.

I wish I had had something written out here, but I just have notes jotted down because I was late getting into this game. I have -- for the last few years I have had -- I have questioned why it is that

Boise residents -- that Ada County residents have to repeatedly have their emissions tested on their vehicles while tens of thousands of cars are commuting in and out of Boise every day.

I think that is the one thing that gets everybody's nose out of joint in the city. I have a truck sitting in my driveway that I've driven 300 miles in the last year. I just use it when I need a truck. The car that I drive to work gets 32 miles to the gallon. I have to keep the emissions tested on that pickup truck, even though I drive it about two or three days a month.

And last year it failed for the first time. When I took that truck in to have it tested, that's when I found out I had to spend $150 towards improving the emissions on it. I spent the $150. The truck polluted more after the money was spent on it, yet it was legal to drive it then. And now a year has passed and it's time to get it tested again.

I'm seriously considering whether it's worth wasting another $150 on something that I know isn't going to work, and just let the registration run out on it because the fine for no registration is only half of what I would spend to get it up to snuff emissions wise. These things cause the public to really be cynical about

these regulations.

So the Canyon County commuters outside of Boise commuters, that's my first comment. The other thing is I'm concerned about the way we keep licensing drive-through facilities in this town. Idling cars are causing more pollution than cars that are moving down the road, for obvious reasons.

The next thing that I'm concerned about is our traffic lights don't seem to have any rhyme or reason to them. They just -- the cars keep – again idling cars are causing pollution, increased pollution, in these concentrated areas.

The next thing on my list has been a problem for me in the last two years, and that's the increase in the amount of gasoline-powered leaf blowers that are being used in this city. I call them dirt blowers. If we only used these in October and November to rake leaves, that would be fine.

They're used 12 months out of the year to blow dirt, and this actually came to my attention one day when I looked out the window and saw the landscape guy coming by my convertible and blew dirt all over my convertible. I came out. I had a cigarette butt on my dashboard that he'd blown up from the pavement. This is considered cleaning.

We keep blowing this dirt around in our city. It settles back to the ground. Hyde Park is another place. Every Sunday morning right across the street from where I have coffee, here comes the dirt blower. When he's done there's a fog of dirt in the middle of the street. Also that is blowing garbage into the river runoff systems, so it's illegal to throw garbage off the bridge in the Boise River, but you can blow it into the storm drain legally.

And so that's another point of contention I have.

Lastly I am currently fighting with the Ada County Highway District which wants me to cut down my 30 year-old shade tree in my front yard because it's interfering with the sidewalk. They don't want to take the sidewalk a foot and a half to the left and go around my tree because they -- well, they just keep fighting me to cut the tree down, and so that it won't buckle the sidewalk anymore.

And here we have a tree in the City of Trees. One of the best pollution control things that we have in nature that we know of is a tree. And yet here I am fighting. On the one hand, I'm getting -- I'm trying to get my truck emissions into -- up to code while the Ada County Highway District, to bring my sidewalk up to

code, wants to cut down a 30 year-old shade tree out of my front yard.

The insanity of that -- I don't even have to go into the insanity of that. Anybody with any common sense at all can look at that and say that's total nonsense. And that was pretty disorganized and disjointed, but that's all I have to say.

HEARING OFFICER: Thank you, Mr. Keys.

MR. KEYS: Thank you.

HEARING OFFICER: Mr. Richardson, have you decided whether you want to testify?

MR. RICHARDSON: Yes.

HEARING OFFICER: Would you state your name for the record, please?

STATEMENT BY GARY RICHARDSON

MR. RICHARDSON: My name is Gary Richardson, R-i-c-h-a-r-d-s-o-n. I live in Boise. I'm the secretary of the Idaho Clean Air Force, but I'm really not representing them here tonight, and I haven't really studied this in great detail, but I have a few comments there.

They're kind of questions, but I think they're issues that need to be addressed in the plan document

before it goes final. One thing is the saturation studies that are referenced. It's my understanding that the most recent saturation studies were conducted in 1996, and it's my feeling that it's now five years later.

We've had unprecented growth in that five-year traffic patterns have changed, and it would do for the appropriate bodies to conduct additional saturation studies just to ensure that the monitoring is optimal, staying with the downtown monitor where it is.

I did a cursory look at traffic counts on some of the major streets in Boise today, and it seems to me you've got intersections outside of the downtown area that potentially could be hot spots that you may not be catching if your data is just as recent as '96.

Addressing a couple -- several other points, on page 24 of the document where you discuss transportation control measures, the statement is made -- this is in Section 2, second sentence: "However, the current SIP, the 1994 minor revision, includes several transit and ride-share measures that are essentially unobtainable, impractical, or unenforceable."

I was trying to track it down today, and I will try to get it into the record before the comment period closes tomorrow, but there's been a recent

decision -- I think it was in a federal district court or possibly appeals court -- dealing with the Bay Area where their contentions that the traffic -- excuse me -- transit measures in their plan were unobtainable and, I believe, impractical. Made no difference whatsoever.

I believe in that case they were exceeding the standards, but I just don't think that's a very good excuse for why you should exclude transit and ride-share provisions from the plan, which is what they're proposing to do. I think you need some stronger reasons.

Then turning to page 27, where at the bottom of that page there's a six-bullet item, and it reads, "Additional modifications made between July 2000 and January 2001 have made the program even more effective. Changes included lowering the CO cut point or allowable percentage."

That's the first bullet point. Then it says, "Adding a standard for hydrocarbon emissions." I see no way that that would have any bearing on CO. The next one is modifying the waiver policy so that initial waivers can be issued only after at least 150 hours of repair work has been done on the vehicle.

The next one is adding diesel vehicles to the list of vehicles required to pass an emissions test. I question whether that has an appreciable CO effect, but

I don't know. I'm not technically expert enough to tell you, but I just wonder if this -- why this list of things was given when they're not all necessarily CO related.

Expanding the test from idle only to two-speed tests conducted at both idle and 2,500 RPMs. I doubt that that has any bearing on the CO improvements because your idle tests would be the one that would be a critical -- would give you the critical information for the CO.

And then eliminating the test and repair option for test stations and their owners. Stations are no longer permitted to offer repair services to check emissions. I have absolutely no idea how that could have any bearing on CO emissions. And then the final statement on that page is, these improvements not required by the SIP. SIP will result in an additional 19,073 kilograms per day reduction in emissions over the previous program.

I assume that means but it does not make clear that you're talking about CO emissions. I question whether you could get that kind of gain from that list. But if you can, I think it behooves you to make it clearer just exactly which of those measures are going to get you the 19,000 kilograms a day in emission

reductions from CO.

I think this is a final point, and it bears on what Commissioner Ullman was touching on, and that it seems that because you're basing this whole plan on a 1994 plan and just trying to use it to -- so that you don't have to do a new plan, you're really depending on some fairly outmoded technologies.

The vehicle emission testing technology that we're using now, basically it's my understanding, will be essentially obsolete within a very few years. Most of the new cars are coming through with computerized technology that would obviate the need to do the kind of tailpipe testing you're doing.

But yet you're bidding this whole plan -- it seems your major reductions are from vehicle emission testing and improved federal standards, most of which have been accomplished in both of those cases. And so I guess an essential logical shortcoming I see in the plan is that you're trying to project forward additional CO reductions from technologies which have basically been exhausted.

I don't think you're going to get any greater improvement in the federal emissions standards that are going to get you greater CO savings. And I don't think you're going to get any appreciable improvement from

additional emissions testing technology, so I just wonder if you really shouldn't do a little improvement to the planning document rather than just ride it on.

I know the thinking is that's all you have to do, but it seems to me we ought to do a little bit more than just what we have to do when this place is growing so quickly and we know that CO is likely to reassert itself as a problem here.

It's already getting to be a substantial problem in Canyon County. I can't believe that with the growth continuing in this area that it's not going to be, and to just let it ride for ten years on a hope and a wish, which is what this essentially does, I think is shortsighted. And I guess with that I'll conclude. Thank you.

HEARING OFFICER: Thank you, Mr. Richardson. Barbara Beehner, is it? You haven't indicated whether there was any wish to comment.

MS. BEEHNER-KANE: B-e-e-h-n-e-r hyphen K-a-n-e. No.

HEARING OFFICER: Dan -- is it Buerstetts?

STATEMENT BY DAN BUERSTETTS

MR. BUERSTETTS: Buerstetts. Last name is

B-u-e-r-s-t-e-t-t-s. I'm a relative newcomer to the area myself, and my family moved here a year ago from Texas. And the reason I'm here tonight is because I'm overall pretty shocked at what I experienced.

I thought it was the forest fires that made this place look dirty and it would dissipate after the forest fires were put out, but then I saw there's dust particulate. There's effluent from the sugar plant factory that blows this way. There's geography working against us creating inversion and trapping all the pollutants derived from automobiles and fireplaces and what not.

And it looks like it's going to plague us year round, and I'm extremely disappointed. I'm making the assumption that this is just one aspect of the pollution that the DEQ is addressing. My hopes are that this is just one aspect because certainly there are other substantial impacts on the environment that need to be monitored and controlled and don't -- to my little bit of research that I've don't appear to have been monitored.

But as far as this issue, the carbon monoxide, Correct me if I'm wrong, but I've been told that about 10 percent of the cars in the area are not subject to the local testing. The vast majority of the people in

Ada County are using their cars here, but the -- another seemingly substantial percentage are coming from outside the area and are not subject to the testing.

It may be an even more substantial factor than just the small percentage that's coming from outside because those tend to be the most noticeable polluting vehicles. They're the ones with the blue exhaust coming out the back of the tailpipe, so they're probably equivalent to about 20, 30, 40 emissions-meeting vehicles. So that's something of concern to me.

I also own a late model vehicle. It's a small four cylinder BMW. It specifically states in my owner's manual precisely the same verbiage that the previous gentleman who spoke said; it will affect the -- to a layperson's interpretation it can affect me also with the vehicle's input and outputs. The vehicles -- if you use ethanol, and it will also just damage the function of the machine.

So I am very concerned about having to possibly use ethanol and incur tremendous expenses to get my vehicle running properly again and being up against the wall. If that proves to be the only gasoline available for a period of time, I'll effectively loss my automobile or the use of my automobile until we lower emission standards and are

able to stop using the ethanol supplemented gasoline.

As far as where to monitor it, certainly downtown gets crowded. Lately there have been a lot of people at the mall. And it astounds me the mall is always busy. That may be a place to set up measurements as well. Apparently CO-2 and unbound hydrocarbons, somebody insinuated that those two don't necessarily go hand in hand. I would think they do.

But I don't know what effect lighter fluid has, but in the summertime there's a heck of a lot of lighter fluid. It's a highly volatile, organic compound. I don't know if that -- TV0C is not carbon monoxide. You have to have combustion to get that, but if a ban on that would help lower it, obviously we're searching for ways to lower it economically by disallowing the sales of some products that we feel create more carbon monoxide than others.

That may be an approach. I don't know if diesels are omitted from the tailpipe testing standards. It seems odd to me, but I've yet to be educated on that aspect of it. And that's all I have to say.

HEARING OFFICER: Thank you sir. Thank you. Jim Glancey.

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STATEMENT BY JIM GLANCEY

MR. GLANCEY: Jim Glancey, G-l-a-n-c-e-y, and I sell and manufacture ethanol. I'd like to correct both of the two gentlemen who have spoken. Ethanol is not methanol. In the book that you read, you stated methanol. Methanol is a toxic. It's corrosive. In fact, if you drink it the anecdote for it is to take ethanol.

But the main thing is, we've gone through this with the motor vehicle manufacturers for the last years. And everything since 1988 will state that a 10 percent blend of ethanol is acceptable, is warranted in all vehicles manufactured in the United States. It will not harm your vehicle. It won't harm the BMW, whether it was manufactured here or not, and it's warranted to that effect.

The confusion's occurred in the past with People confusing methanol and other additives with Ethanol. And the fact that we've sold it here for years and over 10 percent of all the gasoline in the United States at the present time is using ethanol, there's over two billion gallons of ethanol sold in the United States last year.

And if you only use it on a 10 percent blend,

you can see where that's 20 billion gallons of fuel. And if there was a problem with the vehicles, I'll guarantee you, you wouldn't be using it. The automobile manufacturers are required in their emissions testing, and if their vehicle life -- to go 50 to 100,000 miles, and if there was any harm to the vehicle it would not be used.

And there's been actually trillions of miles run with it right now. I really just want to correct that portion of it. I always -- and as I said, I've been pitching this for the last almost 20 years now, and it's ethanol we run even on 100 percent blends. We run a race car out at the drag strip. There's Payette police cars that run on it in a 100 percent blend, and these are Chevelles.

It has been very nominal modifications to it and had no problem. The 10 percent blend of ethanol in the last couple years has been used by all the emergency vehicles in the City of Boise, including your police cars and your emergency vehicles, fire engines where they have gas if they're not using diesels, just because of the contracts, practical arrangements.

On the BMW side, I have a friend who's run over 200,000 miles on a small one. I'd be happy to put you in touch with him. The thing I look at is that even

with the way this SIP is proposed, the ethanol wouldn't come into play until after 2005, and that's if we have violations.

And then after you have the violation it takes another two years before you'd come back and say you probably should mandate using the ethanol. My question is, why aren't we being proactive if we know we're going to be having a problem with carbon monoxide and we are -- and carbon monoxide is a poison; it's as poisonous and more so than the lead that the oil companies put in the gasoline for years.

And when they were told to take it out in 1976, they took 20 years before it finally all came out. It wasn't until '96 we finally had all the lead out of the gasoline.

I would like to see a more aggressive program. I think part of the aggressive program would be that we encompass a larger area. I think the comment has been made by the gentleman and the growth in Canyon County. I was looking at the news the other night, and we're talking about another growth in Kuna, you know. 320 residents is being built in one subdivision.

I've lived here 26 years. I like clean air. I spent a lot of time developing and working in this area, and the ethanol is a product that's made from

agricultural products. There's a small plant in Wyoming where we manufacture it from corn. There are two plants here in Idaho where they manufacture it from potatoes.

There's some plants being proposed here in Idaho where they will possibly manufacture it from wheat or barley or, well, millet, if they get into it, but wheat and barley and corn.

And they're also looking at possibly using some of the product coming out of the dairies. But we have a problem we just faced with what took place September the 11th. We've had that problem, and it continually occurs that we import over 56 percent of all our refined oil in crude at this time.

We sit here, and I see letters to the editor in the paper complaining about the price of gasoline. And as we sit here in Boise we are basically at the mercy of one pipeline and a couple large oil companies who maintain the majority of the market.

And I dread what's going to happen in the next year to two where the largest -- one of the largest sellers of fuel here in the valley has just acquired the other. Chevron has purchased Texaco, and it's going to be interesting to see what the prices are when they sit across the street from one another or which station will be closed.

The independent dealers that use ethanol as an octane enhancer, the fact is when you add a 10 percent blend of ethanol to the fuel, you reduce your carbon monoxide emissions by about a third, 30 percent.

Since 1988 the Denver front has been using ethanol or oxygenated fuels to reduce their problem. Denver had a major carbon monoxide problem, that brown cloud. In that time, in the first three years they changed from a -- they were using -- 95 percent of the fuel was being blended with a product called MTVE, methyl tertiary butyl ether, which contains 42 percent methanol.

However, in three years that reversed itself so that they've been using 95 percent ethanol blends rather than the MTVE. The MTVE has been phased out. It's found to be a water contaminant and a problem. California has banned it.

As of next year it will not be allowed to be used within the state of California. And there's about nine other states that have banned it or restricted its use. It's used by the refiners as a good oxygenator. It does add oxygen to the fuel, does reduce the carbon monoxide, but it has some side effects.

They prefer to use it because they can manufacture it and it's an economic benefit to them to

use it. That's why they objected to the ethanol. And unfortunately, some of these things have come out have been myths rather than facts.

There's been confusion between methanol and ethanol, and we like to try and educate the public and the mechanics accordingly what the benefits are of the ethanol. The big factor with the ethanol is when you put a 10 percent blend in, you also increase the octane of the fuel by three octane numbers. You've seen that little black and yellow sticker on the side of the pump. And if you have a high performance vehicle, you usually prefer that you have at least an 87 octane fuel. Most cars today are designed to run on 87 octane. Some larger vehicles are designed to run on higher octane, 90 and above. Older vehicles run better on 90 and above.

They also -- and I talked to a number of the emissions people over the years, and I've testified in the past to the Ada County Air Quality Board over the last ten years at different times, that they found that the ethanol works; otherwise they wouldn't use it as this alternative, as you see it in the SIP plant, that they would come up with a mandate.

I don't know if we need a mandate. I don't think we need a mandate today, but I do think we need

some aggressive public agencies taking the major step to lead to the public to utilize the fuel and use it in their programs.

I have to tell you that Ada County Highway District has been using it in all their vehicles out there for the last eight months that I can count up right now. So I really just wanted to correct anything that came about in terms of confusion between methanol and ethanol, and they're not the same.

And if either of these gentlemen would like, after the meeting I'd be happy to get your names and I'd get you some literature and such that would include the booklets that are used by GM in their training centers for the mechanics on the fuel program.

In fact, there was a brief spot on TV tonight on Fox news where Ford has it. They're running a lot of vehicles now with 85 percent ethanol. In fact, we just went to the plant, and their small pickup trucks, Tauruses, the S-10 pickups and the GM now has -- the Yukons and the Suburbans and such running on 85 percent blends of ethanol, so it's not a product that is negative or harmful to the vehicle.

HEARING OFFICER: Thank you, Mr. Glancey. Steven Olsen?

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STATEMENT BY STEVEN OLSEN

MR. OLSEN: My name is Steven Olsen. I am an attorney with the law firm Huntley Park here in Boise, and I represent several station owners, emission control station owners, who have some concerns about the plan as proposed.

Several of them are here with me, and they've asked me to speak on their behalf tonight. As I have reviewed this plan, it appears to me that a substantial or a significant reason why we have a decrease in emissions in Ada County has been due to the testing that has been -- that was implemented back in 1984, the emissions testing that was implemented back in 1984.

On page 26 of the proposed plan underneath the subheading C, the first sentence there says, "For 1995 a reduction of 32,889 kilograms per day of carbon monoxide can be attributed to the Ada County vehicle inspection and maintenance program. This equates to 16.2 percent of total daily carbon monoxide emissions.

And then moving down to the second paragraph it says, "The vehicle inspection and maintenance program operated by the Ada County Air Quality Board was instituted in 1984. Vehicles registered in Ada County are required to pass the emissions test or face

revocation of registration. Subsequent to the implementation of the vehicle inspection maintenance program, exceedences of the eight-hour carbon monoxide in AW has dropped steadily from 15 in 1983 to zero only four years later."

And the concern of those of the owners of these testing stations is this. That is, this program was implemented -- as implemented and as currently in operation requires an annual test, and as I understand this new plan, Ada County residents would be allowed to test their vehicles only -- instead of every year, the test would be every two years.

And our concern is if the program is working as well as it has for years, why change it to admittedly allowing a situation where there would be more carbon monoxide emissions into the air? Because if you test, of course, vehicles every two years you're not going to catch vehicles that fail during that two-year period of time as you would if you would test them every year.

And I might just comment very quickly on this gentleman who shared his concerns about having to have testing done on a yearly basis and the cost of that.

Idaho right now has the lowest cost for testing emissions in all the surrounding states. And in fact in the surveys that we've conducted, most states in

Utah and certainly California, but in states that we might consider more closely aligned to our economic situation -- Utah, Washington and Oregon -- all charge anywhere from $20 to $30 per year for their test, being on the low side. More likely 25 to 30.

In Idaho right now it's only $12 a year, and so substantially less. In any case, I also note --

MR. KEYS: For the record, I did not complain about the price of the test.

HEARING OFFICER: Okay. You can discuss this off the record.

MR. OLSEN: I appreciate that. I guess more accurately I was trying to speak to your concern that you are required to have a test on a vehicle that you only drive 300 miles.

So on page 24 of this -- of the report, it also indicates underneath the No. 2 heading there, it says -- it's referred to previously. It says, "However, the current SIP, the 1994 minor revision, includes several transit and ride-share measures that are essentially unobtainable and practically are unenforceable."

And then in the next sentence on the issue of EPA Region 10 technical systems, DEQ proposed to eliminate the inappropriate measures as specified below

and make up the difference in emissions reductions through improvements to other control measures.

And in fact as I understand this proposal, it would actually not make up the difference in emissions reductions through improvements to other control measures. It actually would relax control measures by only requiring testing to be done every two years on the vehicles.

And so I think -- I think that again we should continue on a yearly testing program in the state of Idaho.

And finally, in looking at the report as was introduced by Ms. Hendrickson, on the first page, the third paragraph from the bottom, second sentence, it states, "The EPA assumes the levels will not increase past the health-based standards given that existing control measures remained in effect.

And again the control measure that's in effect right now is the annual test. And so again we strongly feel that part of this plan should be what is presented here, and that is the existing control measures should remain in effect.

There should still continue to be a yearly testing program that back in 1984 -- from 1984 to 1988 -- resulted in a substantial decreases in carbon

monoxide. Now, there's one part of this report that suggests to me that in fact what is contemplated is an annual testing, and this is actually Appendix B.

And I may not completely understand the context of this appendix, but in Appendix B of this report, which is on page 5 of 161 pages here, it says in the final -- in describing recent changes to the vehicle inspection and maintenance program, it states as a final bullet, moving from annual to biannual, "Every other year testing was planned to begin in July of 2000, and the emissions inventory reflects this change."

I understand that to be some kind of testing that was done in connection with this proposal. Then it states, "The mobile 5-B model used to estimate emissions interprets this change to result in slightly increased carbon monoxide emissions, as vehicles with excessive emissions would potentially not be repaired as often."

Finally, the last sentence says, "However the implementation of this change is still under discussion. Since remaining an annual test is actually more protective of air quality, no changes will be made to emissions protections or planning."

And it appears to me to be suggesting that in fact we are going to continue with the annual program. The language in the report itself suggests that we

should continue on the same path we have been. That's an annual test.

And then this final sentence that I've read appears to me to indicate that we should. And so -- or that we are, and so I've tried to interpret this report as best I can.

And we have come to the conclusions, one, that as suggested in the proposal, that the existing control measures should remain in effect. We should continue to have yearly testing, and the report to me suggests that would be the case, although there's some ambiguity in my own mind as I evaluate that.

Finally, there was a comment made earlier about concern over the kind of testing that was done to determine if Ada County will remain within federal guidelines as far as emissions go. And I think there's some justified basis for that concern.

As we have evaluated whether Ada County should go from a yearly testing program to a biannual testing program, we have come across data that was provided to us by a gentleman who is actually involved initially with the -- had some role in the testing programs, Robert Klaus Meyer.

And what they have found is that when you do tailpipe testing in newer vehicles, you have about a one

percent failure rate. When you do this new testing that was referred to, which is called OBT -- 0BD-2 testing, the failure rate for vehicles, instead of being at one percent, goes anywhere from 2.2 percent for vehicles that are one to two years old to 5.8 percent for vehicles that are three to four years old.

And so what happens is that as -- and this 0BD-2 testing is set to begin in Ada County this coming year, so what happens is consistent intuitively, you might feel. With more -- with newer technology you're going to pick up greater -- you'll have better testing. The stats actually show that.

That is, with this new testing that's being done on new vehicles, they're able to test more accurately, and so they find that the newer vehicles are failing the emissions testing at an ever higher rate than with the old testing, and so we always -- the emission control stations also have concern about a plan that's been presented that is based on older technology with older testing methods that likely is not giving the kind of accurate testing that we could -- we would receive with newer technology, which again brings me back around full circle.

Again points to us -- points out to us the importance of keeping us -- the testing at an annual

rather than a biannual project because we're going to get much more accuracy.

Finally, it seems that if we're able to -- that the part of this plan actually benefits everybody if we are able -- if we continue at an annual testing rather than a biannual testing that the public in general will benefit.

And there will be less concern about having to go to some of these other alternatives if we're out of compliance in four or five years.

HEARING OFFICER: Thank you, Mr. Olsen. Penny -- is it Steadman? Would you like to speak? Would you spell your name for the record?

STATEMENT BY PENNY STEADHAM

MS. STEADMAN: My name is Penny Steadman, P-e-n-n-y S-t-e-a-d-h-a-m. I happen to be one of those folks from Canyon County, and I think that we should remain with the nonattainment the way that it is right now with the carbon monoxide.

I personally would be more than happy to go in and have an annual test for my car. I know there are a lot of people in Canyon County that should do that and probably would not pass. And of course some of those

pollutants that are coming from Canyon County are not coming into Ada County, and I know we have a big power plant coming in out there.

I just wish that they would also look at Having some testing. I wish our commissioners, Canyon County Commissioners, would consider having emissions testings also. And that's it.

HEARING OFFICER: Thank you. Delores or David Cram.

STATEMENT BY DAVID CRAM

MR. CRAM: My name is David Cram. It's spelled C-r-a-m. I also live in Canyon County west of Nampa. I also, as Penny Steadham has indicated, would favor an automobile testing program in Canyon County.

I think it's one of the ways to get the emissions under control. It would require me to test something like seven vehicles, and I still think it's important for the air shed, to maintain the air shed, and I really can't understand why the state agency wants to take the step of reducing the requirements to maintain this air shed.

And I don't know why that is. I can't understand why we wouldn't want to maintain the quality

of the air shed we have. Why take the step of reducing the requirements, and then wake up five or six years down the road and have to implement maybe quite more stringent requirements.

So I'm in favor of the continuing our current process and looking at the long-term, what the long-term is for our air shed. Yes, it will affect me. It will require me to do more things, but I should probably be doing that anyway because I benefit from good air shed, and I think anybody that benefits from good air shed ought to be willing to step up to the plate.

So I think that the Department of Environmental Quality should look at the citizens who are here and saying, "Wait. We're willing to do our share." And I don't think this is a good plan, to reduce the requirements. I really don't. That's all I have.

HEARING OFFICER: Thanks, Dave. Is there anybody who signed in on the roster who indicated they did not want to testify who has changed their minds as a result of anything they heard here night?

Is there anybody who has already testified that would like to make a second brief comment?

MS. ULLMAN: Can I make one brief comment?

HEARING OFFICER: Certainly.

FURTHER STATEMENT BY SHARON ULLMAN

MS. ULLMAN: I agree with all the comments I hear all the time, the concern about Canyon County not testing. There are a huge number of vehicles coming into Ada County from Canyon County, and it is my understanding that the Canyon County Commissioners are right now in the process of configuring an emissions testing program, so I think that will be happening in the very near future.

I've actually encouraged them to join our program, but apparently they -- for political reasons they don't want to be part of ours; they'd rather do their own. But I think that they will probably -- they're looking at possibly modeling their program on our program, so it's coming.

HEARING OFFICER: Thank you, commissioner. Anybody else?

This hearing having been commenced at seven o'clock -- and it is now 8:05 p.m. -- is now closed. The record, together with the exhibits, will be transmitted to the Idaho Department of Environmental Quality.

Anyone wishing to submit further comments should address them in writing to Gary Reinbold, R-e-i-n-b-o-l-d, Department of Environmental Quality, 1410 North Hilton, Boise, Idaho, 83720.

All final written comments must be received at the noted address by five o'clock p.m. on November 28, 2001. Before we conclude, does anybody have any written comments they want to submit tonight that didn't end up in the record?

MR. KEYS: What is the deadline for a written comment?

HEARING OFFICER: Tomorrow at 5:00 p.m And if there are no other ones, then the sign-in roster, a two-page document, will be marked and admitted as Exhibit A, and the hearing is now closed.

(Hearing Exhibit A was marked for identification.)

(The hearing concluded at 8:05 p.m.)

REPORTER'S CERTIFICATE

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

I, ROBYN DANE, CSR and Notary Public in and for the State of Idaho, do hereby certify:

That said hearing was taken down by me in shorthand at the time and place therein named and thereafter reduced to typewriting under my direction, and that the foregoing transcript contains a full, true and verbatim record of said deposition.

I further certify that I have no interest in the Event of the action.

WITNESS my hand and seal this 5th day of December, 2001.

ROBYN DANE, CSR, Notary Public

My Commission Expires: 7-18-06

Sign-In Roster

Public Hearing on the Northern Ada County Carbon Monoxide Limited Maintenance Plan

Location: Department of Environmental Quality, Conf. Rm B **Date:** November 26, 2001

Project: Northern Ada County Carbon Monoxide Limited Maintenance Plan

Name (Please Print)	Mailing Address	Organization Represented (If Any)	Do You Wish to Testify? (Yes/No)
Sharon Ullman	9627 W. Desert Ave. Boise, ID 83709	Ada County (Air Qual Board)	yes.
Dale R. Tankersley	13991 W. Elmsprings St Boise, ID-83713	Personal	Yes
LYNN GREER	PO Box 44593 Boise ID 83705	Personal	No
John Dyer	136 Rainbow Boise	Personal	No
DALE KEYS	3496 Forsythia Boise 83703	Personal	Yes
Steven Olsen	250 S 5th Suite 660 Boise ID	Cumission Control Sistem	Yes
WARREN BEAN		ADA AIR QUALITY BOARD	No
Eric Olen	800 Industrial Way Mer 83642	COMPASS	No.
GARY RICHARDSON	746 SANTA PAULA BOISE 83712	ICAF	?
Milena Arthur	4006 Irving St. Boise, ID 83706	None	NO
Jonathan Lemmon	4006 Irving Boise 83706	NONE	No
Bob Burnil	P.O. Box 500 Boise, ID 83701	City of Boise	No

EXHIBIT NO. A
DEQ
DATE 11-27-01
BURNHAM, HARRL & ASSOCIATES, INC.

Sign-In Roster

Public Hearing on the Northern Ada County Carbon Monoxide Limited Maintenance Plan

Location: Department of Environmental Quality, Conf. Rm B **Date:** November 26, 2001

Project: Northern Ada County Carbon Monoxide Limited Maintenance Plan

Name (Please Print)	Mailing Address	Organization Represented (If Any)	Do You Wish to Testify? (Yes/No)
Barbara Bechner-Kane	~~3~~ 318 E. 37th Garden City, Id. 83714	ACHD	
Dan Buerstetta	5473 S Broadway Way Boi 83706	Self	Possibly Yes
BILL COOK	136 RAINBOW BOISE 83713	E.T.C.	NO
Jim Glancey	P.O. Box 8043 Boise ID 83707	Wyoming Ethanol	Possibly yes
Penny Steadman	10155 Gabica Middleton, Id 83644	Citizens For Responsible Growth	maybe
Deborah & David Cram		Citizens for Resp. Gro.	?

Appendix H-4.
Responses to Comments

State of Idaho, Department of Environmental Quality
Responses to Comments and Questions Submitted during a Public Comment Period
for the
Limited Maintenance Plan for the Northern Ada County
Carbon Monoxide Not-Classified Nonattainment Area
(Limited Maintenance Plan)

Introduction

The public comment period for the *Limited Maintenance Plan* was held from October 23rd, 2001 through November 28th, 2001, as required by IDAPA 58.01.01.578.04 (*Rules for the Control of Air Pollution in Idaho*), 40 CFR 51, Appendix V, 2.0. Criteria, and Section 110 of the Federal Clean Air Act. A public hearing was held on November 27th, 2001, in accordance with these rules.

Comment packages that included the *Limited Maintenance Plan* and associated appendices were made available at DEQ's State Office in Boise, DEQ's Regional Office in Boise, and the Boise Public Library. Comments were received by DEQ through postal mail, electronic mail, and verbal testimony at the Public Hearing.

Public comments regarding the air quality aspects of the *Limited Maintenance Plan* have been summarized below. Due to the similarity of many of the comments received, the summary presented below will have some comments that have been combined and/or paraphrased in order to eliminate duplication and provide a more concise summary. Questions, comments, and/or suggestions received during the comment period that do not relate to the air quality aspects of the *Carbon Monoxide Limited Maintenance Plan* are not addressed.

Public Comments and DEQ Responses

Comment 1: Several public comments were submitted to DEQ stating that ridesharing and transit control measures should not be eliminated. One commenter noted that in the San Francisco Bay area, transit measures were allowed as control measures.

DEQ Response 1: An area may adopt the control measures of their choosing, as long as the measures will reduce emissions. However, control measures must be permanent and enforceable.

Transit and ridesharing typically rely on voluntary participation, which can not be guaranteed. It is unrealistic to expect to mandate the use of ridesharing or transit in order to meet the emissions reductions goals for these measures. Transit and rideshare measures are essentially unenforceable. While DEQ advocates the continued operation and use of rideshare and transit as valuable methods to reduce carbon monoxide emissions, they are inappropriate for use as identified control measures.

However, significant improvements have been made in the Vehicle Emissions Testing Program control measure. These improvements more than outweigh the reductions claimed for the transit and rideshare control measures. EPA has indicated via telephone discussion that the transit and rideshare control measures can be eliminated and made up for by improvements in the Vehicle Emissions Testing Program.

Comment 2: How was the 19,073 kilograms per day reduction due to the improvements to the emissions testing program determined?

DEQ Response 2: Appendix A-4 documents these calculations, based on emissions estimates from the Mobile 5b model.

Comment 3: Several public comments were submitted to DEQ addressing concerns about the impact to air quality if the Vehicle Emissions Testing Program is changed to a biennial, rather than annual test.

DEQ Response 3: Seven changes to the Vehicle Emissions Testing Program are included in the *Limited Maintenance Plan*.

1. Reduction in allowable amount of Carbon monoxide emissions
2. Addition of a standard for hydrocarbon emissions
3. Move from an idle-only test to a two-speed test at idle and 2,500 rpm
4. Separation of test and repair sites
5. Requirement for diesel vehicles to pass test
6. More restrictive waiver policy
7. Change from testing every year to testing every other year

Each of these changes increases the stringency of this program, except for the last. Taken in sum, the overall affect is to reduce mobile source CO emissions by 12%, or 19,073 kilograms per day for year 2000 emissions calculations. EPA has indicated through informal discussion that they do not consider that the Vehicle Emissions Testing Program has been relaxed or made less stringent, since the overall change to the program results in less emissions.

Comment 4: Regarding improvements to the Vehicle Emissions Testing Program: how does requiring a hydrocarbon cutpoint, adding diesel vehicles, expanding the test to a two speed test, and separating test and repair sites have any bearing on emissions of carbon monoxide?

DEQ Response 4: Not all of the changes made have a large impact on carbon monoxide emissions. However, the intent of this section is to fully describe the emissions testing program and changes made to it.

Hydrocarbons: One common way to pass a carbon monoxide emissions test without actually fixing the problem is to make a simple, short term adjustment to the fuel/air mixture. This results in lowered carbon monoxide emissions, but inflated hydrocarbon emissions. Once the vehicle has passed the emissions test, the adjustment can be

reversed. By establishing a cutpoint for hydrocarbons, vehicles must be repaired in order to pass the test.

Diesel vehicles: Diesel vehicles account for approximately 1% of vehicle carbon monoxide emissions in Ada County.

Two-speed test: Many gross emitting vehicles can pass an idle-only test. The two-speed test captures vehicles that are not functioning properly under load.

Separation of test and repair sites: If vehicles fail the initial emissions test, they must be repaired and pass a retest. Nationwide EPA studies have shown that, in areas where testing stations are also allowed to offer repair, it is much more common for vehicles that should also fail the retest to be issued certification of passing. Emissions models factor this feature in when generating emissions estimations.

Comment 5: Several public comments were submitted to DEQ questioning why further changes to the Vehicle Emissions Testing Program were not recommended by DEQ, including a change to exempt first 3-5 vehicle years.

DEQ Response 5: To qualify for the limited maintenance plan option the control measures listed in the most recent Air Quality Improvement Plan must continue to be implemented and may not be relaxed or made less stringent. Seven changes to the Vehicle Emissions Testing Program are included in the *Limited Maintenance Plan*. Each of these changes increases the stringency of this program, except for the change from testing every year to testing every other year. Taken in sum, the overall effect is to reduce carbon monoxide emissions, thereby making the Vehicle Emissions Testing Program more stringent.

However, the EPA has indicated that they would not be comfortable with any additional changes to the Vehicle Emissions Testing Program that may relax this primary control measure without detailed modeling and analysis demonstrating that the changes will not result in new problems. In this case, a full blown Maintenance Plan, including emissions projections, setting an emissions budget, attainment demonstration, or other detailed modeling and complete transportation conformity analyses would be required.

Comment 6: The Vehicle Emissions Testing Program should be changed to require that all vehicles undergoing title transfer first pass the Vehicle Emissions Test.

DEQ Response 6: This change would make the program more restrictive and, therefore, can be initiated at any time by the Air Quality Board.

Comment 7: Several public comments were submitted to DEQ suggesting additional restrictions, including: mandating the use of ethanol blended vehicle fuels, requiring Canyon County vehicles to also pass the Vehicle Emissions Test, addressing vehicles idling at drive-through windows, improving traffic flow by synchronizing traffic lights, controlling emissions from gas powered leaf blowers, and controlling emissions from lighter fluid.

DEQ Response 7: Monitoring data indicates a steady reduction in carbon monoxide levels. Carbon monoxide levels in the area are currently well below the health-based standards. From a regulatory standpoint, no new control measures are required to ensure that levels stay below the standards.

Out of county vehicles not subject to vehicle emissions testing account for approximately 10% of vehicle miles traveled within Ada County. The increased emissions from these vehicles are accounted for in our analyses. Emissions from drive-through windows, leaf blowers, barbecues and other combustion sources are generally insignificant. All identified sources of carbon monoxide emissions are accounted for in analyses.

Comment 8: Several public comments were submitted to DEQ addressing concerns about how growth in the region could result in impaired air quality, and the possibility of being re-designated as Nonattainment for carbon monoxide.

DEQ Response 8: Monitoring data indicates a steady reduction in carbon monoxide levels. Carbon monoxide levels in the area are currently well below the health-based standards. As such, the area is not federally required to do future year emissions projections because it is assumed that emissions growth could not reasonably reach a level high enough to trigger future violations of the standards. Even so, DEQ did prepare future year emissions estimates that considered projected growth in all sources of emissions.

DEQ does not anticipate that the carbon monoxide reclassification will be temporary. However, the *Limited Maintenance Plan* contains specific measures to ensure the protection of the National Ambient Air Quality Standards in the future.

A comprehensive review of the assumptions, demographic data, and estimated vehicle miles traveled used to develop the *1995 Carbon Monoxide Emissions Inventory* will be conducted by 2005 to determine whether the assumptions are still reasonable and descriptive of actual conditions. If actual growth of carbon monoxide emissions exceeds projected growth by 20% or more, or if relative contributions from source categories, in comparison with other source categories, change by 10% or more, an update to *the 1995 Carbon Monoxide Emissions Inventory* will be prepared. Based on this data, DEQ will work with EPA Region 10 to determine if a revision of the *Limited Maintenance Plan* is necessary.

The *Limited Maintenance Plan* also includes contingency measures that will be activated if carbon monoxide levels reach a specified trigger. For this *Limited Maintenance Plan*,

triggers will be activated if an exceedance of the National Ambient Air Quality Standards (set at an eight-hour average of 9.0 ppm) occurs, or if eight-hour average concentrations of 8.0 ppm are measured on four or more days within a single winter season. If contingency measures are triggered, all motor vehicle fuels dispensed within the Nonattainment Area will be required to contain a minimum of 10% ethanol to reduce carbon monoxide emissions. This *Limited Maintenance Plan* also provides the option to negotiate different contingency measures with EPA should another, more effective, option be identified.

Comment 9: Several public comments were submitted to DEQ addressing concerns that "the protective non-attainment status" was being removed.

DEQ Response 9: A Nonattainment status does not assign any protection to an area. The Nonattainment designation is assigned to an area where violations of the federal health based standards have been recorded. Nonattainment Areas are required to develop an Air Quality Improvement Plan to rectify the problem. Once the problem has been corrected, as evidenced by long-term reductions in pollution concentrations, it is intended that areas be re-designated as Attainment Areas. The control measures employed to achieve the reduction in pollution levels must remain effective, and the area must continue to maintain the National Ambient Air Quality Standards.

Comment 10: Several public comments were submitted to DEQ addressing concerns that standards were being relaxed or eliminated.

DEQ Response 10: The standards or limits on air pollution concentrations are not changed when an area is redesignated to attainment. The area must continue to maintain the National Ambient Air Quality Standards.

Control measures employed to achieve the reduction in pollution levels must continue to be implemented and may not be relaxed or made less stringent unless detailed modeling is conducted to ensure no adverse impacts to air quality.

Requirements to conduct analyses of transportation impacts (called transportation conformity) are somewhat reduced under the limited maintenance plan option. However, COMPASS has voluntarily agreed to continue performing transportation conformity analyses previously used in Ada County.

Requirements for pollution control equipment on industrial facilities are modified when an area is redesignated to attainment. In accordance with IDAPA 58.01.01.201 et. seq., these requirements only apply to major facilities. In Nonattainment Areas major facilities are required to install Lowest Achievable Emission Rate (LAER) pollution control equipment. After redesignation, major facilities must install equipment that is reasonably available and cost-effective, termed "Best Available Control Technology" (BACT).

Comment 11: Several public comments were submitted to DEQ addressing concerns about impacts of smoke.

DEQ Response 11: Smoke from outdoor burning is a relatively minor source of carbon monoxide emissions (an estimated 6% of total annual emissions), although it is a significant source of emissions of other types of air pollution. There are specific state regulations restricting open burning activities.

Comment 12: Several public comments were submitted to DEQ addressing concerns that the 1995-1996 attainment year and supporting data is outdated.

DEQ Response 12: In determining the appropriate years to base this study on, it was decided to err on the conservative side, and not use the "cleaner" carbon monoxide monitoring data from more recent years. The years 1995 and 1996 are more representative of typical carbon monoxide concentrations in the area.

Good quality emissions inventory data were available for 1995 because an extensive 1995 PM_{10} emissions inventory had recently been completed. Also, 1995 was the peak year for socio-economic growth. No major point, area, off-road mobile, or on-road mobile emissions sources have moved into the area since 1995.

Better and more complete data is constantly being developed. Constantly revising work to reflect only the most recent data would effectively curb the completion of projects. The years reflected in the existing *Limited Maintenance Plan* are sufficient to satisfy regulatory requirements and to ensure protection of the carbon monoxide NAAQS.

The *1995 Carbon Monoxide Emissions Inventory* is complete, accurate, and accepted by the EPA. Carbon monoxide data collection was not a primary focus of recent work for the PM_{10} Maintenance Plan in 2001. Although significant data gathering has been accomplished in this effort, the work is not yet complete, nor is the data sufficient to develop a carbon monoxide emissions inventory that could be used for State Implementation Plan purposes at this time. Therefore, DEQ does not see the benefit of revising the *1995 Carbon Monoxide Emissions Inventory* or the *Limited Maintenance Plan* to reflect a more current year at this time.

Comment 13: Inversion weather conditions could result in very high pollution levels.

DEQ Response 13: An analysis of meteorological conditions that contribute to the accumulation of carbon monoxide was conducted for this *Limited Maintenance Plan.* The full text is included in Appendix D. The analysis shows that inversion conditions, which result in high concentrations of other pollutants in this area, do not have the same impact on carbon monoxide levels. Instead, elevated carbon monoxide levels are associated with short term, low level inversions that coincide with rush hour traffic. The incidence of these conditions has actually increased in recent years.

Comment 14: Several public comments were submitted to DEQ stating that air quality has become worse in recent years.

DEQ Response 14: Monitoring data indicates a steady reduction in carbon monoxide levels over time, a trend that continues to this date.

Comment 15: Appendix B contains a section that is unclear. This section explains that biennial testing was calculated, but the change has not yet been made.

DEQ Response 15: This section will be clarified.

Comment 16: The first 4 control measures listed on pages 21 and 22 appear ineffective as control measures for the future, and DEQ must rely on the next 3 for any future exceedance.

DEQ Response 16: Pages 21 and 22 contain a summary of previous Air Quality Improvement Plans, as required for a Maintenance Plan. A description of the permanent and enforceable emissions reductions for this *Limited Maintenance Plan* begins on page 23. This list includes Federal Motor Vehicle Emissions Control Program for new vehicles, transportation control measures consisting of the Ada County Vehicle Inspection and Maintenance Program (Vehicle Emissions Testing Program), and controls on stationary sources, realized by DEQ's industrial permitting program.

Comment 17: The numbers DEQ uses for CO reductions conflict between pages 22 and 26.

DEQ Response 17: The control measures described on pages 21 and 22 refer to those included in the original, 1984 Air Quality Improvement Plan. The control measures described on pages 25 and following refer to those listed in the currently applicable 1994 Air Quality Improvement Plan, and describe how and whether those measures were achieved.

Comment 18: DEQ does not provide enough information about the City of Kuna's compliance with the Vehicle Emissions Testing Program.

DEQ Response 18: The description of the Vehicle Emissions Testing Program included on page 27 is a summary, and readers are referred to the more complete description in Appendix B. Detailed data is inputted to the model used to calculate emissions. The emissions calculations reflect compliance rates, contributions from out of county vehicles, and other factors. Non-participation of Kuna vehicles is included in the data relating to compliance rates.

Comment 19: There is no indication which, if any, of the changes to the Vehicle Emissions Testing Program will provide the additional 19,073 kg/day reduction in emissions, stated on page 27.

DEQ Response 19: Appendix A-4 provides information about the total impact of all seven changes to the Vehicle Emissions Testing Program. In order to calculate the impact of each change separately, individual model runs would have to be performed for each change.

Comment 20: Several public comments were submitted to DEQ addressing concerns about the effectiveness of ethanol blended fuels as a contingency measure.

DEQ Response 20: The use of oxygenated fuels is widely used across the country as a carbon monoxide contingency measure, and was determined to be the most appropriate currently available technique to apply in the Northern Ada County Nonattainment Area. However, the option to adopt more effective measures, if identified, is provided.

Comment 21: Several public comments were submitted to DEQ addressing concerns about that the use of ethanol blended fuels, if triggered as a contingency measure, would damage vehicles or reduce fuel efficiency.

DEQ Response 21: All vehicles manufactured and sold in the United States since the mid-1980's can be run using ethanol blended fuels. In fact, many manufacturers recommend its use. Ethanol is an octane enhancer in addition to reducing carbon monoxide emissions. Methanol can damage vehicles, but is a completely different substance, and is not recommended in the *Limited Maintenance Plan*.

Comment 22: "A better contingency measure recognizes that VMT is driving CO emissions. CO accumulates during the commute hours, and converting SOV to vanpools and rideshares effectively reduces VMT, and CO emissions."

DEQ Response 22: Contingency measures are intended to promptly correct violations of the carbon monoxide NAAQS. In order to do so, they must be able to make rapid and significant reductions in emissions. The use of vanpools or ridesharing is not appropriate for use as a contingency measure because it is unrealistic to expect to successfully establish a program that mandates their use by the general public.

Comment 23: All references to APA or Ada Planning Association should be changed to COMPASS.

DEQ Response 23: The Ada Planning Association (APA) was renamed as COMPASS in 1999. All references to APA reflect activities, agreements, or work concluded prior to this name change, and, therefore, will not be altered to the new name.

Comment 24: The Idaho Transportation Department (ITD) would like the section on Hot-Spot Conformity analysis to reflect the "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho" developed jointly by ITD, IDEQ and the Federal Highway Administration in September 2001.

DEQ Response 24: State rules provide that the Interagency Consultation Committee (ICC) evaluate and choose the models and associated methods and assumptions to be used in hot spot analysis. While "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho" provides an appropriate method of doing so, the ICC has not yet been presented with this document, or made any determinations about whether or not it will be adopted for use in Ada County.

Comment 25: The Idaho Transportation Department (ITD) would like the section on Continuation Of The Build No Build Transportation Conformity Analysis to reflect the "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho" developed jointly by ITD, IDEQ and the Federal Highway Administration in September 2001.

DEQ Response 25: The methods included in the "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho" do not address regional conformity analysis.

Comment 26: The Idaho Transportation Department (ITD) would like the section on Conformity Analysis of Regionally Significant Projects to reflect the "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho" developed jointly by ITD, IDEQ and the Federal Highway Administration in September 2001.

DEQ Response 26: The methods included in the "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho" do not address all potential regionally significant projects. These methods would only be appropriate for analysis of impact at intersections.

State rules provide that the Interagency Consultation Committee (ICC) evaluate and choose the models and associated methods and assumptions to be used in regional emissions analysis. While "Project Level Air Quality Screening, Analysis, and Documentation for Roadway Projects in Idaho" provides an appropriate method of doing so at intersections, the ICC has not yet been presented with this document, or made any determinations about whether or not it will be adopted for use in Ada County.

Comment 27: The section on transportation conformity states that mitigation measures will be required for projects that would result in an increase in carbon monoxide emissions. The Idaho Transportation Department (ITD) would like the caveat "wherever feasible" to be added.

DEQ Response 27: Federal register 40 CFR 93.116(a) requires the application of mitigation measures for any project that would result in new, more frequent, or more severe violations of the National Ambient Air Quality Standards.

COMPASS has voluntarily committed to conducting Build/No Build analyses. In this analysis, emissions under the Build scenario must not be greater than those in the No-Build scenario.

Comment 28: More recent BUS ridership figures are available.

DEQ Response 28: According to COMPASS data, BUS ridership in 2000 was also at 1.1 million riders. This information will be added.

Comment 29: The 2015 transportation plan was outdated by the 2020 plan. It was completed in 2000 and approved in 2001.

DEQ Response 29: The 1994 Air Quality Plan required that a three-phase transit plan be developed. The first phase was to address the City of Boise. A draft plan was completed in 1995, but was never adopted. The second phase, to address Ada County, was first included in Destination 2015. Destination 2020 also included a transit plan. The third phase, to address multi-county transit, is being developed by VIATrans, initially called the Treasure Valley Regional Public Transportation Authority. We will clarify this information.

Comment 30: The Treasure Valley Regional Public Transportation Authority is called VIATrans.

DEQ Response 30: In 1999, voters authorized the establishment of a Treasure Valley Regional Public Transportation Authority, originally administered by COMPASS. In 2000, it became independent of COMPASS, and was renamed Valley InterArea Transit (VIATrans). This clarification will be incorporated.

Comment 31: The Treasure Valley Transit development plan will be completed in 2002.

DEQ Response 31: This information will be updated.

Comment 32: The ICC voted to change the definition of regionally significant transportation projects in October 2001.

DEQ Response 32: The most recent version of the definition of regionally significant will be inserted.

Comment 33: In the emissions inventory (Appendix A-1), the open burning at the airport is for fire fighting training.

DEQ Response 33: That is clearly indicated on pages 23-27 of the *1995 Carbon Monoxide Emissions Inventory* (Appendix A-1).

Comment 34: The airport fire training facility never had a permit to construct; there was a Director's exemption that restricted fuel use to 54,300 gallons/yr.

DEQ Response 34: Page 26 of Appendix A-1 states that a permit to construct was granted to the airport fire training facility prior to 1995 that limits them to burning 54,300 gallons of jet fuel per year, and prohibits burning between November and March. Actually, these limitations were established via a Director's exemption, issued on June 23, 1992. The exemption was modified several times after 1995, but the total annual fuel limit was not changed until May 31, 2000, when it was limited to 51,197 gallons per year.

Comment 35: I didn't see anything in Appendix C page 29, last sentence of b. regarding emission factors.

DEQ Response 35: Unclear reference.

Comment 36: The limited plan needs to require the use of an emissions budget.

DEQ Response 36: In a limited maintenance plan, the submitting agency is not required to conduct the rigorous and costly work of developing an emissions budget. Because levels of carbon monoxide are well below the standards, it is considered very unlikely that levels will increase past the health-based standards, given that existing control strategies remain in effect.

Even without an emissions budget, the *Limited Maintenance Plan* does contain specific measures to ensure the protection of the National Ambient Air Quality Standards in the future.

A comprehensive review of the assumptions, demographic data, and estimated vehicle miles traveled used to develop the *1995 Carbon Monoxide Emissions Inventory* will be conducted by 2005 to determine whether the assumptions are still reasonable and descriptive of actual conditions. If actual growth of carbon monoxide emissions exceeds projected growth by 20% or more, or if relative contributions from source categories, in comparison with other source categories, change by 10% or more, an update to the *1995 Carbon Monoxide Emissions Inventory* will be prepared. Based on this data, DEQ will

work with EPA Region 10 to determine if a revision of the *Limited Maintenance Plan* is necessary.

The *Limited Maintenance Plan* also includes contingency measures that will be activated if carbon monoxide levels reach a specified trigger. For this *Limited Maintenance Plan*, triggers will be activated if an exceedance of the National Ambient Air Quality Standards (set at an eight-hour average of 9.0 ppm) occurs, or if eight-hour average concentrations of 8.0 ppm are measured on four or more days within a single winter season. If contingency measures are triggered, all motor vehicle fuels dispensed within the Nonattainment Area will be required to contain a minimum of 10% ethanol to reduce carbon monoxide emissions. This *Limited Maintenance Plan* also provides the option to negotiate different contingency measures with EPA should another, more effective, option be identified.

Comment 37: On the bottom of page 21, the percentages quoted for total reduction credit are more than 100%.

DEQ Response 37: Page 21 lists the reductions committed to in the 1984 Air Quality Improvement Plan. In this 1984 Plan, the reductions total 105.7%. The percentages were based on the amount of emissions reduction calculated to be necessary to reach the federal health-based standard. The additional 5.7% percent reduction was intended to keep concentrations below the federal health based standard. This is admittedly somewhat confusing. However, the *Limited Maintenance Plan* must reflect what was written at the time. We will attempt to better explain the percentages listed. The federal health-based standard is based on accumulation of emissions in the ambient air, which can be affected by weather patterns, obstructions, and other factors that make a direct comparison to total emissions difficult.

Comment 38: Several public comments were submitted to DEQ addressing concerns about the adequacy of the monitoring network in the area, and the possible need for updated saturation studies.

DEQ Response 38: Monitoring data indicates a steady reduction in carbon monoxide levels. carbon monoxide levels in the area are currently well below the health-based standards. Saturation studies were conducted in 1991-92 and 1995-96 to determine areas of maximum concentration and ensure that monitors are sited appropriately. DEQ prepares an annual Monitoring Network Review, available for public review and comment, to evaluate the adequacy of the monitoring network. In addition, regular reviews of traffic patterns and volume are conducted to identify any potential hot-spots. Based on analysis of changes in emissions, traffic congestion, and other factors, DEQ periodically updates saturation studies to ensure that monitors are appropriately located. The 1995-96 Saturation Study identified an area with potentially high concentrations near the Boise Towne Square Mall. Funding is being sought to locate an additional carbon monoxide monitor in this area.

Comment 39: Getting through all the appendices and report was painful, and a significant deterrent to public comment.

DEQ Response 39: The public must be provided the opportunity to review and comment on all portions of this *Limited Maintenance Plan*. The choice to review all or portions of the *Limited Maintenance Plan* is up to the individual reviewer.

Comment 40: If the 1994 revision of the Air Quality Plan is good for 10 years, why is DEQ pushing this Plan through early?

DEQ Response 40: DEQ's intention in the preparation of this *Limited Maintenance Plan* is to follow the prescribed pathway set out by the Clean Air Act and federal guidance. This process dictates that, once a Nonattainment Area has resolved the air quality problem, a maintenance plan that will ensure continued healthy air be developed, and that the area be redesignated as a Maintenance Area.

Comment 41: This *Limited Maintenance Plan* relies on already existing emissions control strategies such as the federal new vehicle emissions standards and the already existing vehicle emissions testing program. Additional improvements can not be achieved through this Plan.

DEQ Response 41: The purpose of a maintenance plan is to document that air pollution levels have been brought below the standards, and to commit to continuing the control measures, listed in the existing Plan, that resulted in the improved air quality. No additional controls or improvements are required.

Comment 42: We know that Canyon County impacts emissions levels – why aren't they included in this study?

DEQ Response 42: This *Limited Maintenance Plan* must focus on the identified Nonattainment Area, which is limited to Northern Ada County. However, DEQ is working on with local communities to develop an Airshed Management Program that will reflect the desires and needs of local communities across the airshed.

END OF RESPONSES.