IDAHO DEPARTMENT
OF HEALTH AND WELFARE

DIVISION OF
ENVIRONMENTAL QUALITY

1410 North Hilton, Boise, ID 83706-1255, (208) 334-0502

Philip E. Batt, Governor

August 16, 1996

Mr. Chuck Clarke
Regional Administrator
U.S. Environmental Protection Agency
Region 10, MS: SO-141
1200 Sixth Avenue, AT-082
Seattle, WA 98101

Dear Mr. Clarke:

On behalf of the State of Idaho, the Department of Health and Welfare, Division of Environmental Quality (IDEQ), hereby submits the enclosed Sandpoint Particulate Matter (PM_{10}) Air Quality Improvement Plan for approval by the U.S. Environmental Protection Agency (EPA) as revisions to Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho (Idaho SIP).

Pursuant to the Environmental Protection and Health Act, Idaho Code §§ 39-101 through 39-130, and a delegation to the Administrator of IDEQ, I adopted the SIP revision on August 16, 1996. The effective date of this submittal is also August 16, 1996. Further, this adoption is made in accordance with the requirements of the federal Clean Air Act, as amended, and with other applicable federal requirements.

The EPA approval schedule for the Sandpoint Particulate Matter (PM_{10}) Air Quality Improvement Plan is of keen interest to the Sandpoint Community and IDEQ. Any ability of EPA to expedite the mandated schedule for completeness determination (60 days to 6 months) and subsequent approval process (1 year following the completeness determination) would be greatly appreciated. Such actions would recognize the community for its efforts and the positive air quality partnership reflected in the 1995 Sandpoint Tasking Matrix.

Finally, four additional copies of the revisions have been provided to your staff to review, as required by federal regulations and to facilitate review. Questions concerning this submittal should be directed to Gwen Burr, Regional Administrator, Northern Idaho Regional Office. If your staff have questions concerning the technical portions of this Sandpoint document, they can contact Dan Redline, Air Quality Analyst, North Idaho Regional Office, Division of Environmental Quality, 2110 Ironwood Parkway, Coeur d'Alene, Idaho, 83814, (208) 769-1422 or Mike McGown, Air Quality Protection Manager at (208)-373-0509.

Sincerely,

Wallace N. Cory

Wallace N. Cory, P.E.
Administrator

WNC/pm
enclosures
cc: Gwen Burr, DEQ-NIRO
Larry Koenig, DEQ
Helen Rigg, DEQ
Lisa Kronberg, AG
Jim Greaves, EPA, IOO
Jonathan Coe, Sandpoint Chamber of Commerce

IDAHO DEPARTMENT
OF HEALTH AND WELFARE

DIVISION OF
ENVIRONMENTAL QUALITY

1410 North Hilton, Boise, ID 83706-1255, (208) 334-0502

Philip E. Batt, Governor

ADOPTION OF THE REVISION TO THE
SANDPOINT PARTICULATE MATTER (PM_{10})
AIR QUALITY IMPROVEMENT PLAN

Pursuant to the Environmental Protection and Health Act (EPHA), Idaho Code §§ 39-101 through 39-130, and a delegation of authority from the Director of the Idaho Department of Health and Welfare, I hereby adopt the Sandpoint Particulate Matter (PM_{10}) Air Quality Improvement Plan revision dated August 16, 1996. This adoption is also made in accordance with the requirements of the federal Clean Air Act, as amended, and applicable federal regulations. The revision will be included in Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho (Idaho SIP).

Except as limited by federal law, the EPA and state regulations authorize immediate adoption of the Sandpoint Particulate Matter (PM_{10}) Air Quality Improvement Plan revision by the State of Idaho. Therefore, the Division of Environmental Quality is directed to begin state implementation of the measure as soon as possible in order to protect the environment and the personal health of the citizens of the State of Idaho and to bring the State of Idaho portions of the Sandpoint PM_{10} Nonattainment Area into compliance with national and state air quality standards.

Dated this 16th day of August, 1996.

Wallace N. Cory, P.E.
Administrator

PM_{10} Air Quality Improvement Plan

For

Sandpoint, Idaho

Final Revision

August, 1996

TABLE OF CONTENTS

LIST OF FIGURES 1

LIST OF TABLES 3

ACKNOWLEDGMENTS 5

SUMMARY 7

I. INTRODUCTION 1-1
- A. SIP OVERVIEW 1-1
- B. STUDY AREA DESCRIPTION 1-2
  - 1. *Physical and Historical Description* 1-2
  - 2. *Legal Description* 1-3
- C. COMMUNITY INVOLVEMENT 1-3
  - 1. *Intergovernmental Consultation* 1-3
  - 2. *Public Involvement* 1-6

II. AIR QUALITY 2-1
- A. MONITORING AND DATA SUMMARY 2-1
  - 1. *Ambient PM_{10} Monitoring Network* 2-1
  - 2. *PM_{10} Air Quality Data* 2-2
    - a. Summary of PM_{10} Data 2-2
    - b. Determination of PM_{10} Attainment Status 2-7
    - c. Evaluation of Seasonal Exceedances 2-8
- B. METEOROLOGY 2-9
  - 1. *General Meteorology* 2-9
    - a. Geographical Summary 2-9
    - b. Meteorological Data 2-10
    - c. Climatology 2-10
    - d. Exceedance Conditions 2-12
  - 2. *Summary of Wintertime Stagnation Events* 2-12
    - a. February 28, 1986 2-12
    - b. February 21 and 24, 1988 2-13
    - c. February 26, 1990 2-13
    - d. February 4, 1992 2-13
    - e. January 26, 1994 2-14
  - 3. *Summary of Fall Events* 2-14
    - a. September 6, 1988 2-14
    - b. October 4, 1990 2-15
    - c. September 4, 1992 2-15

III. EMISSION INVENTORY AND PROJECTIONS 3-1
A. EMISSIONS INVENTORY DEFINITION 3-1
B. APPROACH 3-2
1. *1993 Sandpoint SIP* 3-2
2. *1995 Sandpoint SIP* 3-2
3. *Emission Inventory Applications* 3-3
C. BASE YEAR ANNUAL EMISSIONS 3-4
D. BASE YEAR MAXIMUM DAILY WINTERTIME EMISSIONS 3-4
E. 1997 EMISSION PROJECTIONS 3-6
1. *Point Sources* 3-6
2. *Area and Mobile Sources* 3-7

IV. AIR QUALITY MODELING 4-1
A. INTRODUCTION 4-1
B. RECEPTOR MODELING 4-1
1. *Background* 4-1
2. *Results* 4-2
3. *Limitations of the CMB Analysis* 4-3
4. *Conclusions* 4-3
C. DISPERSION MODELING 4-6
1. *Introduction* 4-6
2. *Background Concentration* 4-6
3. *Meteorological Data* 4-7
4. *Emission Inventory* 4-8
5. *Model Assumptions and Definitions* 4-8
6. *Model Domain* 4-10
7. *Lake Pre-Mix* 4-10
8. *Uncontrolled Results* 4-10
9. *Controlled Results* 4-13
10. *Additional Modeling* 4-14
11. *Summary* 4-15
D. MODEL RECONCILIATION 4-15
1. *Introduction* 4-15
2. *Comparison* 4-15
3. *Conclusion* 4-15

V. CONTROL STRATEGY IMPLEMENTATION 5-1
A. EVALUATION OF CONTROL MEASURES 5-1
1. *Introduction* 5-1
2. *Conformity* 5-1
a. Transportation Conformity 5-2
b. General Conformity 5-2
3. *Residential Wood Combustion* 5-3
a. Reasonably Available Control Measures 5-3
4. *Fugitive Dust Control Strategies* 5-6
a. Reasonably Available Control Measures 5-7
5. *Industrial Sources* 5-11
a. Permitting Strategy 5-13
b. Future Permitting in the Sandpoint NAA 5-14
B. FUTURE GROWTH OF PM10 EMISSIONS 5-15
C. CONTINGENCY MEASURES 5-15

APPENDIX A: PM_{10} DATA . . . . . Append A-1

APPENDIX B . . . . . Append B-1
B-1: POINT SOURCE EMISSIONS
B-2: POINT SOURCE EMISSIONS INVENTORY SPREAD SHEETS

APPENDIX C: AREA & MOBILE SOURCE EMISSIONS . . . . . Append C-1
I. INTRODUCTION . . . . . Append C-3
II. IDENTIFIED SOURCES . . . . . Append C-5
III. PRIMARY DATA COLLECTION . . . . . Append C-6
IV. EMISSION CALCULATIONS . . . . . Append C-8
V. 1994 AND 1997 PROJECTIONS . . . . . Append C-8
VI. RESULTS . . . . . Append C-33
VII. QUALITY ASSURANCE . . . . . Append C-36
VIII.REFERENCES . . . . . Append C-36

APPENDIX D . . . . . Append D-1
D-1: CMB RECEPTOR MODELING
D-2: SANDPOINT CMB MODEL RUNS

APPENDIX E: DISPERSION MODELING . . . . . Append E-1
E-1: SDPT - CONTROLLED EMISSIONS
E-2: DSGN-UNCONTROLLED EMISSIONS
E-3: REVISED CONTROLLED
E-4: CMB UNCONTROLLED EMISSIONS

APPENDIX F: CONTROL STRATEGY SUPPORT . . . . . Append F-1
F-1: SANDPOINT AREA ROAD REPORTS AND ORDINANCES
F-2: AIR QUALITY, SEARCHING FOR SOLUTIONS
F-3: PUBLIC AWARENESS - GREATER SANDPOINT AREA CHAMBER OF COMMERCE
F-4: CITY OF SANDPOINT MANDATORY CURTAILMENT ORDINANCE

APPENDIX G: PUBLIC INVOLVEMENT . . . . . Append G-1

APPENDIX H: REGIONAL PM_{10} RACM REPORT . . . . . Append H-1
H-1: FALL EXCEEDANCES

GLOSSARY . . . . . Glossary -1

ACRONYMS USED IN THIS DOCUMENT Acronyms-1

LIST OF FIGURES

Figure I-01: Sandpoint PM10 Nonattainment Area 1-4
Figure I-02: Location of Sandpoint Nonattainment Area 1-5
Figure II-01: Sandpoint PM10 Monthly Summary 2-4
Figure II-02: 1993 Sandpoint PM10 2-4
Figure II-03: 1994 Sandpoint PM10 2-5
Figure II-04: 1995 Sandpoint PM10 2-5
Figure II-05: PM10 Quarterly Means 2-6
Figure II-06: Sandpoint Annual PM10 Values 2-6
Figure II-07: Sandpoint PM10 Nonattainment Area 2-8
Figure II-08: Windrose 2-11
Figure III-01: 1993 Annual Emission Rates 3-5
Figure III-02: 1993 Maximum Daily Wintertime Emission Rates 3-5
Figure III-03: Base Year vs 1997 Projections 3-9
Figure III-04: 1993 & 1997 PM10 Max. Daily Wintertime Emissions 3-9
Figure IV-01: Sandpoint PM-10 Source Apportionment 4-5
Figure IV-02: Dispersion Modeling Domain 4-12

LIST OF TABLES

Table II-01: Sandpoint PM_{10} Data Summary 2-3
Table III-01: Summary of 1993 Annual Emission Rates 3-6
Table III-02: Summary of 1993 Maximum Daily Wintertime Emission Rates 3-6
Table III-03: Future Projections - Industrial Sources 3-7
Table III-04: Future Projections - Area and Mobile Sources 3-8
Table IV-01: CMB Model Results with (Uncertainties) 4-4
Table IV-02: Mean PM_{10} Values From Hope, Idaho - $\mu g/m^3$ 4-7
Table IV-03: Dispersion Model Emission Inputs 4-9
Table IV-04: Dispersion Model Evaluation 4-13
Table IV-05: Dispersion Model Impacts on the Highest Sixth High Receptor 4-14

ACKNOWLEDGMENTS

The 1996 State Implementation Plan for the Sandpoint PM_{10} Nonattainment Area has been prepared under the direction of the Air Quality Protection Section Staff, Air Resources and Prevention Bureau, Community Services Section, Division of Environmental Quality, and the Division of Environmental Quality, Northern Idaho Regional Office.

Division of Environmental Quality	Wallace N. Cory, P.E., Administrator
Community Services Section	Larry L. Koenig, Acting Assistant Administrator
Air Resources and Prevention Bureau	Helen Rigg, Bureau Chief
Air Quality Protection Section	Michael R. McGown, Manager
Permits and Enforcement Section	Orville D. Green, Assistant Administrator
Northern Idaho Regional Office - NIRO	Gwen P. Burr, Regional Administrator

Sandpoint PM_{10} Nonattainment Area Project Leaders:
Dan Redline, DEQ - Northern Idaho Regional Office
Michael R. McGown - DEQ Air Quality Protection Section
Cynthia S. Grafe, Team Leader - DEQ Air Quality Protection Section
Krishna Viswanathan, Team Leader - DEQ Air Quality Protection Section

Thanks to all present and former Division of Environmental Quality Staff who assisted in the development of this 1996 Sandpoint PM_{10} Nonattainment Area State Implementation Plan.
Contributors include:
Beth Baird, Mark Boyle, Bruce Bradshaw, Doug Collins, John Courtright, Yayi Dong, Cynthia Grafe, Melony Hysell, Chris Johnson, Michael R. McGown, Vicky McLane, Darrin Mehr, Brian Monson, Matthew E. Moore, M.A., Patricia Mowry, Dan Redline, Sue Richards, Matthew J. Stoll, Krishna Viswanathan

Special thanks to the many public agencies who contributed time and data to this State Implementation Plan.
Contributors include:
City of Sandpoint, Idaho, Idaho Transportation Department-Boise, Idaho Transportation Department - District 1, Sandpoint Chamber of Commerce, Sandpoint Independent Highway District

Additional thanks to the private organizations who contributed to this State Implementation Plan.
Contributors include:
Lake Pre-Mix Concrete, L.D. McFarland Company, Lignetics of Idaho, Louisiana-Pacific Corporation, Interstate Concrete and Asphalt

The State of Idaho, Division of Environmental Quality also wishes to extend appreciation to the United States Environmental Protection Agency, Region X, for their invaluable contributions of time and effort.

SUMMARY

In 1987, the Sandpoint area was designated by the Environmental Protection Agency as nonattainment because it did not meet the 24 hour national and state ambient air quality standard for small particulates, known as PM_{10}. In May 1993, in response to this designation, the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) developed a plan which outlined a strategy for implementing various control measures to reduce particulate emissions from local sources.

Problems were encountered in implementing the State Implementation Plan, which resulted in continued violations of the PM_{10} air quality standard. These violations had the potential to trigger other federal action that could result in the reclassification of the area from "moderate" to "serious". This potential reclassification prompted action at the local and state level which has resulted in major revisions of the original plan for the Sandpoint area. This revised plan is the product of continued effort at the local and state level to improve air quality in the Sandpoint area.

The Sandpoint area, with a 1990 population of 7,000, is located on the northwestern shore of Lake Pend Oreille in Idaho's Panhandle. The physical setting of the area results in the frequent occurrence of stagnant weather conditions in the winter. These conditions, combined with emissions from various sources, can contribute to a buildup of particulate pollutants which sometimes exceeds the PM_{10} national and state health standard.

The DEQ has been measuring PM_{10} air quality in the Sandpoint area since 1985, when it installed a monitor on the roof of the downtown post office. In the years following, exceedances of the PM_{10} standard were experienced, and sampling was accelerated from every sixth day to every other day during the winter. A meteorological tower was installed at the University of Idaho's Sandpoint Agricultural Experimental Station in 1991. The DEQ acquired the ability to directly measure PM_{10} in real-time with the installation of a Tapered Elemental Oscillating Micro-balance (TEOM) at the post office site in 1993.

An inventory of the sources of small particles, known as an emission inventory, was developed for the Sandpoint area. It revealed that during the winter season, the primary sources of PM_{10} emissions were residential wood burning and dust from paved roads treated with anti-skid (sanding) material. On an annual basis, industrial emissions also played a significant role. An evaluation of the level of PM_{10} emissions from all known source categories in the Sandpoint area, combined with the chemical analysis of actual particulate samples, confirmed wood combustion and fugitive dust as the primary sources contributing to the elevated PM_{10} concentrations.

Further evaluation of the industrial emissions was conducted in 1994 and 1995 to address some inconsistencies in the original emission inventory. The updated emission inventory for the industrial sources resulted in a more accurate analysis of the impacts associated with the industrial sources. The improved emission inventory is the result of much time, devotion, and hard work from all involved staff - both DEQ and industry.

The modeling results indicated that, without implementing programs designed to reduce PM_{10} emissions, the Sandpoint area would continue to experience exceedances of the PM_{10} standard. The modeling process estimated PM_{10} concentrations during the winter season at levels approximately 20% higher than the ambient standard ($150 \mu g/m^3$) without any control measures in place.

The DEQ reviewed numerous control measures with local officials to formulate a comprehensive control strategy acceptable to the community. The control measures that were initially selected focused on reductions in residential wood burning emissions through measures such as a public awareness program, a woodstove replacement program, and changes in winter road maintenance practices. The original strategy also included reductions from industrial emissions through the issuance of operating permits for the applicable industrial sources. This component of the control strategy (issuance of operating permits) became very controversial, primarily due to the inadequacies of the original emission inventory. Continued implementation of these programs should ensure maintenance of the standard through at least 1997. Ambient monitoring data from 1995 suggests that the control strategy, when fully implemented, was effective at reducing PM_{10} emissions and therefore ambient PM_{10} concentrations, especially during the winter season.

The first section provides background on the plan, information on health effects, a description of the area, and a discussion of community involvement. Section II focuses on air quality status, including monitoring and meteorological data. Section III is an analysis of the problem, and includes the emission inventory and results of the modeling efforts. Section IV evaluates alternative control strategies and describes how they will be used to meet attainment. The report also details an implementation schedule and describes a contingency plan.

I. INTRODUCTION

A. SIP OVERVIEW

The United States Environmental Protection Agency (EPA) adopted a new National Ambient Air Quality standard for particulate matter on July 1, 1987. The standard is expressed in terms of PM_{10}, which is particulate matter less than 10 micrometers in aerodynamic diameter. The 24 hour ambient air quality PM_{10} standard is 150 $\mu g/m^3$ and the annual standard is 50 $\mu g/m^3$ expressed as an annual arithmetic mean. The State of Idaho has adopted both of these standards.

Particulate matter measuring less than, or equal to 10 micrometers (PM_{10}), is considered a risk to human health due to the body's inability to effectively filter out particles of this size. These small particles enter through the nose and mouth and can penetrate the deeper regions of the lung. When PM_{10} particles contain cancer causing or toxic materials, the health effects can be acute and long term.

Even periodic exposure to high levels of PM_{10} can lead to increased incidence of coughing and symptoms of upper respiratory problems. While this same exposure is usually tolerable for those with healthy respiratory systems, it can lead to irreversible or fatal damage in people already suffering from cardiopulmonary disease - usually children, the elderly, and cigarette smokers.

Wood stove emissions and fugitive road dust are of particular concern because they generally account for the majority of fine particles (less than one micrometer) found in the nonattainment area. These emissions can become an even more serious problem during periods of stagnant air. In the Northwest, accumulation of pollutants is common in valley settings where steep walls can restrict the flow of air. Mountain valleys often experience stagnant or light wind situations during the winter, when wood burning is an important source of heat, and the addition of anti-skid materials to roads is necessary to make roads safe. The combination of these conditions can result in exceedance of the PM_{10} health standard.

On August 7, 1987, the Sandpoint area, in Bonner County (Figure I-01), was designated as a PM_{10} nonattainment area (NAA) by the EPA. With promulgation of the Clean Air Act Amendments of 1990 (CAAA), the State of Idaho was required to submit a State Implementation Plan (SIP) no later than May 15, 1993. A draft plan was sent to EPA on March 15, 1993. The SIP was required to provide for attainment of the standard as quickly as possible but in any case, no later than December 31, 1994.

Unfortunately, an exceedance of the 24 hour standard was measured in January 1994. In addition, other days with PM_{10} concentrations near the standard, suggested that local sources were still causing air quality problems. The recommended control strategy was not fully implemented during the 1993-94 winter season. By the 1994-95 winter season, some additional control measures were in place, but not the entire strategy. One outstanding element was the issuance of operating permits for the industrial sources. Due to exceedances in 1994, the ambient monitoring data showed that attainment of the 24 hour standard was not possible by the CAAA deadline.

As a result, the EPA forewarned DEQ and the local community that under the laws of the CAAA, the EPA was required to reclassify all nonattainment areas that failed to meet the attainment deadline. The reclassification would change the Sandpoint area from a "moderate" to "serious" nonattainment area. New and more stringent requirements would become applicable to all non-exempt sources of PM_{10} emissions in a serious area. Faced with these challenges, the community urged EPA and DEQ to find an alternative to the serious reclassification. After several meetings with DEQ and the community leaders, EPA proposed an alternative course of action that was acceptable to all the participants. The alternative included a one year extension of the attainment deadline provided that specific tasks designed to quickly implement strategies to reduce PM_{10} levels were completed by DEQ and the community.

On March 31, 1995, DEQ submitted an extension request for the Sandpoint area, and a Reasonable Further Progress (RFP) report, as required by the CAAA. The RFP report summarized the status of control measures and additional requirements. The CAAA requires EPA to reclassify nonattainment areas to "serious" six months after the scheduled attainment date if an extension is not granted by that same date.

This revised SIP will contain all the control measures necessary to demonstrate attainment of the ambient standard as expeditiously as possible provided the area is not reclassified to serious. The plan must also show that the standard will be maintained once it has been met. On May 8, 1996, the EPA issued a final rulemaking granting the one year extension for the Sandpoint PM_{10} nonattainment area.

B. Study Area Description

1. *Physical and Historical Description*

The approximately fifteen square mile Sandpoint NAA is located in central Bonner County in the northern portion of Idaho's panhandle (Figure I-02). It is situated on the northwestern shore of Lake Pend Oreille, Idaho's largest lake. The area includes the communities of Sandpoint, Kootenai, and Ponderay, which lie on a 2,000 foot high plain at the base of the Selkirk mountains. Five thousand foot peaks surround the NAA which has a population of about six thousand.

The average annual temperature is 47°F. August is the warmest month with a monthly mean temperature of 64.8°F and an average maximum of 79.9°F. The coldest month is December with a monthly mean temperature of 23.4°F and an average minimum of 18.7°F. Precipitation averages about 31 inches per year. Snow during November, December, January, February and March averages 64 inches per year. The heaviest precipitation comes during the winter months while summer is the driest season. Winds blow predominately from the northeast and southwest.

Much of the local geography is the result of glacial activity that occurred about 20,000 to 10,000 years ago. A glacier in the Sandpoint area carved out glacial valleys in the region, and was responsible for the Lake Missoula flood. This glacier acted as a large ice plug blocking the Clark Fork River. The result was Lake Missoula, a body of water that covered 500 cubic miles and was estimated to be 2000 feet deep near the glacial plug. About 10,000 years ago the ice plug broke and the water from Lake Missoula stormed

through the break, eventually reaching the Pacific Ocean via the Columbia Basin. The resulting flood played a significant role in sculpting the local geography, and left behind large deposits of sediment and gravel in the region.

The Kalispell Indians were the first known inhabitants of the area. This tribe was sometimes called the "Pend Oreille" by French fur trappers, a french term meaning "ear bob" or earring. The first Europeans came into the area looking for furs, mainly beaver pelts, and most were associated with either the Hudson's Bay Company, or the Northwest Fur Company. David Thompson, a Northwest Fur Co. trapper, built the Kullyspell House, the first building in the region near what is now Hope, on the northeast shore of Lake Pend Oreille

The first permanent residents moved into the region around the 1880's and the city of Sandpoint was incorporated in 1900. By the turn of the century logging and milling were the area's major industry. Between 1880 and 1906 three major railroads had brought rail lines into Sandpoint. Early attempts at mining in the region proved futile even though it was only sixty miles from areas with large precious metal deposits. Efforts to farm the lands cleared after logging also proved to be largely unsuccessful.

Today the area's employment is more diversified, including the wood products industry, retail trade, agriculture, and the resort industry. The recent economics of the area appear stable, with steady increases in population, businesses, number of employed, and per capita income over the past twenty years

2. *Legal Description*

The Sandpoint PM_{10} nonattainment area is that area shown on Figure I-01, and included within the following section number designations:

Sections 1-3, 9-12, 15, 16, 21, 21, 27, 28 of Range 2 west and Township 57 north; and the western 3/4 of Sections 14, 23, and 26 of Range 2 west and Township 57 north.

C. COMMUNITY INVOLVEMENT

1. *Intergovernmental Consultation*

DEQ recognizes the importance of consulting with "local political subdivisions" in order to ensure their participation in the development and implementation of PM_{10} control strategies. In fact, past experience has shown DEQ that local involvement is essential. While a formal process has not been established, a number of consultations have taken place during the SIP planning effort and open lines of communication now exist between DEQ, EPA and local elected officials. DEQ made presentations to the City Council Representatives from Sandpoint, Kootenai, and Ponderay, along with the Bonner County Board of Commissioners, on the local air quality situation and possible strategies to correct the problem. DEQ also explained to these representatives the possible consequences the area and the State would encounter if no action was taken by local government. EPA representatives have also met with local officials and community leaders and have made presentations to the advisory committee. This interaction at the federal level has actually improved relations between all responsible entities.

Figure I-01

Sandpoint PM-10 Nonattainment Area

Base Map

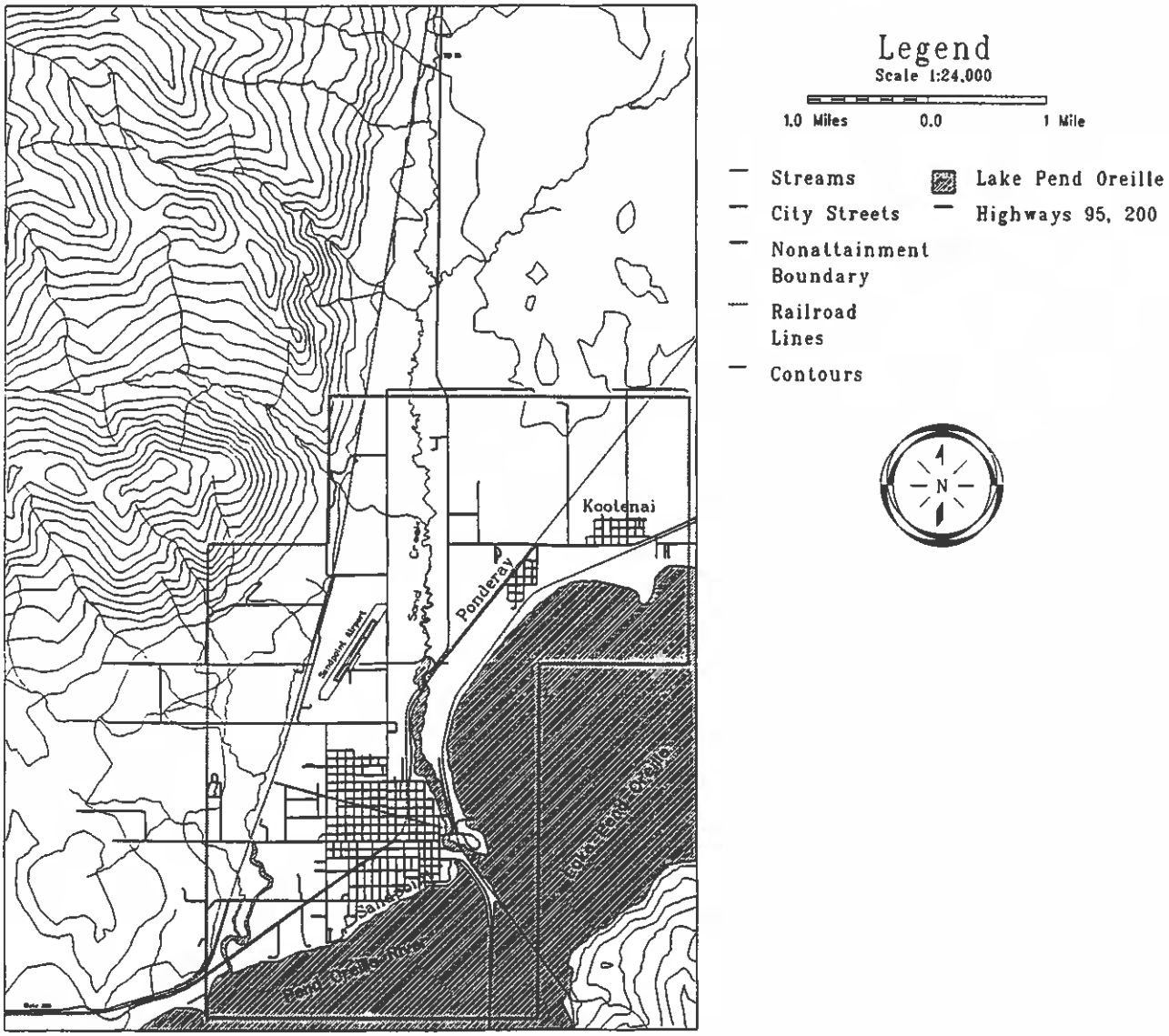
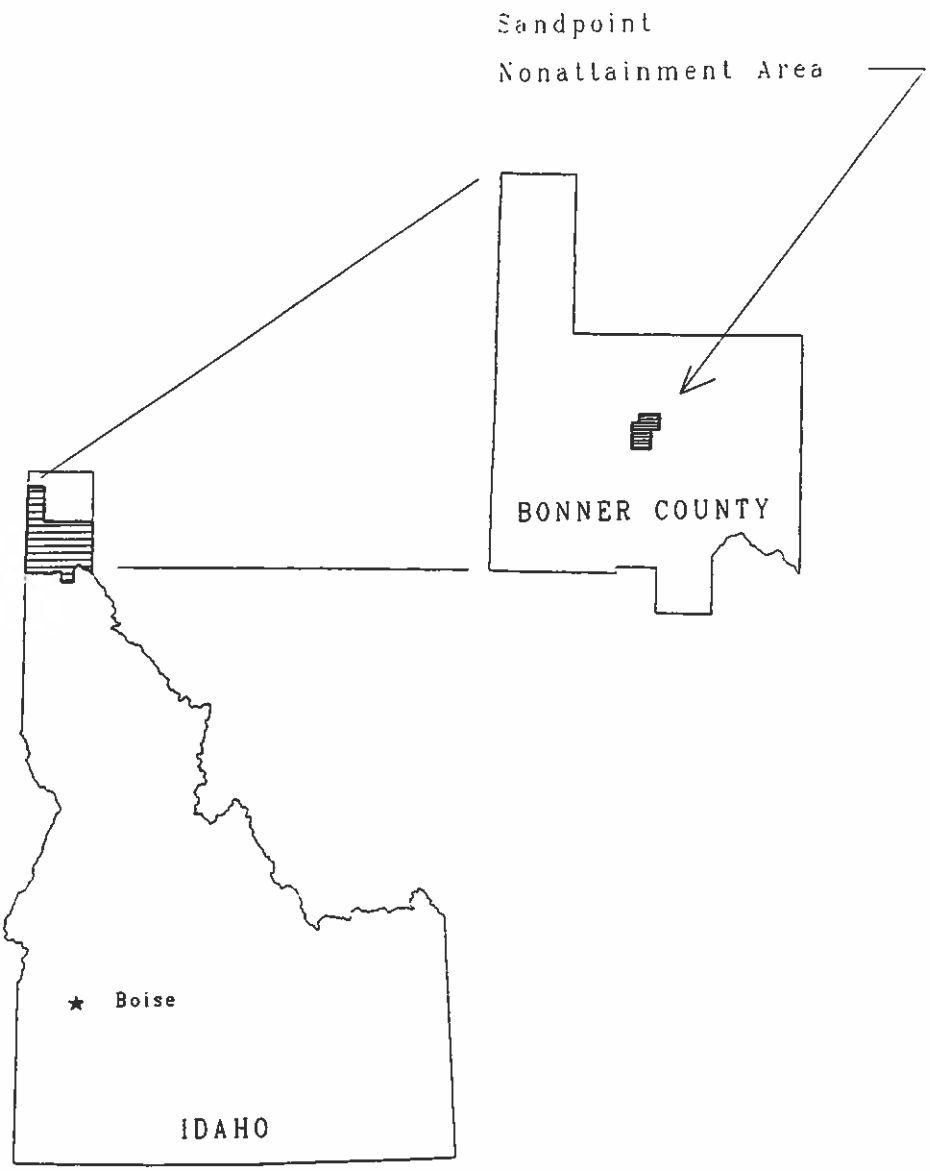


Figure I-02

Location of Sandpoint Nonattainment Area



As discussed earlier, the potential for a serious classification has increased the awareness level of the City of Sandpoint elected officials. This increased awareness has lead to greater communication between DEQ and local officials, as well as enlisting the participation of regional Idaho legislators and the U.S. congressional staff.

DEQ staff have met with representatives of a number of other agencies, such as the local highway districts, in an effort to involve them in the process. The Community Advisory Committee (CAC) represents an informal intergovernmental consultation, since representatives from local government are members of that committee. Every effort will be made to continue to make local political subdivisions an integral part of the Sandpoint area air quality improvement effort.

2. ***Public Involvement***

DEQ has worked to involve the public in the planning process through formation of the CAC. This committee assists DEQ with development and implementation of the Sandpoint SIP. In particular, it provides a local perspective on which control measures are most appropriate and how to best implement those that are selected. The organizations represented on this committee are varied - ranging from the Chamber of Commerce to a local air quality coalition.

After the adoption of the 1993 Sandpoint Area SIP, the original CAC dissolved during the implementation of specific control measures. During the summer of 1994, interest in reviving the CAC was renewed when DEQ issued proposed operating permits for four industrial facilities located in Sandpoint. DEQ received numerous comments during the public comment period which ultimately resulted in DEQ withdrawing the proposed permits. The ensuing controversy over the permits resulted in the creation of a very active CAC that contained an almost entirely new group of individuals.

The new advisory committee is led by the Sandpoint Area Chamber of Commerce. Meetings were held every two to four weeks during the fall of 1994. The advisory committee formed several smaller task forces to focus on specific issues and report back to the entire committee. This level of organization and participation resulted in greater success in solving problems and implementing the control measures at the local level. For example, one of the local industries loaned the necessary equipment to the highway district for the storage and application of liquid deicer.

To further promote public involvement and awareness, the Sandpoint Area Chamber of Commerce received an air quality grant from EPA in 1995. The main purpose of the grant was to hire a public awareness coordinator for the Sandpoint area to focus on the air quality issues in the community. The public awareness coordinator is responsible for organizing the advisory committee meetings and has taken a lead role on the public awareness task force. DEQ supports the efforts of the coordinator and will continue to work with the Chamber of Commerce and the advisory committee to increase public involvement through informative meetings and public awareness materials. The latter will include newspaper articles, brochures, radio programs, and other techniques that will foster public knowledge of, and participation in, local air quality programs. As required by law, DEQ will hold public hearings and public comment periods prior to the adoption of any SIP amendment or major revisions of the SIP control strategy.

II. AIR QUALITY

A. MONITORING AND DATA SUMMARY

The basis for determining the air quality of any area lies in the collection of accurate and adequate monitoring data Data collected from an area's monitoring network are used to establish air quality trends, to determine if and when air quality standards are exceeded, and to aid in the development of appropriate air quality control strategies when standards are exceeded.

1. *Ambient PM_{10} Monitoring Network*

The Division of Environmental Quality (DEQ) has monitored PM_{10} in the Sandpoint area since 1985. The single monitoring site contains three monitors and is located on top of the Sandpoint Post Office at 210 N. 4th Avenue. The location was chosen because it is in the center of the community, is representative of the surrounding neighborhood, and it is located at the area of maximum PM_{10} concentration. This site is an official State and Local Air Monitoring Site (SLAMS) for PM_{10}, and as such, monitoring is conducted in accordance with 40 CFR 58 Subpart C.

The type of monitor being used is the size selective high volume sampler, or PM_{10} Hi-Vol. The PM_{10} Hi-Vol operates by pulling outside air into the sampler and trapping the particulates on a quartz fiber filter. The sampler utilizes a Sierra Anderson size selective air inlet to restrict the size of incoming particles to an aerodynamic diameter smaller than or equal to a nominal 10 micrometers. The air flow into the PM_{10} Hi-Vol is also regulated and measured to determine the total air flow through the sampler, and to work with the inlet to control the size of incoming particles. The PM_{10} Hi-Vol operates for a 24 hour period from midnight to midnight. Together with the mass of PM_{10} collected on the filters, the total air flow is used to calculate the mass of PM_{10} per volume of air, reported in $\mu g/m^3$.

The initial schedule in Sandpoint was to monitor every sixth day. As concentrations exceeding the standards were measured during the winters of 1985-86 and 1987-88, the frequency was accelerated. Presently the post office site operates every other day from October through March, and every sixth day from April through September. Accelerating the monitoring schedule was done to provide a more complete data base, an important element in evaluating and understanding an area's air quality. The accelerated monitoring is conducted during the fall and winter months because elevated PM_{10} concentrations have been traditionally recorded during these time periods.

Additional data support at the post office site is provided by a Tapered Element Oscillating Microbalance (TEOM), which provides continuous "real time", direct measurements of PM_{10} concentrations. The TEOM was installed at the Sandpoint post office site during the spring of 1993. The operation of the TEOM at the site provides a useful supplement on non-scheduled sampling days to the official data collected by the PM_{10} Hi-Vols. The simultaneous operation of the TEOM and PM_{10} Hi-Vols at the site

will contribute to establishing a correlation between data collected by the two instruments. An evaluation of the correlation between the two instruments will aid in determining the future uses of each instrument at the site. DEQ is currently developing standard operating and QA/QC procedures for the use of TEOMs in the Idaho ambient air quality monitoring network. Upon EPA Region 10 approval of these procedures and site changes, DEQ intends to substitute TEOMs for Hi-Vols at sites where an everyday sampling frequency is necessary.

Prior to the TEOM's installation at the site, a nephelometer, which measures the light scattering associated with fine particulate concentrations, was used for additional data support. The nephelometer went on-line in Sandpoint during July 1987, and was used to provide continuous "real time", indirect measurements of the ambient particulate concentrations. The nephelometer was discontinued at the end of the 1992-93 winter season.

Special saturation studies were conducted in the Sandpoint area during 1989 and 1992 using small, portable monitors located at temporary sites. The purpose of the studies was to measure the representativeness of the Sandpoint SLAMS monitoring site as a maximum impact location, and to assess the extent of the PM_{10} problem. However, because the portable monitors are not federally approved as an alternate or equivalent method for PM_{10} sampling, the concentrations cannot be used to determine air quality violations. Instead, the instruments are operated mainly to establish spatial trends. The saturation studies indicated that elevated levels of PM_{10} occur in parts of the Sandpoint area other than the downtown. However, the post office site is in a location that represents maximum concentrations as determined through the saturation studies and past modeling endeavors.

2. *PM_{10} Air Quality Data*

a. Summary of PM_{10} Data

Data collected from the Sandpoint post office monitor are initially collected and reported as a 24 hour average value. The daily average values are used to calculate monthly and quarterly averages. The quarterly averages are used to calculate an annual average. PM_{10} air quality standards are written for 24 hour and annual averages only, with the 24 hour and annual standards being 150 $\mu g/m^3$ and 50 $\mu g/m^3$, respectively. The 24 hour standard is measured from midnight to midnight. The annual standard is for the calendar year, January 1 through December 31.

A total of 951 24 hour PM_{10} samples were collected from the post office monitors between 1986 and 1995. Nine of these values exceeded the 24 hour PM_{10} standard, six of which were recorded in the winter months, and three in the fall. All data collected from 1986 through 1995 are found in Appendix A.

Table II-01 summarizes the 24 hour PM_{10} data collected at the Sandpoint site from 1986 through 1995. Figure II-01 displays the monthly average and monthly highest

value for the years 1993 through 1995. Figures II-02 through II-04 display Sandpoint's three highest recorded PM_{10} concentrations for each quarter from 1993 to 1995. Figure II-05 shows the mean quarterly PM_{10} concentrations for all years with a full year of monitoring.

The Sandpoint area has not exceeded the annual standard of 50 $\mu g/m^3$ for any of the years monitored. The annual arithmetic means (definition provided in II.A.2.b.) from 1986 to 1995 are shown in Table II-01, and displayed in Figure II-06. The annual arithmetic mean for 1995 was the lowest annual mean since data collection began in 1986

Table II-01: Sandpoint PM_{10} Data Summary

Year	# of Samples	# of Samples >150 $\mu g/m^3$	Maximum Concentration $\mu g/m^3$ (Date)	2nd Maximum Concentration $\mu g/m^3$ (Date)	Annual Arithmetic Mean [2]
1986*	58	1	168 (2/28)	133 (3/3)	42.6
1987*	70	0	125 (10/27)	115 (10/21)	40.9
1988*	93	3	[1]219 (9/6)	179 (2/24)	41.7 — any more 7154 ?
1989	106	0	[1]116 (9/25)	108 (3/23)	31.6
1990	109	2	218 (10/4)	192 (2/26)	35.3
1991*	85	0	144 (2/23)	110 (1/22)	36.2
1992	113	2	473 (9/4)	199 (2/4)	40.6 — "
1993*	96	0	127 (2/28)	109 (3/10)	34.6
1994*	105	1	157 (1/26)	128 (3/25)	37.2
1995	116	0	79 (2/22)	79 (3/28)	25.9

* Year does not meet summary criteria for data retrieval.

1 Exceptional event.

2 Annual arithmetic mean is the average of the four quarterly averages. Exceptional event data is excluded in this computation. See Figure II-06 for a comparison of actual and expected annual means.

Figure II-01

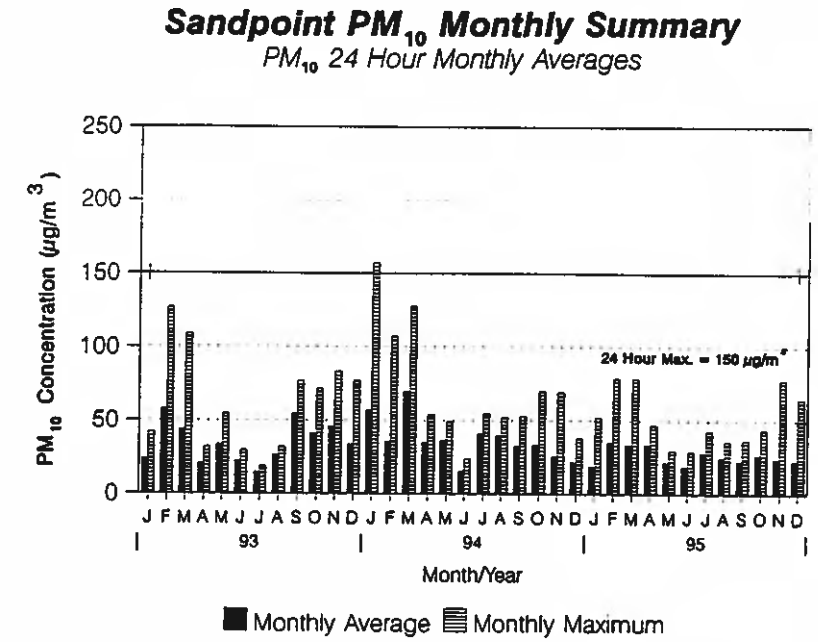


Figure II-02

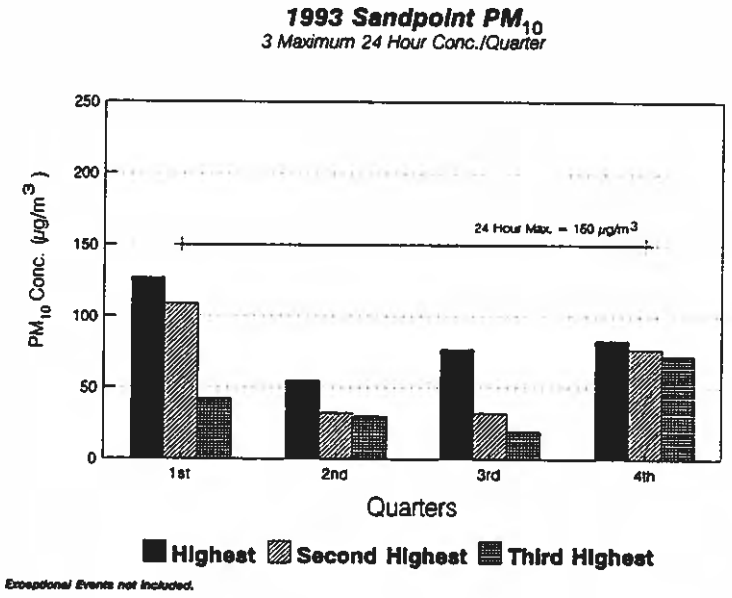


Figure II-03

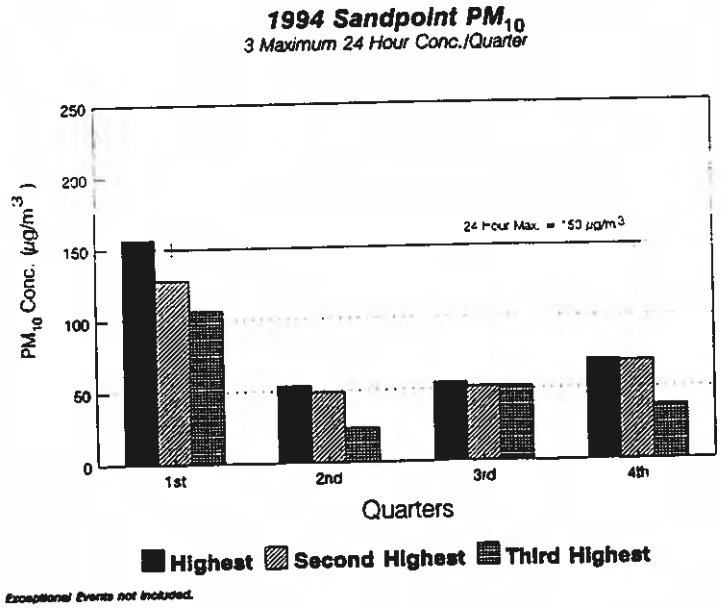


Figure II-04

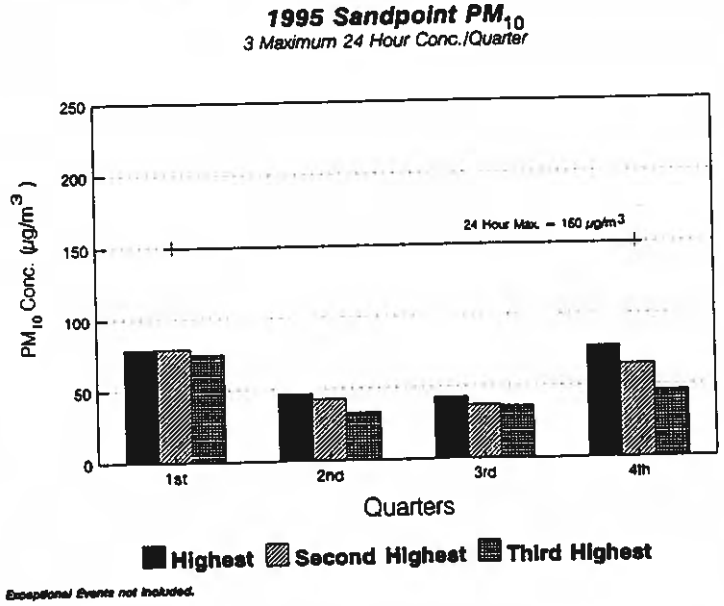


Figure II-05

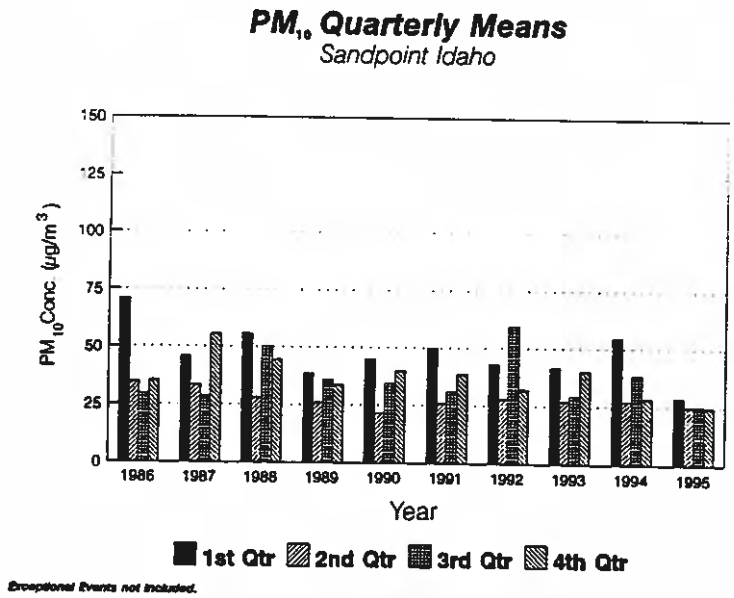
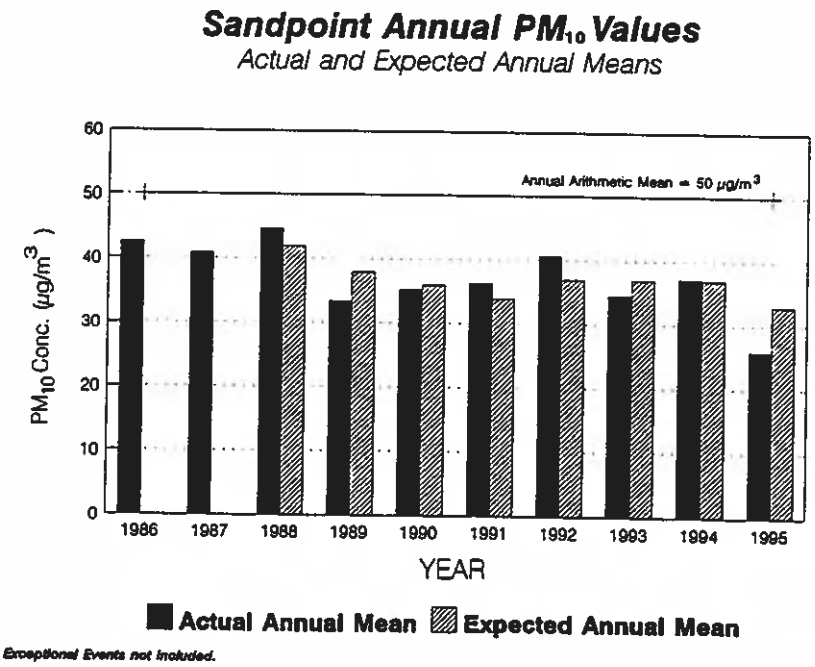


Figure II-06



b. Determination of PM_{10} Attainment Status

Appendix K, 40 CFR 50, Interpretation of the National Ambient Air Quality Standards for Particulate Matter, requires the use of the three most recent calendar years of data in the demonstration of attainment or non-attainment status. These three years are used for calculating the 24 hour and annual expected PM_{10} exceedances.

Each year should have at least 75% data recovery in each quarter, if that year is to be considered in the analysis process. Out of ten full years of PM_{10} monitoring in Sandpoint, only four (1989, 1990, 1992, and 1995) meet the 75% completeness criteria.

According to 40 CFR 50, Appendix K, "*the 24 hour primary and secondary standards are attained when the expected number of exceedances per year at each site is less than or equal to one.*"

The phrase, "expected number of exceedances per year", takes into account the likelihood of exceedances occurring on days when sampling does not take place, and represents the estimated number of exceedances that would occur if monitoring were done every day.

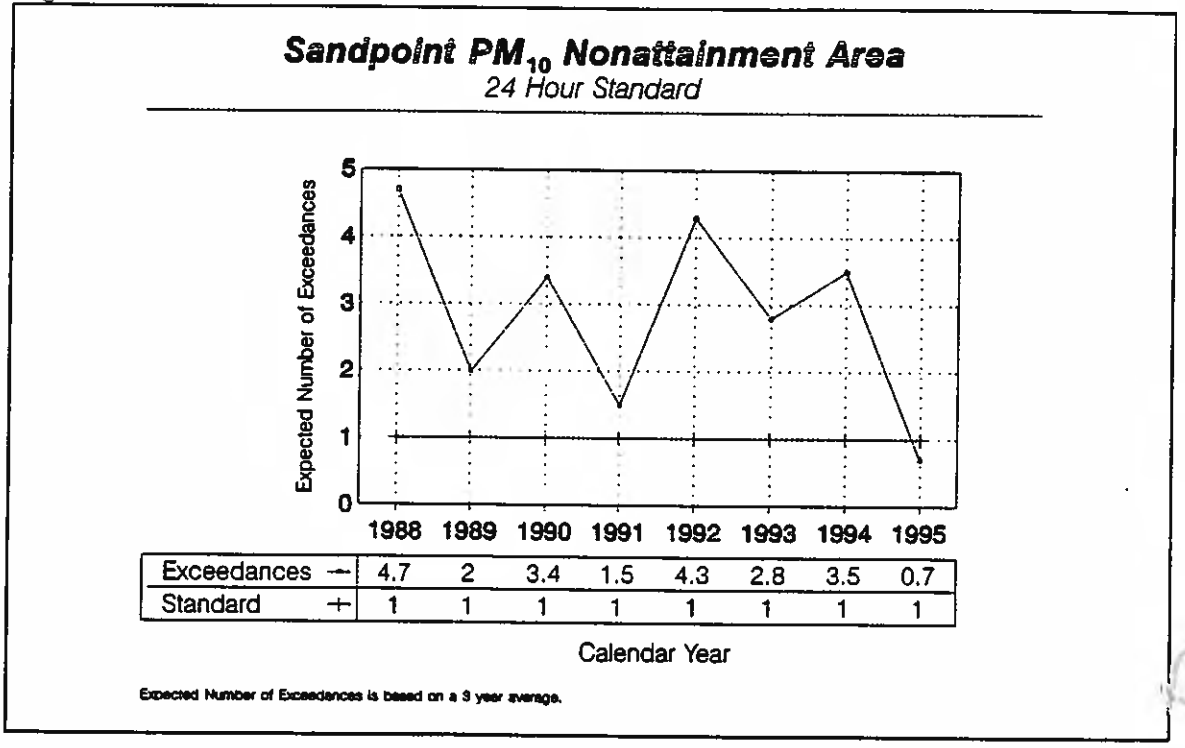
For example, if one exceedance is recorded in a quarter that samples every sixth day, the expected number of exceedances for that quarter would be six. The expected number of exceedances (eg) are calculated using the observed number of exceedances (Vg), the number of days in the quarter (Ng), and the number of days in the quarter with observed PM_{10} data (ng) in the equation eg = Vg (Ng / ng). The four quarters are then summed to get an annual total, and the annual expected number of exceedances are averaged for the three most recent years to determine attainment.

The average annual expected number of exceedances for 1993, 1994, and 1995 are 2.8, 3.5, and 0.7, respectively. Figure II-07 summarizes the yearly variation of the average annual expected number of exceedances in the Sandpoint PM_{10} nonattainment area. Table A-01 in Appendix A shows all measured PM_{10} exceedances since 1986 at the Sandpoint post office site.

The 1995 three year average for expected number of exceedances is less than one and demonstrates that the Sandpoint area is in compliance with the ambient PM_{10} standard for 1995. However, data collection during 1993 and 1994 did not meet the data completeness requirements specified in 40 CFR 50, Appendix K. Therefore, DEQ must collect three years of complete data, in addition to completing other Clean Air Act requirements, before the Sandpoint area can complete the redesignation process to attainment status.

The annual primary standard is attained when the expected annual arithmetic PM_{10} concentration is less than, or equal to, the standard. The expected annual arithmetic PM_{10} concentration is equal to the average of the three most recent years' annual arithmetic means. For the years 1993 through 1995, the expected annual average is equal to 33 $\mu g/m^3$, well below the annual standard (see Figure II-06).

Figure II-07



c. Evaluation of Seasonal Exceedances

Historically, the ambient data collected during the summer months in Sandpoint have shown the lowest PM_{10} concentrations throughout the year. The highest PM_{10} levels generally occur in the winter months, November through March, although high concentrations are sometimes measured during the fall, September and October.

Emission inventories, receptor modeling and dispersion modeling indicate that sources leading to high PM_{10} concentrations during the winter months appear to be local, coming mainly from residential wood combustion, fugitive road dust, and industry. Weather conditions, such as colder temperatures and air stagnation, contribute to increased emissions, and the subsequent build-up of pollutants in the airshed. Drying of local sanded roadways after long periods of snow cover also seem to play a role in elevated PM_{10} emissions and air quality levels.

Sources leading to high PM_{10} concentrations during the fall months appear to be more regional in nature, such as fugitive dust from agriculture fields and/or smoke from forest fires. Seasonal grass burning has been implicated as a significant impact,

but no direct correlation has been established to the fall violations. Weather patterns during times of increased PM_{10} levels (fall season) often show high winds, which produce fugitive dust and act as a transport mechanism for the regional impacts.

Sandpoint has had three fall values designated as exceptional events. An exceptional event is defined as an uncontrollable event caused by natural sources of particulate matter, or an event that is not expected to recur at a given location at regular intervals. Exceptional events, as concurred by EPA Region X, are excluded from calculations for the determination of attainment of the 24 hour and annual PM_{10} standards. The Sandpoint exceptional events occurring on October 6, 1987, September 6, 1988, and September 25, 1989 were designated as such because of construction/demolition, forest fires, and high winds, respectively. Historically, EPA Region 10 granted exceptional event status to wind blown dust storms in the Eastern Washington/Northern Idaho area. However, the agency has determined that these events occur regularly and therefore, no longer meet exceptional event criteria.

PM_{10} exceedances in Sandpoint have been monitored in two distinct seasons, fall and winter. The sources of emissions contributing to exceedances are suspected to be just as distinct requiring separate control strategies of varying scale and depth. DEQ has previously concentrated its efforts toward identifying, quantifying, and controlling winter PM_{10} sources. In an effort to identify control strategies for the fall events, DEQ reviewed and summarized regional PM_{10} sources within Northern Idaho. This report included a summary of the types of applicable control measures that are already in effect within Idaho and serve as RACT/RACM. See Appendix H for further information pertaining to regional area sources and applicable control measures.

In addition to developing the summary report described above, DEQ will also remain active with the Pacific Northwest Columbia Plateau Wind Erosion/PM_{10} Project. DEQ has participated at the quarterly review meetings and has provided some input into the research project. This project will produce recommended control strategies that will assist Idaho with further SIP control strategy developments for the Sandpoint NAA to address the fall violations.

B. METEOROLOGY

1. *General Meteorology*

a. Geographical Summary

Northern Idaho geography is a cumulation of prairies, mountains and valleys. Eastern portions of the Panhandle comprise mostly mountainous National Forests such as the Nez Perce, Clearwater, St. Joe, Coeur d'Alene and Kaniksu interspersed with blocks of state and private land. The western terrain of the Panhandle has some mountains, but also consists of wide open prairies, like the Rathdrum and Palouse Prairies, which are portions of the vast Columbia Plateau. The Columbia Plateau is

an expanse of flat open land with soil low in moisture content. The plateau consumes much of Southwest Washington and reaches into Northeast Oregon and Northwest Idaho.

The Sandpoint NAA is located in Bonner County in the Panhandle region of Northern Idaho. On the shores of Lake Pend Oreille, it lies at 2100 feet elevation, 48° 17'N latitude, and 116° 34' W longitude. Lake Pend Oreille extends to the south and east of Sandpoint, the Pend Oreille River drains the lake to the west of town, and mountains rise to greater than 6500 feet to the northwest of town. Sand Creek drains through town from a valley to the north and empties into Lake Pend Oreille in Sandpoint.

b. Meteorological Data

Until recently, the only routine meteorological data collected in Sandpoint were temperature and precipitation. These data were collected at the University of Idaho's Sandpoint Experimental Station located approximately 2 miles north of the downtown area. This data has been collected for more than 85 years[1].

In April 1991, the Idaho DEQ installed an automated 10 meter meteorological tower. Data collected includes temperature, delta temperature (the temperature at 10 meters minus the temperature at 2 meters), wind speed, wind direction, sigma theta (wind direction variability), solar radiation, and precipitation. Data is stored as 15 minute averages and is accessible remotely through a telephone modem. This data is being collected to develop a meteorological data base for air quality modeling, support air quality advisories (AQA), and to provide detailed, local meteorological information previously lacking for the Sandpoint area.

Although the Sandpoint data is being collected, it is currently limited in utility. Spokane surface data (meteorological data used in this report) is also a useful tool for air quality assessment in Sandpoint. Upper air meteorological and associated mixing height data are not available for Sandpoint. The closest upper air site is located at Spokane, Washington, approximately 50 miles to the southwest. Upper air data from Spokane will be used as representative for upper meteorology required by air quality models.

c. Climatology

The climate classification for the Spokane area, a location representative of the regional area, is mild arid in the summer to cold coastal in the winter months. Air masses moving in from the Gulf of Alaska bring moisture to the region. The annual climatology summary over the past 30 years indicates that July, August, and September are the three driest months. The climatologies of Sandpoint and Spokane are similar, although Sandpoint is slightly cooler and wetter.

---

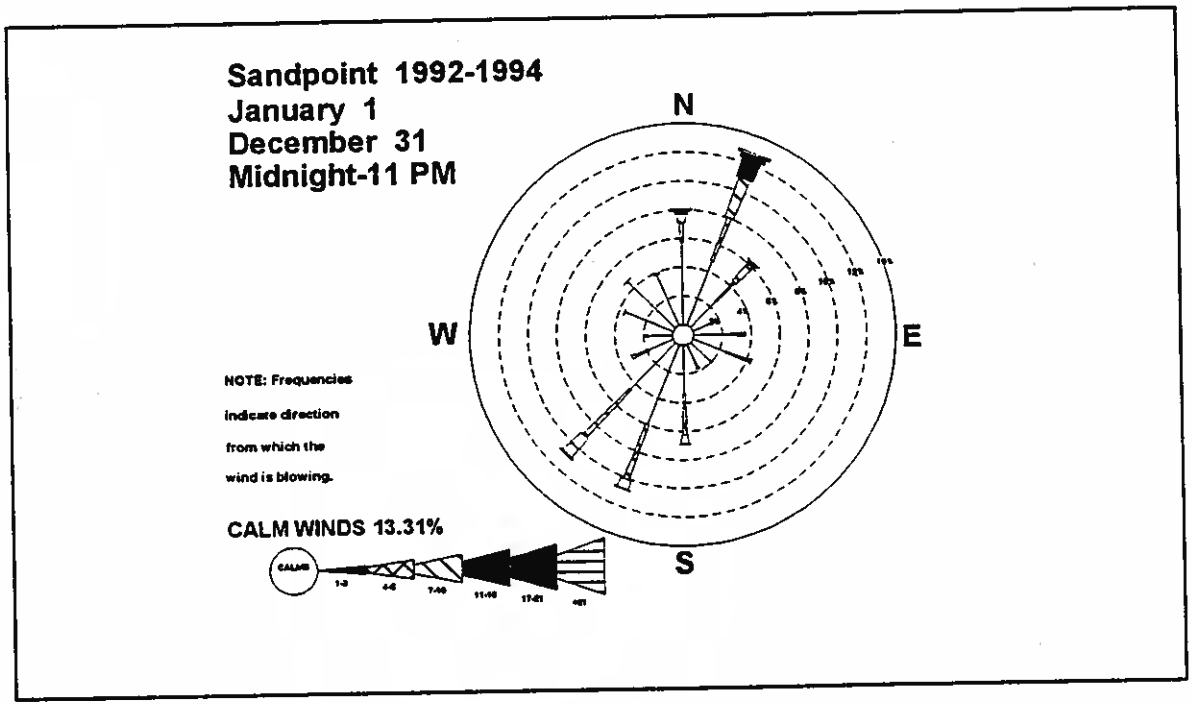
[1] U.S. Department of Commerce, Climatological Data Annual Summary, Idaho, 1995, Volume 98, Number 13.

Sandpoint is an intermountain city of the Pacific Northwest. The region is a mixture of lakes, meadows, and forests; and its meteorology is dominated by migratory weather disturbances, which are modified by complex local terrain.

The mean annual temperature for Sandpoint is 44.8°F. These temperatures range from a monthly mean of 64.5°F in July to a cool 24.8°F in January. Temperature extremes can range from summer highs in the upper 90's to bitter cold winter readings below -20°F. Summers are generally mild with light precipitation, while the winter season is cold and wet.

Precipitation in Sandpoint averages about 33.5 inches per year with greater amounts falling in the nearby mountains. On average the heaviest rainfall occurs during November, December and January. During these months, rainfall averages in excess of 4 inches per month. Wintertime precipitation can fall in the form of snow or rain, and significant accumulations of snow have been recorded. The driest month on average is July, with a mean rainfall of 1.26 inches.

Figure II-08: Windrose



Wind velocities for a three year period, beginning January 1, 1992 through December 31, 1994, are summarized in the windrose shown in Figure II-08. This windrose is based upon data collected at the DEQ meteorological station in Sandpoint. For the three year period, 82% of the data was recovered. During this time period, prevailing winds are from the northeast and southwest. This follows from the shape of the surrounding terrain, which funnels winds along the main orientation of the valley. The highest occurrence of light winds is from the northwest, which is probably associated with drainage winds during stagnation conditions from the mountainous area to the northwest of town. Calm winds occurred about 13% of the time.

d. Exceedance Conditions

Exceedances of the PM_{10} standard occur in the fall and late winter. Meteorology, during the fall episodes, is characterized by high winds and regional transport of dust and/or smoke. During the fall, episodes of high PM_{10} levels are noted throughout Northern Idaho and Eastern Washington, indicating a regional problem. The wintertime exceedances occur under stagnation conditions, when atmospheric mixing and pollutant dispersal is at a minimum, which can cause local emissions to accumulate to high levels. Additionally, drying may contribute to excessive fugitive emissions from local roads. Two different types of meteorological regimes are responsible for PM_{10} events in the Sandpoint area. Six of the measured events occurred during wintertime stagnation episodes. The three remaining exceedances occurred during autumn high wind episodes. A summary of each of the meteorological events that have led to exceedances are described in this section.

The meteorological data set for the Sandpoint area is limited. The meteorological descriptions given in this section are based upon daily weather maps from a weekly map series provided by the National Oceanic and Atmospheric Administration (NOAA). This series provides 5 AM Mountain Standard Time surface, and 500 mb charts. Additional meteorological data were gathered from the Idaho climatological data summaries, also provided by NOAA.

2. *Summary of Wintertime Stagnation Events*

Wintertime stagnation events are meteorologically significant for producing conditions in which high PM_{10} levels can occur in the Sandpoint area. Of the nine exceedances, which were documented from 1986 to 1994, all but three occurred during winter stagnation periods. It should be noted, however, that the highest PM_{10} levels do not necessarily fall on the most stagnant days. The highest levels appear to develop when stagnation occurs simultaneously with a spike in local PM_{10} emissions. This spike in local emissions is usually meteorologically related, as it occurs when streets become dry, and fugitive road dust becomes significant.

a. February 28, 1986

The 24 hour PM_{10} concentration on February 28, 1986, reached 168 $\mu g/m^3$ after several days of a strong high pressure system dominating Northern Idaho's weather.

During the stagnation period, synoptic analyses showed a strong ridge of high pressure positioned along the west coast. A surface high pressure system also dominated the area. The center of the surface high moved across the area on February 26 and February 27, and was well east of the area by February 28. Despite the rapid eastward movement of the surface high pressure center, pressure on February 28, at both the surface and aloft, remained high over Northern Idaho. A weak pressure gradient existed for several days leading up to the exceedance, implying light winds.

No precipitation was reported in Sandpoint from February 26 through February 28, and temperatures warmed into the 50's, rapidly melting the snow cover. Snow depth dropped from 11 inches to 2 inches during the five days between February 23 and February 28.

b. February 21 and 24, 1988

This stagnation period produced two PM_{10} exceedances. A high pressure ridge along the west coast had persisted for several days, leading up to the episode. A strong surface high existed over the Pacific Northwest on February 20, but began to push south. High pressure and a weak pressure gradient at the surface still dominated the situation on February 21, when a PM_{10} value of 157 $\mu g/m^3$ was measured.

A short wave trough pushed over the top of the ridge and drove a surface front to the southeast from British Columbia, just brushing Northern Idaho. Most of the energy from this disturbance moved down the east side of the Rockies, and high pressure with light pressure gradients returned to the Sandpoint area. A second exceedance of 179 $\mu g/m^3$ occurred on February 24.

Temperatures were mild during the period, reaching 54°F on February 21 and 49°F on February 24. Warmer temperatures and disappearing snow cover again appears significant. The four inches of snow cover noted on February 19 had disappeared by February 21. This may have contributed to drying out of road surfaces, causing an increase in fugitive dust emissions.

c. February 26, 1990

Strong high pressure at the surface and aloft persisted for several days, leading up to the February 26, 1990, exceedance, measured at 192 $\mu g/m^3$. Again, temperatures were mild with the daytime high reaching 50°F on the day of the exceedance.

The weak pressure over the area indicates that winds were light through the period. This event differed from the other wintertime events, because heavy snow cover of fourteen inches was still being reported at Sandpoint on February 26.

d. February 4, 1992

A relatively calm and stable weather pattern dominated Northern Idaho after a frontal passage on January 31, 1992. A stagnation period began on February 1, 1992, and continued until February 7. On February 8, a storm system brought both precipitation and destabilization. PM_{10} levels climbed to 199 $\mu g/m^3$ on February 4. This is the highest wintertime level measured at Sandpoint to date.

Of interest during this period, as with all but two of the other wintertime episodes, is that persistent snow cover disappeared on, or near, the day of the violation. Snow continually covered the ground through February 3, but by February 4, the snow

cover had disappeared. Temperatures were mild for February, with highs well above freezing each day, including a high of 47°F on February 3. Overnight lows were also unseasonably warm, ranging from the mid-twenties to low thirties each night. Light precipitation occurred on February 3.

e. January 26, 1994

A series of Pacific weather systems contributed to unsettled conditions in Sandpoint early in the week of January 23 - 29. Precipitation, measured at 0.18 inches and a trace, were recorded on January 24 and January 26, respectively. Maximum daily temperatures ranged from 46°F on January 25 to 39°F on January 29. High pressure with associated stagnant conditions developed over Northern Idaho on January 27 and continued through January 28. Light winds and morning fog were noted during this stagnation period. Cool temperatures, light precipitation, and increased public activity during a week-long annual winter carnival are suspected to have contributed to the exceedance of 157 $\mu g/m^3$ recorded on January 26, 1994 (See memo in Appendix A).

3. *Summary of Fall Events*

As mentioned previously, the region experiences its driest months in July, August, and September. During these months, high wind conditions associated with surface, cold frontal passages have the ability to transport wind blown dust from Eastern Washington to the Idaho Panhandle. Subsequently, elevated PM_{10} levels (recorded throughout the region) sometime occur due to extensive dispersion processes and dry conditions generating regional wind erosion.

Wind erosion occurs when soil particles are detached and carried from the ground. The wind force (i.e., a function of velocity) moves soil by rolling and lifting particles. Lifting suspends fine particles (i.e., clay- and silt-sized particles) into the atmosphere, where the particles can be transported long distances. Two main components of the wind force, direction and speed, control the transport and dispersion of PM_{10} in Northern Idaho.

High peak wind gusts and average wind speeds are evident in the following discussion of the fall events. According to EPA guidelines (AP-42, Section 11.2-1), wind speeds greater than 12 mph can produce wind erosion conditions. Strong winds from a west-southwest direction is also a similarity in all three events.

a. September 6, 1988

A PM_{10} level of 219 $\mu g/m^3$ was measured on September 6, 1988. Synoptic maps show the passage of a short wave trough at 500 mb associated with a low pressure area moving through Canada. Surface features were somewhat complex, with both a trough line and a surface front passing through the area. Spokane was reporting brisk southwesterly winds through the period. The 24 hour average wind speed was 20.8 mph from a south-southwesterly direction with a peak gust at 46 mph from a

westerly direction. A forest fire was active in the area and the Sandpoint exceedance was designated by DEQ and EPA Region 10 as an exceptional event resulting from a forest fire.

b. October 4, 1990

The October 4, 1990, PM_{10} episode produced a PM_{10} reading of 218 $\mu g/m^3$. Meteorologically, the situation during this episode was similar to the fall event of 1988. An upper level trough, and surface cold front produced a strong pressure gradient, bringing strong winds to the panhandle region. A peak gust of 46 mph from the southwest was reported at Spokane and the 24 hour average wind speed at Spokane was in excess of 23 mph from the west-southwest.

c. September 4, 1992

A 24 hour average PM_{10} level of 473 $\mu g/m^3$ was measured on September 4, 1992 at Sandpoint. Upper level synoptic analyses revealed a persistent 500 mb level cut-off low along the California coast. A strong short-wave out of the Gulf of Alaska intensified as it moved into the upper long wave trough along the Western US coast. At the surface this was supported by a low level system that developed along an old stationary front positioned near the US-Canadian border. This system moved to the east at approximately 30 miles per hour. The developing surface low and accompanying cold front produced gusty winds with little precipitation. As this front passed over the region on September 4, 1992, the National Weather Service office at Spokane reported a peak gust of 41 mph and a 24 hour average wind speed of 19.5 mph from the west-southwest. Spokane was also reporting reduced visibility with blowing dust on that day. The hourly average wind speed for the 24 hour period on September 4 at Sandpoint was 7.2 mph, and the peak 15 minute average was 13.9 mph (Idaho DEQ meteorological station), although peak gusts were certainly higher. The wind direction on that day was predominantly from the west-southwest. Subsequently, fugitive dust generated over the Palouse of East-central Washington would have been transported in the general direction of Sandpoint.

DEQ requested EPA's concurrence, designating this elevated PM_{10} concentration as an exceptional event. EPA Region 10 did not approve the exceptional event status for this date, stating that high wind events were a recurring phenomenon in this region.

In 1994 DEQ staff modeled the event to demonstrate that the violation was due to sources outside the nonattainment area. The meteorology and synoptic setting on September 4, and the regional climatology strongly corroborate the theory that dust transport through the Palouse-Spokane corridor impacted Sandpoint and caused the exceedance of the 24 hour PM_{10} standard. See Appendix H, Attachment D for more information pertaining to the modeling of this event.

III. EMISSION INVENTORY AND PROJECTIONS

A. EMISSIONS INVENTORY DEFINITION

An emission inventory identifies and measures the location, type, and relative strength of sources contributing pollutants to an air-shed. By definition, an emission inventory is a compilation of sources and their emissions within a designated area. A working interpretation of this definition would be that an air emission inventory is a listing, by source, of all pollutants released into the atmosphere of a community. For Sandpoint, the air emission inventory is comprised of three general categories of sources: point, area, and mobile. A definition of each, as pertains to the current inventory, is given below.

- **Point Source Emissions** are those emissions generated due to a specific process and fixed location (stationary), commonly ducted through a stack, and typically associated with industrial processes. Facilities in the non-attainment area producing more than one ton of PM_{10} emissions per year are considered in the inventory. Therefore, 1 ton/year is designated as the cut-off for point source classification for purposes of the SIP.

- **Area Source Emissions** represent air emissions from a collection of many small, unidentified points within a specified geographical area, all emitting less than the minimum prescribed level for point sources, as defined in the SIP. These emissions generally constitute emissions produced from fixed locations that are too small and/or too numerous to be surveyed and characterized individually. Examples of these include, but are not limited to, residential wood combustion and agricultural emissions.

- **Mobile Source Emissions** are a subset of the area sources, but are compiled a little differently. Emissions from motor vehicles (not including fugitive dust), aircraft, and locomotive emissions are some examples of sources in this category.

The pollutant of concern in the Sandpoint nonattainment area is particulate matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}). Particulate matter as defined by the State of Idaho is any material, except water in uncombined form, that exists as a liquid or a solid at standard conditions. In the Sandpoint air-shed, chemical analysis of the particulate matter did not reveal significant contributions from secondary aerosols, that is, particulate matter resulting from chemical and physical reactions of gaseous pollutants in the atmosphere (see Section IV.A. Receptor Modeling). As a result, the emission inventory focused on sources that emitted PM_{10} directly into the atmosphere as well as condensible sources of PM_{10}. In this context, condensible PM_{10} is considered part of primary PM_{10} and is distinctly different from secondary PM_{10} which results from chemical reactions of certain gases. The point source emission inventory for Sandpoint is detailed in Appendix B. The area and mobile source components are combined into one segment as Appendix C. Detailed documentation of methodology, calculations and sources of information is also included along with each corresponding section.

B. APPROACH

The emission inventory provides information on the spatial distribution of emissions and also tracks the amount of pollutants released as a function of time. It should be noted that the inventory is performed under two major classifications: industrial, including facility inventories, and area comprising everything not included in the industrial section. The industrial emission inventory is averaged on a short-term pounds per hour (lb/hr) basis and annual tons per year (TPY) basis. Area source emissions are averaged on an annual, daily, and wintertime daily basis. PM_{10} emission rates are expressed in terms of tons of particulate per year (TPY) or in pounds of particulate per day (lbs/day.) The winter time frame is of concern since two-thirds of the exceedances of the NAAQS from 1986 to 1995 occurred during the winter season.

Emission rates are calculated from emission factors and source activity records. Emission factors are typically obtained from the Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and the Area Sources. AP-42. Fourth Edition, September 1985, and reported as weight of the pollutant emitted per weight of material processed (e.g., grams of PM_{10} per kilogram of wood burned). Several other EPA publications, research publications, and industry recommended emission factors are also used in the compilation of these inventories.

The following activities were undertaken to compile the 1990 base year inventory for the earlier SIP. This information is used in the 1995 Sandpoint SIP. Source activity information is obtained by a wide variety of methods such as public surveys, process log books, census data, traffic counts, and questionnaires. For example, a telephone survey was conducted in the Sandpoint area to update the residential wood burning portion of the emission inventory. A detailed questionnaire was mailed to most of the major industries in the area to update the point emission inventory.

1. *1993 Sandpoint SIP*

Originally, emission inventories were produced for three separate time periods: a 1990 base year inventory, and projected inventories for 1994 and 1997. A base year inventory is used to represent the area's current situation. DEQ selected 1990 because at the time of the original SIP submittal, it represented the most recent year for complete source activity information and ambient monitoring data. The Clean Air Act Amendments of 1990 require nonattainment areas to reach compliance with the ambient standard by December 31, 1994. Therefore, 1994 was selected to demonstrate attainment and 1997 was used to show that attainment will be maintained into the future.

2. *1995 Sandpoint SIP*

The industrial point source emission inventory was fully revised in 1995. The emission inventory revisions resulted after DEQ began to use the original emission inventory data and developed operating permits that the community and industrial sources believed created economic hardship.

The revised inventory addressed numerous other changes that dramatically improved the accuracy and reliability of the data. The base year for the SIP revision was changed from 1990 to 1993 for the industrial portion of the inventory to reflect substantial equipment changes and operational practices. The industrial emission inventory was projected to 1997. For the area source inventory, the earlier compiled 1994 projected inventory was used along with changes in emission calculations to address discrepancies found in the computations. The 1994 base year emission inventory for the area and mobile sources did not include any emission reductions for control measures such as improved anti-skid material or street sweeping. These controls were implemented late in 1994 and do not represent the emissions for the winter of 1993-94.

The 1994 projected inventory for the area sources along with the 1993 industrial base year inventory was used as the composite 1993 base year inventory. This aspect was discussed with EPA and justified for use as such. The need for this approach was dictated by pressing time constraints that did not allow for the preparation of a fully revised area source inventory. The 1993 base year was chosen because it provided the necessary source activity information and ambient monitoring data for the most recent year. The attainment year was chosen as 1997 because control strategies should result in attainment of the standard by this date.

3. *Emission Inventory Applications*

The emission inventory establishes relative emission trends from various sources, however targeting the sources most likely to contribute to an exceedance requires more analysis. The major limitation is that the inventory, by itself, can not show how the individual, or combined sources impact specific locations within the inventoried area.

As an example, the base year emission inventory shows that residential wood combustion (RWC) contributes more pounds of particulates per winter day than does fugitive road dust. What the emission inventory data does not consider is that RWC emissions may be spread over a larger area than road dust and may produce a smaller impact in the areas with the highest PM_{10} concentrations. The technique used to allocate the identified pollutant sources to the area that they impact is called dispersion modeling and is covered in Section IV.3.c. The results from this technique are corroborated using receptor modeling to confirm the findings of the dispersion model and the inventory.

The industrial point source inventory was prepared for three scenarios: 1993 actual operations, 1997 permittable (allowable) scenario, and 1997 proposed scenario. The 1993 inventory simulates the actual operating scenario in 1993. The 1997 permittable scenario is calculated with existing controls and maximum throughputs using permit allowable emission limits for permitted facilities. For non-permitted facilities, this entails allowing the requested level of throughput with existing controls or the potential to emit (PTE) limits for the appropriate sources. The 1997 proposed scenario is prepared using facility requested throughputs and proposed controls.

C. Base Year Annual Emissions

Because of inaccuracies and changes made in the original inventory, a 1990 emission inventory will not be presented in this document. The base year will reflect PM_{10} emissions revised for 1993-94 (industrial sources - 1993, area/mobile sources - 1994). The emissions were projected to 1997 using information collected from the industrial facilities and from the original area source emission inventory. For industrial emissions, existing 1993 controls are considered for the 1993 base year calculations.

The emission inventory for 1993 (see Table III-01) indicates that there are potentially four significant sources of PM_{10} on an annual basis. These are fugitive road dust (305 TPY), residential wood combustion (97 TPY), industrial process (90 TPY), and building construction (63 TPY). Two categories in Table III-01 report combined emission rates. The category "Mobile Sources" combined emissions from vehicle tailpipes, vehicle brake and tire wear, aircraft, and railroad locomotives. The "Residential Heating" category combined emissions from natural gas use and fuel oil use. Figure III-01 displays the percent contributions of the significant sources.

D. Base Year Maximum Daily Wintertime Emissions

DEQ identified the winter season as the critical time of year for determining emission rates from all the source types since a majority of the exceedances of the 24 hour standard were recorded during this time. Therefore, emission rates were calculated for all the source types based on a worst case winter 24 hour day (see Table III-02). The industrial sources were tabulated as just a worst case day and not a winter worst case day. For sources that are influenced by meteorological parameters such as temperature, a worst case scenario for the Sandpoint area is based on the meteorological conditions recorded in December 1990. The scenario primarily affects residential heating emissions, such as residential wood burning, because of their temperature dependence.

As shown in Figure III-02, the three largest daily winter PM_{10} emission sources are residential wood combustion (RWC) at 45.2% (2878 lbs/day), fugitive road dust at 34.7% (2210 lbs/day), and industrial process at 10.8 % (686 lbs/day). For the 1993/94 base year, the total maximum daily wintertime PM_{10} emissions were calculated to be 6364 lbs/day (see Table III-02).

Figure III-01

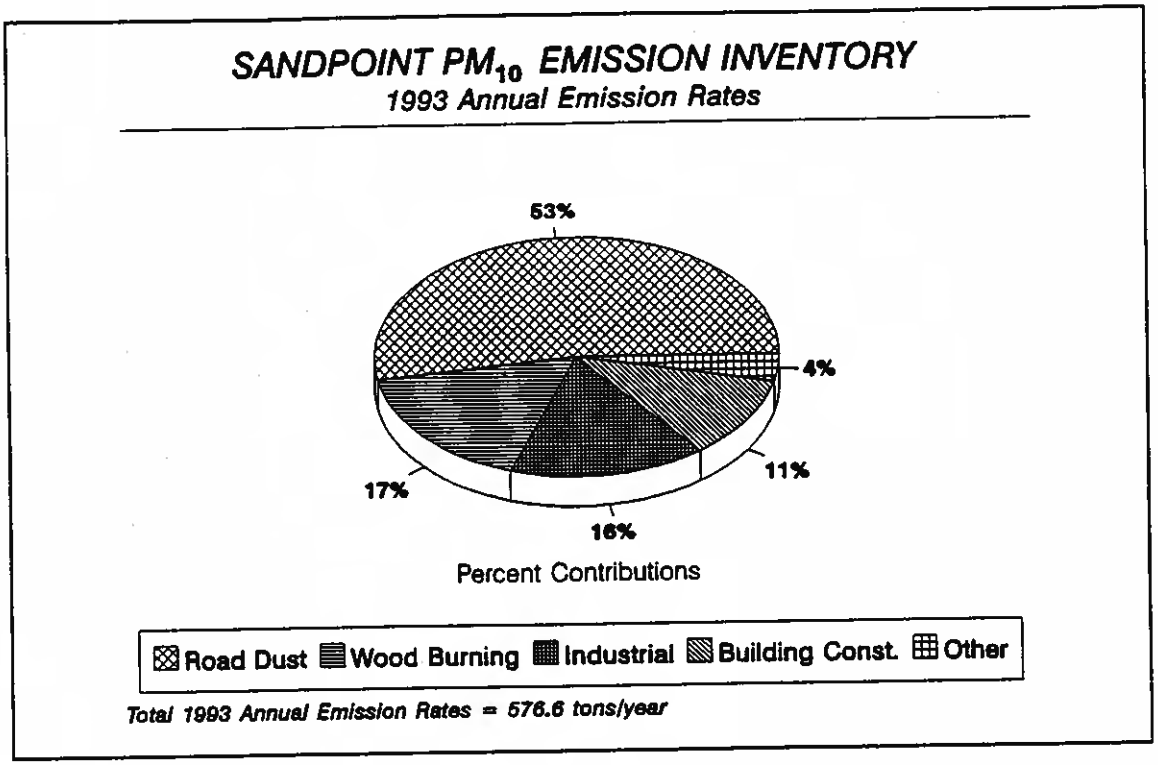


Figure III-02

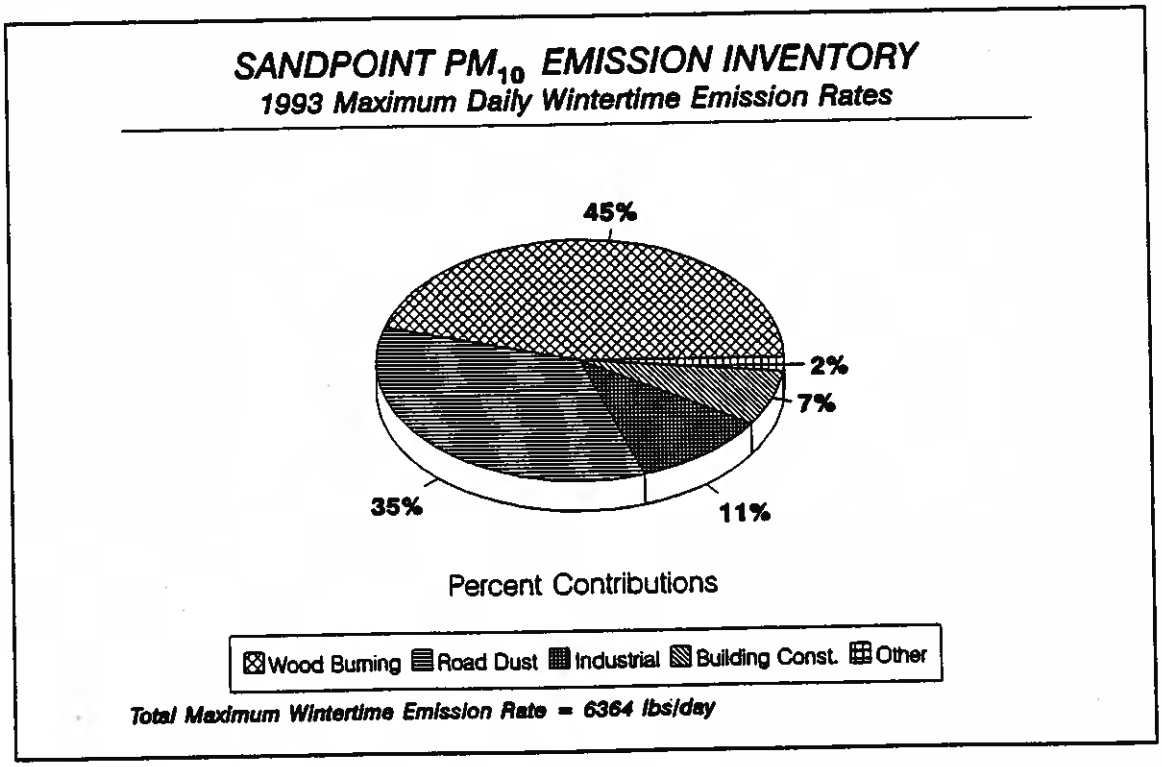


Table III-01: Summary of 1993 Annual Emission Rates

Source Type	Emission Rate, tons/year PM_{10}	%
Fugitive Road Dust	305.1	52.9
Residential Wood Burning	97.0	16.8
Industrial Process	90.0	15.6
Building Construction	63.4	11.0
Mobile Sources	18.3	3.2
Miscellaneous Burning	1.5	0.3
Residential Heating	0.8	0.1
Agricultural Tilling	0.5	0.1
TOTAL	**576.6 tons/year**	**100.00%**

Table III-02: Summary of 1993 Maximum Daily Wintertime Emission Rates

Source Type	Emission Rate, lbs/day PM_{10}	%
Residential Wood Burning	2878.0	45.2
Fugitive Road Dust	2210.0	34.7
Industrial Processes	686.0	10.8
Building Construction	469.0	7.4
Mobile Sources	110.0	1.7
Miscellaneous Burning	8.0	0.1
Residential Heating	3.0	0.0
Agricultural Tilling	0.0	0.0
TOTAL	**6364.0 lbs/day**	**100.0%**

E. 1997 Emission Projections

The State of Idaho is required to show attainment of the National Ambient Air Quality Standards (NAAQS) in the Sandpoint area by December 31, 1997, and to maintain the air quality well into the future. To meet these goals, the DEQ projected emission inventories for 1997.

1. *Point Sources*

Table III-03 presents the emission estimates for the five largest industrial facilities in the Sandpoint area for 1993 and 1997, and Figure III-03 provides a visual display. Only maximum daily PM_{10} emissions are shown in the table, The emission data comes from the Industrial Point Source PM_{10} Emission Inventory for Sandpoint, Idaho, May 1995, prepared by DEQ. (See Appendix B).

Table III-03: Future Projections - Industrial Sources
PM_{10} Maximum Daily Wintertime Emissions, lbs/day

Name of Facility	Emission Rates, lbs/day 1993	1997 (Phase I permit)	1997 (Phase II permit)
Lignetics of Idaho	169.0	169.0	169.0
Louisiana-Pacific Corporation	331.0	429.0	370.0
L. D. McFarland Company	53.0	56.0	56.0
Interstate Concrete and Asphalt	108.0	210.0	78.0
Lake Pre-Mix Concrete	25.0	6.0	6.0
TOTAL	**686.0**	**870.0**	**679.0**

* Negotiations regarding permitted issues still occurring between OPB and facilities. Above emissions subject to minor changes.

Projections were based on facility submitted information regarding anticipated production increases and proposed modifications of control technology enhancements. For Lignetics, the emission rate remains at 169 lbs/day since this is the permit allowable and Lignetics will not exceed the rate in the worst-case scenario. No major modification was noted in that facility to necessitate any changes in the emission inventory from current permit levels.

All the other facilities, with the exception of Lake Pre-Mix, show increases in emissions for the 1997 permittable scenario as they have been calculated using permit allowables for permitted facilities and using the Potential to Emit (PTE) for other sources. For 1997, the facility proposed emission rates include elevated throughput levels which also included proposed additional control measures. The total emissions decrease significantly, even with a very high throughput amount for the 1997 proposed scenario, due to proposed usage of control measures that meet or exceed Best Available Control Technology (BACT) guidelines.

2. *Area and Mobile Sources*

Projections for area and mobile sources were made using information from Intermountain Demographics (IMD), which was contracted to develop a data base for households and vehicle miles traveled (VMT) for 1994 and 1997. The final report from IMD, 1990, 1994 and 1997 Population, Housing Unit, Household and Vehicle Miles Traveled Databases for Sandpoint, Idaho, PM_{10} Nonattainment Area, dated July 1992, is found in Appendix C of this document. The methodologies used to develop the growth projections are described in detail in this report.

Table III-04 presents the calculated emission estimates for the area and mobile sources in the Sandpoint area for 1994 and 1997. Only maximum daily wintertime PM_{10} emissions are shown. Most emission calculations are based on data from the IMD report and from local officials and agencies in the area. Residential wood combustion emissions are derived from the July 1992 heating survey prepared by E.S. Field Services (see Appendix C), and the 1990 worst case heating degree-day value.

Table III-04: Future Projections - Area and Mobile Sources
PM_{10} Maximum Daily Wintertime Emissions, lbs/day

Source Category	Emission Rates, lbs/day 1993/4	1997
Residential Wood Burning	2878.0	2906.0
Fugitive Road Dust	2210.0	2420.0
Building Construction	469.0	469.0
Railroad	58.0	58.0
Vehicle-related Emissions	45.0	49.0
Aircraft	7.0	7.0
Natural Gas Combustion	7.0	7.0
Misc Burning	3.0	3.0
Heating Oil Combustion	2.0	2.0
Agricultural Tilling	0.0	0.0
TOTAL	**5679.0**	**5921.0**

Based on the 1994 to 1997 growth predictions for the Sandpoint area, PM10 emissions from area and mobile sources are estimated to increase by approximately 4%. As Figure III-04 shows, the most notable increase is from fugitive road dust emissions which are directly related to projected increases in VMT. Again, these emission projections do not include any of the emission reductions associated with the control measures recently implemented in the community. These emission reductions will be used in the modeling analysis as described in Section IV.

Emissions from RWC devices are projected to increase slightly during this time period, with the changes reflecting anticipated population growth in the area. RWC emissions are also influenced by a wide variety of factors such as weather conditions, state and local ordinances and regulations, energy prices, and the regional economy. To compensate for unpredictable changes which these variables represent, DEQ used a conservative approach in estimating future emissions.

The calculations were built around three main assumptions:

- The percent distribution of RWC devices remained constant for the projected years. However, the growth in devices was more weighted toward certified equipment.
- Wood burning habits were assumed to stay the same, i.e., the number of cords burned per household was a constant.
- The percentage of wood burning households and the number of devices per household remained the same.

When the assumptions above are applied, the projection of wood burning emissions was then based on two variables, the total number of households and the worst case heating degree-day, which was assumed to remain the same. Using this simplified scenario, wood burning emissions changed proportionally with the change in population and occupied households. This approach was also applied to the other residential heating sources such as oil and natural gas.

Figure III-03

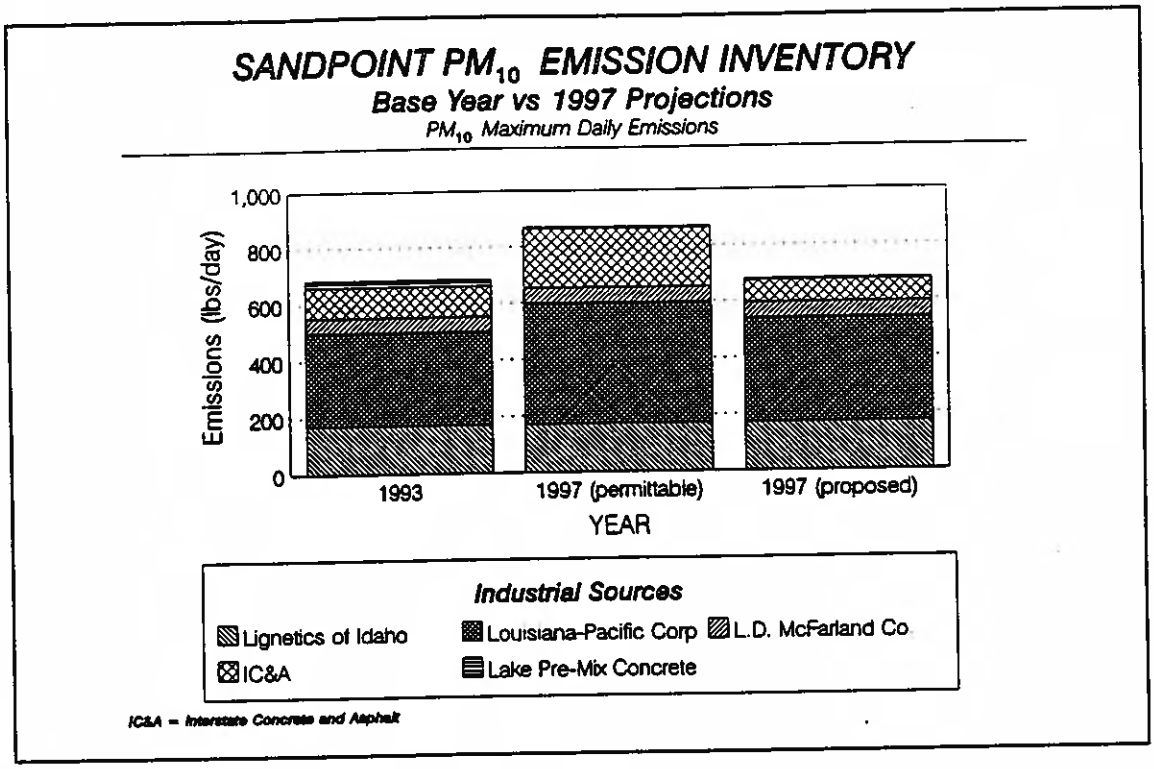
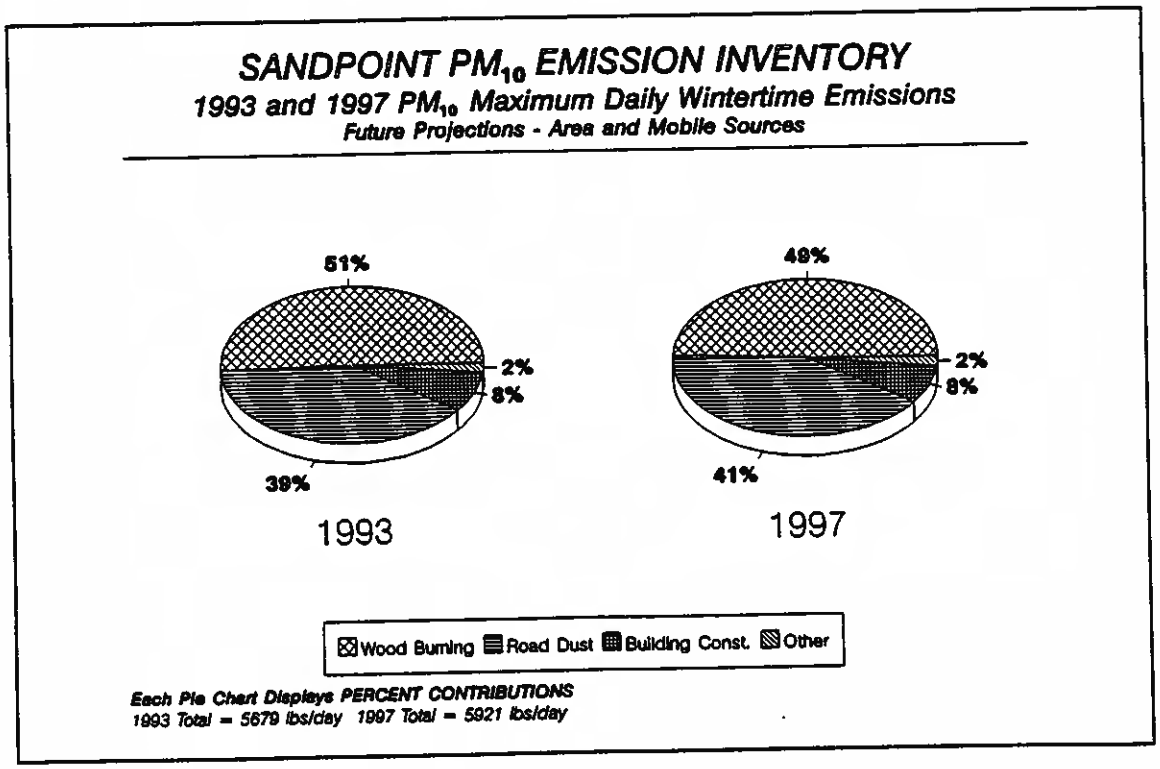


Figure III-04



IV. AIR QUALITY MODELING

A. INTRODUCTION

DEQ utilized various investigative tools to determine the type of sources which were impacting the air quality in the Sandpoint area and to evaluate their relative strength before and after implementation of control measures. These tools included computerized modeling techniques such as receptor modeling and dispersion modeling.

Receptor modeling starts with information collected at a receptor (i.e. monitoring site) and utilizes statistical methods to identify the contributing sources. DEQ used the Chemical Mass Balance (CMB) technique for receptor modeling. Appendix D of this plan contains more detailed information on the CMB analyses and receptor modeling.

DEQ also employed dispersion modeling to identify source contributions particularly during wintertime exceedances. Dispersion modeling inputs emission inventory data, combined with meteorological data and uses mathematical representations of the atmosphere to estimate the contribution of each source to ambient air quality at designated receptor sites. Each technique has its own inherit strengths and weaknesses, but when used together, they can compliment each other to provide a reasonably accurate interpretation of the source contributions in an airshed.

B. RECEPTOR MODELING

1. *Background - Chemical Mass Balance (CMB)*

This CMB receptor analysis utilized ambient data from the long-term State and Local Air Monitoring System (SLAMS) PM_{10} monitoring site located on the Post Office in downtown Sandpoint. Thirteen high PM_{10} concentration filter samples from 1988-1992 were submitted for elemental analysis and source apportionment analysis by the CMB technique.

Six exceedances of the 24 hour standard were recorded in Sandpoint between 1986 and 1991, and five of the six exceedance samples were analyzed. The exceedance on September 6, 1988 (219 $\mu g/m^3$) was determined to be an exceptional event. The smoke from wild fires in Idaho and neighboring states caused elevated PM_{10} levels at many Northwest monitoring locations during the first week of September 1988. This September 6, 1988 sample was not analyzed for CMB receptor model application. In addition to the five exceedance samples, eight samples with concentrations greater than 100 $\mu g/m^3$ were chosen for analysis. Table IV-01 identifies the samples by date that were analyzed by the CMB method for the initial investigation.

Emission inventory results indicate that the significant PM_{10} sources in the Sandpoint area include the wood products industries and area sources, such as residential woodburning and fugitive dust road dust. Preliminary CMB model runs indicated that residential wood combustion, fugitive dust, and secondary SO_4 and NO_3 were the statistically significant source types which identified by the model. The final CMB model runs utilized these profiles to identify the source contributions to the ambient PM_{10} concentration. The CMB results for residential wood combustion also include the potential impacts from the wood

product industry, due to the similarity of the emissions of these two combustion source types. Appendix D provides more information regarding the specific source profiles used in the CMB model.

Since the completion of the initial receptor modeling report, two additional exceedances of the 24 hour standard were recorded in Sandpoint. These occurred on September 4, 1992 (473 $\mu g/m^3$) and January 26, 1994 (157 $\mu g/m^3$). In March 1995, DEQ sent these two filters and three other filters with high PM_{10} concentrations (above 100$\mu g/m^3$) to a qualified laboratory for chemical analysis. The selected filters are listed below:

1-26-1994	157 $\mu g/m^3$
1-28-1994	102 $\mu g/m^3$
3-25-1994	128 $\mu g/m^3$
2-28-1993	127 $\mu g/m^3$
9-04-1992	473 $\mu g/m^3$

Preliminary results from the CMB receptor modeling on these filters corroborate earlier findings. However, the following sections will only discuss conclusions from the previous receptor modeling effort, since the chemical analysis results were not final at the time of publication of the Revised SIP.

2. *Results*

A summary of the CMB receptor modeling results from the thirteen filter samples are found in Table IV-01. The individual CMB model runs are attached to Appendix D. Overall, the CMB model's diagnostic statistics, which indicate validity of the model results, were well within the acceptable ranges. In some cases, the model-generated PM_{10} concentrations were outside of the acceptable range. The model's guidelines suggest that the percent mass calculated by the model should be between 80 and 120% of the gravimetricly determined mass. Five of the samples had calculated masses which fell below the 80% limit. Because of the uncertainties associated with these five samples, the source apportionment results should be considered questionable. Only the CMB runs which met all the acceptability guidelines are considered in this receptor modeling analysis. The dates, PM_{10} concentrations, and the source contributions of the eight valid samples are given in Figure IV-01. The CMB results in Figure IV-01 are normalized to 100% mass recovery for ease of comparison.

The particular causes for the low mass recovery problems are not completely known. Appendix D, Section E., *Limitations*, includes a discussion regarding the individual samples that do not meet the acceptable mass recovery criteria.

Three of the samples shown in Figure IV-01, 2-21-88, 2-24-88, and 2-4-92, illustrate the source contributions from exceedance days. The wood combustion and fugitive road dust contributions vary slightly on these days, but **the CMB model generally indicates that approximately half of the PM_{10} mass is attributed to wood combustion and half is due to fugitive road dust**. The same average source apportionment holds true for all the other high, non-exceedance PM_{10} samples in this analysis.

It should be noted that all the samples detailed in Figure IV-01 are winter samples. Two exceedance days in the fall, 9-25-89 and 10-4-90, were analyzed, but failed to meet the percent mass recovery guidelines for valid samples. Table IV-01 indicates that the CMB results of these samples are overwhelmingly influenced by fugitive dust sources. Despite the low mass recoveries in the fall samples, the CMB source apportionment is likely to be accurate since high, gusting winds and blowing dust were documented on both the analyzed days. Under such conditions, fugitive dust would be expected to be the dominant source of PM_{10}.

3. *Limitations of the CMB Analysis*

Modeling results are only as good as the quality of data used. There were some shortcomings which limited the performance of this CMB analysis. These limitations are listed below and are elaborated upon in Appendix D.

- Differentiation between wood product industry emissions and residential woodburning emissions can not be quantitatively determined.
- The resolution of X-ray fluorescence (XRF) elemental analyses is not optimal on samples collected on quartz filters. The fugitive dust source apportionment may be affected.
- The wood combustion source apportionment may be affected by the questionable soluble potassium values and/or the woodburning source profile that was used in the analysis.
- Five of the thirteen samples had model calculated total PM_{10} concentrations outside the suggested acceptable range.
- The filter samples were not refrigerated; mass may be lost from the older samples.

4. *Conclusions*

Considering the above discussion of the results and limitations, the following points summarize the receptor modeling analysis on source contributions to the elevated ambient PM_{10} concentrations in Sandpoint.

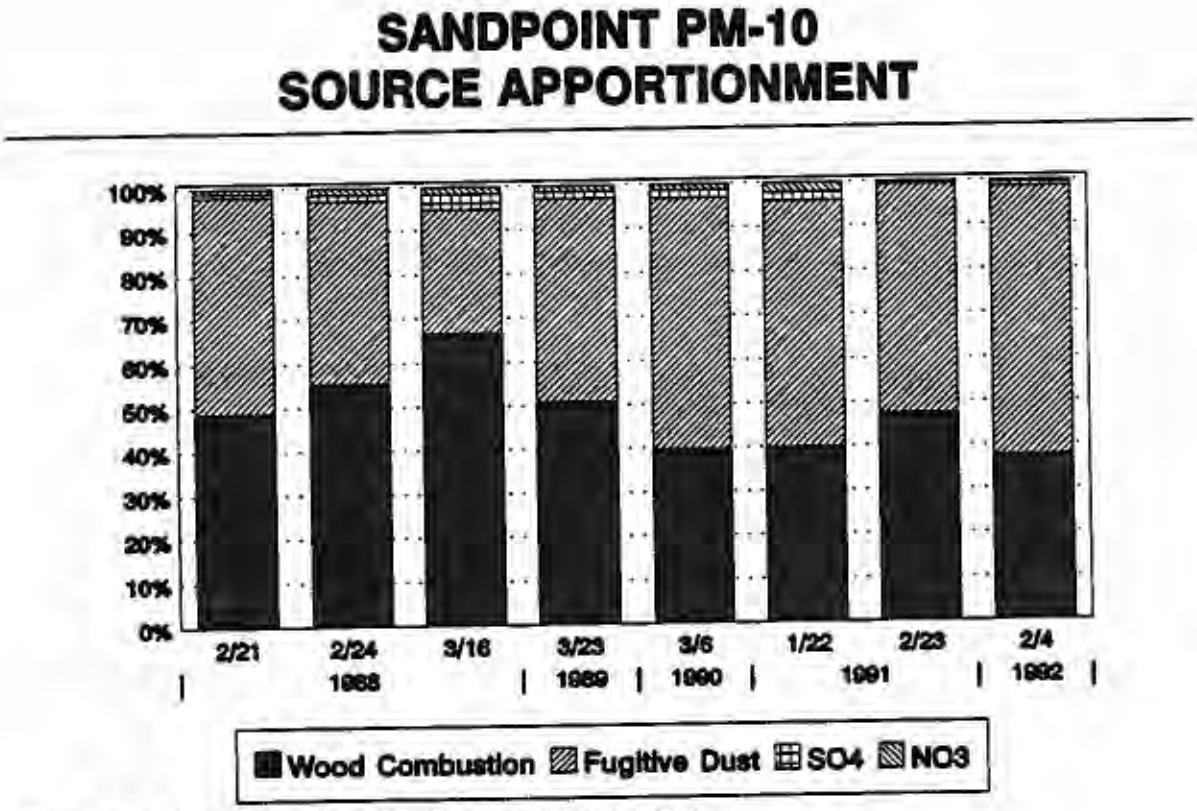
- The PM_{10} mass on the highest winter samples appears to be approximately equally influenced by emissions from wood combustion and fugitive road dust. In some cases, however, wood combustion may reach nearly 70%. In other instances fugitive dust contributes over 60%. This variability is illustrated in Figure IV-01.
- The CMB model was not able to differentiate between the emissions from the wood products industries and from residential woodburning. Through microscopy analysis on a limited number of samples, it appears that the emissions from process wood handling are not significant on the PM_{10} filters collected at the Sandpoint Post Office.
- Exceedances found in the fall months occur on high wind, blowing dust days. The overwhelming majority of the ambient PM_{10} levels recorded on these days is caused by fugitive dust.

Table IV-01: CMB Model Results with (Uncertainties)
Percent Source Contributions to PM_{10} in Sandpoint

	PM_{10} $\mu g/m^3$	Wood Combust	Fugitive Dust	SO_4	NO_3	Calc. % PM_{10}
2-21-88	157	42.4 (5.0)	42.8 (2.9)	0.7 (0.2)	0.9 (0.2)	86.5
2-24-88	179	44.6 (6.0)	33.4 (2.3)	1.1 (0.2)	1.3 (0.2)	80.4
3-16-88	101	59.1 (7.4)	24.9 (2.0)	3.1 (0.6)	1.5 (0.3)	88.0
12-7-88	131	41.5 (4.6)	2.5 (0.4)	1.2 (0.2)	0.7 (0.2)	45.5
3-23-89	108	42.5 (5.0)	38.3 (3.0)	1.3 (0.2)	1.2 (0.2)	83.1
9-25-89*	116	19.3 (2.9)	50.6 (3.9)	0.7 (0.1)	0.4 (0.1)	70.9
2-26-90	192	24.8 (3.6)	43.1 (2.9)	0.8 (0.1)	0.4 (0.1)	69.1
3-2-90	122	34.6 (4.6)	42.5 (3.7)	1.1 (0.2)	1.0 (0.2)	79.1
3-6-90	109	32.1 (4.4)	46.3 (3.9)	1.4 (0.2)	1.1 (0.2)	80.6
10-4-90**	218	3.9 (1.7)	66.1 (4.6)	0.4 (0.1)	0.2 (0.1)	70.4
1-22-91	110	34.3 (4.7)	48.1 (3.4)	1.7 (0.3)	1.9 (0.3)	85.6
2-23-91	144	45.7 (5.5)	49.9 (3.6)	0.6 (0.1)	0.1 (0.04)	95.8
2-4-92	199	33.3 (4.5)	54.3 (3.4)	0.8 (0.1)	0.4 (0.1)	88.6

* Exceptional Event due to high winds and blowing dust in Northern Idaho
** High winds and dust

Figure IV-01



Note: Includes samples with calculated percent mass > 80%
Values normalized to 100%
See Table IV-01 for actual concentrations

C. DISPERSION MODELING

1. *Introduction*

Sandpoint air quality concentrations were investigated using the EPA program, ISCSTDFT. This code is the latest version of ISCST promulgated by Supplement C to the *Guideline on Air Quality Models* (GAQM). The code is recommended in the GAQM and has algorithms applicable to all source types.

Five years (1987 to 1991) of Spokane National Weather Service (NWS) data were used as input to the model. Two emission scenarios were modeled: 1994 emissions and 1997 emissions with additional controls applied. The 1994 scenario was used to evaluate the model against monitoring data and compute the design concentration. The 1997 scenario was used to demonstrate that control measures assured compliance with the air quality standard. The meteorological data used in the dispersion modeling for this project is explained and justified in detail in Section IV.B.3.

2. *Background Concentration*

As defined by EPA's *PM_{10} SIP Development Guideline* document, background is the portion of the ambient particulate concentration attributed to natural sources, nearby sources other than those inventoried, and unidentified sources.

The guideline document states that "the preferred method for background determination is to use an upwind PM_{10} site in the vicinity of the study area under review, which reported data during the time period in question, but which is not influenced by the sources in question or by other sources which do not impact the study area." DEQ does not operate a specified background site in northern Idaho and there are no privately operated PM_{10} monitors in northern Idaho suitable for obtaining PM_{10} background information.

A potential PM_{10} background site is in the State of Washington, near Cheney where the Washington Department of Ecology maintains a PM_{10} monitor at the Turnbull National Wildlife Reserve (NWR). Data from this location could represent background conditions directly in the windblown, agricultural Palouse Prairie area, but would not reflect the PM_{10} levels in rural areas outside the Palouse where there is generally less windblown dust. Since the Sandpoint NAA is situated about 60 miles northeast of Cheney in a much more rugged and forested terrain, the Turnbull NWR PM_{10} data would not be representative of the area around Sandpoint.

A background PM_{10} value was developed from PM_{10} data collected from Hope, Idaho. DEQ maintained a seasonal PM_{10} monitoring site at Hope, which is approximately 15 miles east of Sandpoint on the northeast shore of Lake Pend Orielle. This monitoring site was established to record ambient PM_{10} levels during the grass burning season in the late summer. There are no other significant local sources influencing air quality in the Hope area. Therefore, the mean PM_{10} concentrations from Hope would reasonably represent the regional background levels influencing the Sandpoint area during the late summer/early fall period. The mean PM_{10} concentration from Hope, based on four years of data taken everyday during August and September, is 23 $\mu g/m^3$. This figure is the background concentration used for Sandpoint. Table IV-02 indicates the August/September mean values recorded at Hope.

Table IV-02: Mean PM_{10} Values From Hope, Idaho - $\mu g/m^3$

	August	September	Mean
1989	21	40	31
1990	18	28	22
1991	20	17	19
1992	17	23	20
Mean	**19**	**27**	**23**

The background value is slightly higher than the 20 $\mu g/m^3$ used in the Pinehurst SIP. A higher value would be expected for Sandpoint, because of the more open location being influenced by more regional sources of PM_{10}.

It would be expected that the spring and winter 24 hour levels would be lower since the regional agricultural field burning season ends in October each year. However, there were no wintertime PM_{10} readings taken at Hope. Due to the lack of appropriate data, 23 $\mu g/m^3$ is used as both the fall and winter 24 hour background concentrations to be added to the dispersion modeling results.

3. *Meteorological Data*

Representative and accurate meteorological data is critical model input and greatly affects model results. The selection of appropriate meteorology for dispersion modeling in Sandpoint was difficult, since no available meteorological data set was ideal. In the absence of an ideal data set, criteria were developed to choose the best data set under the circumstances. The only two possible data set choices were DEQ data from Sandpoint Agricultural Station and Spokane Airport data.

DEQ began taking meteorological measurements in 1991 near Sandpoint. Data is collected on a ten-meter tower outfitted to collect meteorological parameters required for modeling. This data, although intended for modeling use, did not meet the modeling quality assurance requirements specified in EPA modeling guidance. As a minimum, documentation on instruments, audits and regular site visits should occur. The lack of regular audits and proper maintenance are also problematic. As a result, at the time of this report, the data was only useful for general meteorological information and for use in local pollutant forecasting. See Section II of this report for additional information about the meteorological site in Sandpoint.

The closest site with meteorological data that meets the EPA quality assurance requirements is from the Spokane National Weather Service site located at the Spokane Airport. Although the data met EPA criteria, the representativeness of the data can be questioned since Spokane is located 50 miles to the southwest of Sandpoint.

The quality assurance and representativeness of the data are subjectively compared below. A (+) indicates the data meets requirements, while a (-) indicates it does not. A (?) means the data acceptability is not clear.

	Spokane	Sandpoint
Parameters Measured	+	+
Spatial Representativeness	?	+
Period of Record	+	-
Data Quality	+	-

Based upon the relative comparison of these four measures, Spokane data is determined to be equivalent or superior to Sandpoint data for each factor, with the exception of spatial representativeness. Which site is actually more spatially representative is unknown since the quality of the Sandpoint data cannot be verified. Based upon this comparison, the Spokane data was chosen for use in the model. In the future, spatial representativeness may be given greater weight in the evaluation of available met data due to technical concerns expressed by EPA code PCRAMMET. Model runs were conducted for this same five year period.

4. *Emission Inventory*

Section III provides a summary of the emission inventories used for the modeling. Detailed technical methodologies and the industrial and area inventories are provided in Appendices B and D, respectively.

Table IV-03 summarizes the emission inputs used for the modeling analysis. The two columns labelled **Modeled Emissions** and **Allowable Permitted Emissions** essentially represent the same quantity. The **modeled emission** values were used as model inputs for predicting ambient impacts. The **allowable permitted** values were the emission limits at which the facilities were permitted. The permitted values vary slightly from the modeled values on a facility-by-facility basis. However, the total of industrial emissions in both the modeled emissions column (28.0 $lbhr^{-1}$) and allowable permitted emissions column (28.25 $lbhr^{-1}$) are approximately equal. The individual facility differences were evaluated to be insignificant by modeling performed per the *Rules for Control of Air Pollution in Idaho (Rules)*, and consequently did not warrant an additional model run under the time constraints imposed on this project. Minor differences in the two sets of numbers were the result of continuing negotiations with the industrial facilities to arrive at practical and viable control options for the future. Further increases in throughputs and related emissions will be done per the *Rules* for permitting in nonattainment areas.

5. *Model Assumptions and Definitions*

Hourly emission rates were determined for worst case maximum operations and used as model inputs. All area sources, including area and fugitive sources *inside* industrial facilities, were treated the same as non-industrial area sources. Industrial area sources were dispersed in square grids of 402 meters over the entire nonattainment area. This is a departure from the normal treatment of industrial area sources in modeling. For all runs

(controlled and uncontrolled), the 1997 allowable emissions for industrial point sources were used with BACT controls in place. The controlled/uncontrolled delineation occurs only in the case of area sources (industrial and non-industrial). Thus, the following **definitions** apply to the model inputs used by DEQ for each scenario:

1) **controlled run** - controlled point and fugitive (indl.) + *controlled* industrial area source + *controlled* non-industrial area source.

2) **uncontrolled run** - controlled point and fugitive sources (indl.) + *uncontrolled* industrial area source + *uncontrolled* non-industrial area source.

TABLE IV-03: DISPERSION MODEL EMISSION INPUTS

Source Name	Modeled Emissions (lb/hr)	Allowable Permitted Emissions (lb/hr)	Operation
Louisiana-Pacific	15.0	15.4	Planer Mill
Lignetics Inc.	6.9	7.0	Wood Pellet Mill
L.D. McFarland	2.2	1.1	Pole Treatment Facility
Interstate	3.7	4.5	Asphaltic/Cement Concrete Batch Plant
Lake Pre-Mix	0.2	0.25	Concrete Batch Plant
Industrial Totals	28.0	28.25	
Area Controlled	135.3		Mostly Residential Heating and Road dust
Area Uncontrolled	236.6		Mostly Residential Heating and Road dust

Uncontrolled, non-industrial area emissions represent maximum daily 1994 wintertime emissions as defined and determined in the emission inventory. Maximum area source emissions occur when meteorological conditions induce high residential heating demands and the drying of sanded paved streets. The 1997 controlled non-industrial area emissions scenario assumes the following control measures are in place: wood stove replacement, public awareness of clean burning techniques, mandatory wood stove curtailment, anti-skid material specification requirements, street sweeping, and use of liquid deicer. The control effectiveness of each is described in Section V.

Residential wood combustion accounted for 51% and 57% of the controlled and uncontrolled area emissions, respectively. Fugitive road dust was the other significant source, accounting for 39% of the controlled area emissions and 24% of the uncontrolled area emissions. The remaining sources are discussed in the emission inventory, Section III.

6. *Model Domain*

Sandpoint borders Lake Pend Oreille in a flat basin surrounded by mountains. The mountains almost reach residential areas to the west and north of town, but are one to five miles off to the east and south across the Lake, see Figure IV-02. Modeling did not show significant impacts from stacks within the nonattainment area. Sources and receptors were located by UTM coordinates along the flat valley floor and placed on a 402 m (1/4 mile) grid within the nonattainment area consistent with the emission inventory.

7. *Lake Pre-Mix*

At proposed Tier II operating permit emission levels, the Lake Pre-Mix facility did not have a significant impact within the nonattainment area (< 5 $\mu g/m^3$), when modeled. Therefore, Lake Pre-Mix was not included in cumulative source impacts. Furthermore, Lake Pre-Mix has applied for relocation to a site in the NAA where facility impacts to high PM10 concentrations in downtown Sandpoint are further reduced as compared to the current impacts at the original location. The DEQ Permits and Enforcement Bureau will perform modeling to determine if the facility impacts are less due to relocation, and if the relocation serves as an acceptable alternate control option.

8. *Uncontrolled Results*

Model runs for the 1994 uncontrolled case were performed to accomplish two tasks: first, to determine a design value; and second, to evaluate the model's performance when compared to monitored data. Note that the above specified definition of "uncontrolled" is used for input for this run and the outputs are in Appendix E, titled Design Uncontrolled Emissions.

The model was run with five years of Spokane meteorological data and 294 receptors over the nonattainment area. The model stores the highest six daily concentrations it computes at each receptor. The particulate standard is violated when the expected yearly number of exceedances (values > 150 $\mu g/m^3$) occur with a frequency greater than 1. For the model, the standard is violated at a receptor when the sixth highest high value is greater than 150 $\mu g/m^3$.

The design concentration is defined as the sixth highest model predicted concentration, and is used to determine the level of control needed to successfully demonstrate attainment. The control strategy must demonstrate that the design concentration will be reduced to a level below the NAAQS standard. The modeled design concentration was 196 $\mu g/m^3$ at a receptor site with the following source impacts; 173 $\mu g/m3$ - inventoried Sources, and 23 $\mu g/m^3$ - Background. This value indicates the area violates the standard.

The model was also evaluated by computing concentrations at the receptor site representing the Post Office monitoring site. Table IV-04 shows the highest 25 wintertime monitored and modeled concentrations from 1987 through 1991.

Since this is a guideline model approach using a recommended 40 CFR Part 51 Appendix A model, evaluations are not necessary to validate the model. However, the evaluations act as a trial test tool for the meteorology and control options selected for the modeling runs in that area. Consequently, comparisons were done with spatially and temporally unpaired sets of data, as is recommended in screening procedures in the EPA document *"Protocol for Determining the Best Performing Model"*.

The fractional bias is the recommended performance measure for evaluating model performance at a minimum operational level. The guide recommends that the **fractional bias of both the average and the standard deviation of the 25 highest values** in both cases have an **absolute value less than 0.67** (i.e., observed and predicted statistics be within a factor of two).

FB = 2 x (OB-PR)/(OB+PR), where

FB = absolute fractional bias
OB = observed average or std. deviation - of the 25 highest values
PR = predicted average or std. deviation - of the 25 highest values

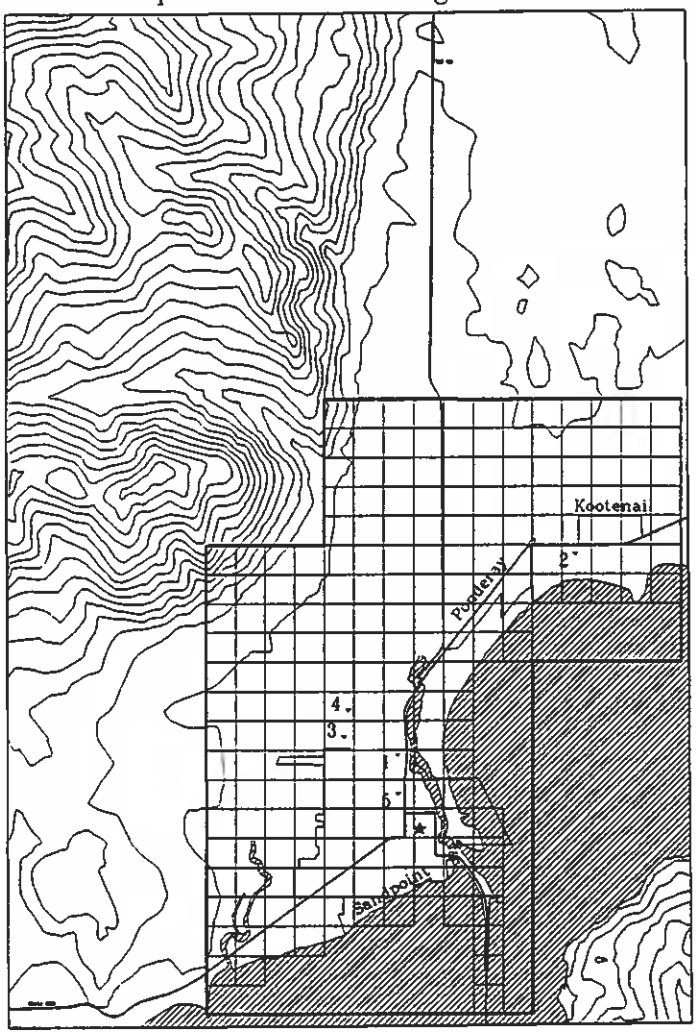
(Note that the values selected may be unpaired in space and time, as this is just a screening technique for evaluating model performance by a factor of two from the monitoring comparison.)

As computed in Table IV-04, the fractional bias for the average was 0.32 and the standard deviation was 0.61. Both these met the acceptability criterion of an absolute value less than 0.67. The model closely predicts the maximum observed concentration. However, as is evident from the table the standard deviation of model results is less than that of the measured values (i.e., 15 versus 29, respectively). This is most easily explained because constant and worst case emissions have been assumed. This approach would account for the model's overprediction, and explain why the model's variability is smaller than the variability in the ambient data. Variability of the ambient data is driven by changes in emissions and meteorology, while modeled variability is only a function of meteorology.

The model was run with a full five years of meteorological data and worst case emissions from sources within the nonattainment area. The model does not predict any fall exceedances. This fact strongly indicates that these events are driven by PM_{10} emission sources outside the nonattainment area. Please see Appendix H for a more detailed discussion of episodes during the fall season and regional source contributions.

Figure IV-02

Dispersion Modeling Domain



Legend

Scale 1:24,000

1.0 Miles 0.0 1 Mile

Nonattainment Boundary

Gridded Emissions Data

Receptor Site

Industrial Sites

1. Louisiana-Pacific
2. Lignetics
3. L.D. McFarland
4. Interstate
5. Lake Pre-Mix

TABLE IV-04: DISPERSION MODEL EVALUATION

Monitor	Concentration ($\mu g/m^3$)	Modeled ($\mu g/m^3$)	Concentration
02/26/90	192	12/27/87	201
02/24/88	179	12/15/88	195
11/05/87	161	01/01/88	186
02/21/88	157	11/28/87	181
02/23/91	144	01/02/88	176
12/07/88	131	03/13/91	168
03/02/90	122	12/13/87	163
01/28/88	121	01/06/88	161
03/01/88	120	11/18/90	158
01/22/91	110	02/26/90	158
03/06/90	109	12/31/87	157
03/23/89	108	01/18/87	156
02/28/90	107	11/05/90	156
02/27/91	103	02/22/91	155
03/16/88	101	02/17/90	154
01/17/90	101	12/22/87	153
11/14/91	100	03/17/88	152
03/19/88	98	01/16/87	151
01/25/88	97	02/19/90	151
01/21/87	95	12/07/88	149
03/09/91	92	02/06/89	148
01/28/91	91	02/25/89	147
02/09/89	91	11/14/91	146
03/07/89	88	03/03/89	143
02/15/89	86	02/13/89	143
Average	116		160
σ	29		15
Avg. Fractional Bias			- 0.32
σ Fractional Bias			0.61

9. *Controlled Results*

Modeling for the controlled scenario assumes that full controls are in place and operational in Sandpoint. This would imply the use of BACT controls on point sources as well as the specified level of projected controls for area sources as well. The output for this run is given in Appendix E titled "Sdpt - Controlled Emissions". The purpose of this portion of the modeling exercise was to demonstrate future attainment of the PM_{10} NAAQS standard. When modeling for five years of meteorological data, the sixth highest modeled value determines whether or not a violation of the standard has occurred. The sixth highest value as determined from this model run was 133 $\mu g/m^3$ (110 $\mu g/m^3$ area and industrial, and 23 $\mu g/m^3$ Background). This level, which is below 150 $\mu g/m^3$, demonstrates attainment of the standard.

However, an additional analysis was performed to demonstrate that the attainment demonstration also satisfied contingency requirements. In order to satisfy contingency, a 25% overcontrol from the attainment level is required:

$$150\mu g/m^3 - 25\% \times (196\mu g/m^3 - 150\mu g/m^3) = 138\mu g/m^3$$

The $138\mu g/m^3$ value is greater than the $133\mu g/m^3$ value computed with full controls in place and therefore, this modeling demonstration satisfies contingency requirements through overcontrol with future growth incorporated in the inventory.

10. ***Additional Modeling***

A further analysis of industrial source impacts was performed to illustrate **current** attainment demonstration status. The 1997 controlled levels can not be immediately implemented because facility modifications and/or the purchase of control technology are required. It is therefore necessary to model an intermediate scenario to show air quality levels with the current controls as they will exist when the operating permits first become effective, and before additional controls are in place. The emission limits assumed in the previous controlled modeling were based on changes in plant operation and equipment that do not currently exist.

The 25 highest sixth high concentration receptors were chosen from the uncontrolled run, and used as input for the current analysis. Theoretically, meeting the standards in the highest concentration group of receptors automatically implies attainment of the standard in the NAA. Note that the location of the highest sixth high receptor is different for the uncontrolled and controlled modeling scenerios. Due to the impact of the control measures, the location of the sixth highest receptor changed because of the variability in emissions and source types throughout the study area. Therefore, the highest receptor location may change when different control measures are evaluated depending on the spatial distribution of emission sources in the model domain. A comparison of the impacts on the sixth highest high values receptor is given below in Table IV-05, for all three control scenarios.

TABLE IV-05: DISPERSION MODEL IMPACTS ON THE HIGHEST SIXTH HIGH RECEPTOR

Source Category	Design Uncontrolled μgm^{-3}	Controlled with existing industrial controls μgm^{-3}	Controlled with BACT industrial controls μgm^{-3} (future scenario)
All sources	173	127	110
Background	23	23	23
Total	196	150	133

In the interim case, computations were made only where the changes had significant impact (> 5 $\mu g/m^3$). The highest sixth high concentration was 150 $\mu g/m^3$ (127 $\mu g/m^3$ all sources, and $23\mu g/m^3$ Background). The model demonstrates that the current operating permits, with existing controls comply with the standard.

11. *Summary*

The results of the dispersion model are summarized in Table IV-05. The uncontrolled run shows a sixth highest high impact of 196 $\mu g/m^3$ from all sources in the NAA. This figure was chosen as the design value for the study area and with a contingency provision of 25% overcontrol, the controlled result is 138 $\mu g/m^3$ (see Section IV.B.8 for details). The BACT control scenario demonstrates attainment and also provides for 25% overcontrol for contingency measures. As BACT controls were currently not in place, an as-is control scenario run was performed to show compliance with NAAQS. This run also demonstrates compliance with the standards with existing control technology. Therefore, the control strategies adopted for this plan will lead to attainment when properly implemented.

D. MODEL RECONCILIATION

1. *Introduction*

Dispersion model results were compared with CMB model results to determine if significant differences in source apportionment existed.

2. *Comparison*

The CMB model concluded that high wintertime concentrations are almost equally influenced by wood combustion and fugitive road dust at the monitor site.

For comparison purposes, the dispersion model was revised to place area source emissions into the two CMB categories. In addition, grid cells with less than 1 ton/year were not included to limit the number of sources. The removal of some grid cells caused an insignificant change in predicted concentration.

The day (12/27/87) with the highest predicted concentration at the monitor (201 $\mu g/m^3$) was re-run. The dispersion model apportioned the sources as: 111 (55%) to residential wood combustion, 67 (33%) to fugitive road dust, and 23 (11%) to background. As the CMB model attributes background to other source types than the dispersion model, the distribution of impacts between the fugitive road dust and background categories are not quantitatively exact. However, the dispersion model demonstrates that the predicted exceedance was caused by wood combustion and fugitive road dust from area sources.

3. *Conclusion*

The results of the dispersion and the receptor model complement each other in the major source categories that contribute to the exceedance. Therefore, the models are considered reconciled since the separate conclusions agree with each other, within the bounds of each model's uncertainty and fundamental assumptions.

V. CONTROL STRATEGY IMPLEMENTATION

A. EVALUATION OF CONTROL MEASURES

1. *Introduction*

The Clean Air Act Amendments of 1990 require that the SIPs provide for control of particulate emissions from area sources by implementing Reasonably Available Control Measures (RACM). The control strategy for the Sandpoint PM_{10} nonattainment area will focus on reducing emissions from residential wood combustion and fugitive road dust. The emission inventory, in combination with the receptor analysis, indicate that these are the two predominant sources of PM_{10} wintertime emissions. Ambient impacts from industrial emissions are high near facility boundaries, and can play a significant role in certain parts of the nonattainment area. Therefore, the control strategy will include the issuance of operating permits to four facilities as a requirement to demonstrate attainment throughout the Sandpoint area.

2. *Conformity*

To meet air quality standards, the State of Idaho considers the cost-effectiveness of various air pollution control measures. These control measures are the cornerstone of the SIP.

Conformity addresses pollutant emissions through the process of reviewing plans, projects, and programs funded, permitted, and/or approved by the federal government, prior to their implementation. The conformity process assures that State efforts to cost-effectively achieve clean air, through local and regional decision making and planning, are not undermined by federal actions. The State reserves the authority to prohibit certain federal actions which do not "conform" to a SIP, if these actions substantially increase pollutant emissions. Without these conformity requirements, the State might need to adopt additional control measures or entire strategies to offset pollutant emissions from federal activities, thereby increasing the overall cost of achieving clean air.

DEQ is currently drafting a conformity rule package which will address both transportation and general conformity requirements on a statewide basis. In the period between federal rule promulgation and state rule package/State Implementation Plan revision, the State of Idaho will utilize the federal rule requirements identified in: the November 24, 1993, 58 Federal Register, pages 62188-62253; the November 30, 1993, 58 Federal Register, 63214-63259; and Section 176© *et al.*, of the federal Clean Air Act, as amended. The federal rule requires that actions which are funded, permitted or otherwise approved by the federal government within or adjacent to air quality nonattainment areas do not: cause or contribute to new National Ambient Air Quality Standard(s) violations; increase the frequency or severity of existing violations; or delay timely attainment of reasonable further progress or milestones identified by the applicable State Implementation Plan. The applicable State Implementation Plan emissions budget then becomes directly connected to local, state and federal planning for regionally significant actions.

a. Transportation Conformity

Transportation conformity is a mechanism for ensuring that transportation activities (plans, programs, and projects) are reviewed and evaluated for their impacts on air quality prior to funding or approval. The process curtails increases in air pollution related to motor vehicles through planning and review.

Transportation activities are subject to conformity if they occur within or affect a designated nonattainment area. Activities that do not conform cannot be funded or approved. For areas which are outside of Metropolitan Planning Organization boundaries and have no local transportation improvement program, project-specific conformity analysis is required under the federal rule for a regionally significant activity/project(s). In the case of transportation conformity, a regionally significant activity/project would include actions which: are on a state roadway which serves as a principal arterial for the area; require the preparation of a federal Environmental Impact Statement as a result of potentially significant environmental impacts; and are not classified as exempt by the federal rule.

For areas which are outside of Metropolitan Planning Organization boundaries and have no Transportation Improvement Program, the emissions budget from the applicable State Implementation Plan will be summed with the proposed regionally significant transportation activities emissions to assure conformance among short and long-term planning efforts. This analysis will require coordination between local entities who propose projects, the Idaho Transportation Department and the Idaho Division of Environmental Quality.

b. General Conformity

The federal rule requires the preparation of both a qualitative and quantitative conformity analysis for all federal actions which are defined as regionally significant. In the case of general conformity, regional significance is defined as any federal action or combination of actions which: will result in direct and indirect pollutant emissions greater than 100 tons per year; or produce emissions which exceed 10 percent of the existing emissions budget defined for the nonattainment area. Areas which are subsequently classified as "serious" PM-10 nonattainment areas will have the threshold of 100 tons per year lowered to apply to actions which result in total emissions of 70 tons per year.

Conformity analyses prepared under the federal rule must fulfill several requirements. The emissions analysis which is prepared for the action(s) must be approved by IDEQ and include and identify all assumptions utilized in the analysis. Then, the emissions budget from the applicable State Implementation Plan will be summed with the proposed regionally significant federal action(s)' emissions to assure conformance among short- and long-term planning efforts prior to approval. The process curtails increases in air pollution related to federal actions through planning and review.

3. *Residential Wood Combustion*

Residential wood combustion is a major source of PM_{10} wintertime emissions, although its influence varies throughout the area. In downtown Sandpoint, it may comprise as much as 50% of the air quality problem while in other parts of the nonattainment area, these emissions may amount to no more than 5% or 10% of the total PM_{10} loading.

The proposed control measures to reduce wood combustion emissions include the following:

- Develop and implement a public awareness program focusing on cleaner burning techniques.
- Replace 150 uncertified wood stoves with cleaner burning devices by 1997.
- Develop and implement local ordinances to restrict any additional growth in the existing quantity of uncertified wood stoves.
- Implement a wood burning curtailment program.

a. Reasonably Available Control Measures

Public Awareness Program: Although this effort, by itself, may not always result directly in emission reductions, it is clear that the success of any residential wood burning control effort depends heavily on an effective public awareness program. This is because the public awareness component has a significant effect on the degree of public acceptance of all other program elements.

In 1993, DEQ proposed a public awareness program incorporating a multi-media approach (e.g., educational brochures, newspaper articles, radio interviews, etc.) addressing a wide variety of topics: weatherization, clean burning practices, proper installation and maintenance of wood burning equipment, and wood storage.

Public awareness implementation began in July 1993, which coincided with the beginning of the woodcutting season. DEQ prepared a brochure, "Split It, Stack It, Dry It," which was distributed throughout the area.

During the 1993/1994 Winter, there were basically no public awareness activities other than some local radio show interviews and newspaper articles. Public awareness about air quality and the sources of particulate air pollution in the Sandpoint area did not significantly increase until the local advisory committee and community business leaders became involved in the program. The local newspaper developed a 30-page brochure entitled, "Air Quality, Searching for Solutions" (see Appendix F, Section 2). In February 1995, this brochure was distributed to nearly every household in the City.

A comprehensive public awareness campaign was developed by the Greater Sandpoint Chamber of Commerce with the assistance of an EPA grant. This public awareness campaign further enhances the earlier efforts that were funded by local contributions and the City's stove replacement grant. The public awareness campaign for 1995 is further described in Appendix F, Section 3 .

Increased public awareness will result in emission reductions from the residential wood burning in addition to promoting other control measures such as an episodic curtailment program. By focusing on issues such as burning clean and using seasoned dry wood, residential wood burning emissions will decrease on an annual basis. Homeowners will also be more inclined to use other heat sources such as gas or electric if that option exists in their homes.

Uncertified Wood Stove Replacement Program: A replacement program, administered by DEQ, was developed in the fall of 1994 with grant money provided by EPA. A contract was awarded to the City of Sandpoint in November 1994 with the goal of replacing 85 uncertified wood stoves within the Sandpoint city limits. The program provides incentive grants to qualified homeowners to replace their old wood stoves with a cleaner burning heating system, i.e., natural gas, pellet stove or certified Phase II wood stove. The homeowner must permanently dispose of the old wood stove and pass an inspection by the City building department to receive the grant funds.

By March 1995, the City had signed up homeowners for all of the grants. The city reported that 36 homes had completed the conversion to natural gas and 20 homes had completed the conversion to certified wood stove. Winter conditions delayed the installation of the natural gas lines until the spring thaw.

The City of Sandpoint and DEQ received a great deal of cooperation and assistance from the Washington Water Power Company (WWP) for this replacement program. WWP is the local utility which supplies natural gas to the area.

Prior to the implementation of this program, there were very few incentives, either financial or regulatory, which would have prompted the replacement of a large number of uncertified wood stoves in this community. Since 1990, some households have replaced old wood stoves with cleaner burning devices, according to discussions with local stove dealers and heating contractors. Unfortunately, a tracking system does not exist in the community to provide adequate documentation of the wood burning stove replacements.

The replacement program was completed in September 1995 with 84 wood stoves removed. These were replaced by 64 natural gas devices, 18 new wood stoves and 2 pellet stoves. Of interest, 50 percent of the old stoves replaced were identified as homemade devices.

Limits on Growth of Uncertified Wood Stoves: The City of Sandpoint recently adopted Ordinance No. 965, which develops a mandatory curtailment program in addition to restricting the sale and installation of uncertified solid fuel heating devices. A copy of the Ordinance is found in Appendix F, Section 4. The Ordinance became effective as of February 27, 1995. The Cities of Kootenai and Ponderay have not adopted any ordinances that restrict the sale or installation of solid fuel heating devices, nor has Bonner County. However, the advisory committee is working on ways to increase participation from Kootenai and Ponderay to improve emission reductions from outside the City of Sandpoint.

Episodic Curtailment Program: DEQ has successfully developed episodic residential wood burning curtailment programs in several communities in Idaho. Initially, the Sandpoint SIP recommended the implementation of a voluntary curtailment program. The City of Sandpoint passed a resolution in November 1993 that supported a voluntary program. DEQ assumed the responsibility for operating the curtailment program in the Sandpoint NAA. A toll-free phone line was established to provide air quality advisory information on a daily basis specifically to the Sandpoint NAA.

The advisory forecast is performed by DEQ staff every workday morning (November through March), and updated by 9:00 a.m. DEQ staff use PM_{10} data from the real-time monitoring equipment in conjunction with the weather forecasts to predict the need for any emission reduction from residential wood burning. A trigger level at 70 $\mu g/m^3$ on a running 24-hour average initiates the first level warning. If PM_{10} levels reached 100 $\mu g/m^3$, a stronger warning is issued advising homeowners not to use their wood stoves or fireplaces. When elevated PM_{10} concentrations are observed, the hourly concentrations are analyzed and local weather conditions evaluated to determine the potential impacts from fugitive road dust. On several days in the winter of 1993, the decision was made to defer initiating a wood stove advisory because fugitive road dust was suspected as the culpable source.

In February 1995, the City of Sandpoint adopted Ordinance No. 965 (see Appendix F, Section 4). This Ordinance was designed to meet the EPA requirements for a mandatory wood burning program as identified in Table 5-9 of "Guidance Document for Residential Wood Combustion Emission Control Measures," EPA-450/2-89-015. The Sandpoint program incorporates a two-stage approach. The first stage is a voluntary curtailment which is triggered at 70 $\mu g/m^3$. The second stage is a mandatory curtailment which is triggered at 100 $\mu g/m^3$. The Ordinance exempts certified wood stoves and sole source households from the mandatory curtailment. Violations of the mandatory curtailment is a misdemeanor offense and subject to a monetary fine.

Notification of a voluntary or mandatory curtailment occurs through the toll-free hotline, press contacts with newspaper, radio and television sources, and phone contacts with the Sandpoint Mayor's office and Chamber of Commerce. The Chamber of Commerce devised a phone tree to spread the notification throughout the community. Other methods of notification are discussed in the Chamber of Commerce public awareness report (see Appendix F, Section 3).

The curtailment program, when it is fully effective, is predicted to reduce all wood burning emissions by 40 to 50 percent for the affected households, i.e., those not granted an exemption. Based on the 1992 survey data, it is estimated that approximately one-third of the wood burning households will be exempted.

Tax Deductions: The Idaho Tax Commission revised the tax code in 1994 to provide a tax deduction for taxpayers replacing uncertified wood stoves with new certified wood stoves, pellet stoves or natural gas/propane heating units. The revised tax code became effective January 1, 1995. Part of the requirements include disposal of the old wood stove at an authorized location.

DEQ established agreements with several recycling facilities and landfills around the State to become authorized disposal sites. The taxpayer receives a tax receipt from the facility, and sends a completed copy of the receipt to DEQ. DEQ uses the receipts to track stove replacements statewide. This tracking system provides additional documentation on the reduction of uncertified wood stoves in the Sandpoint nonattainment area.

An authorized disposal site was established in Sandpoint, which will compliment the wood stove replacement program currently in effect. In 1995, the tracking system confirmed that 34 homeowners disposed of a wood stove through this program in the Sandpoint area. The Sandpoint changeouts constituted approximately 8% of the total statewide participants during 1995. Overall, the tax deduction will provide an additional financial incentive for replacing an old, uncertified wood stove with a cleaner burning heating unit in the Sandpoint NAA.

4. *Fugitive Dust Control Strategies*

Fugitive road dust has been identified by both the emissions inventory and CMB analysis as a major wintertime PM_{10} source. Specifically, fugitive dust from paved roads has been recognized as a significant source of PM_{10} in the Sandpoint NAA.

Fugitive dust emissions from paved roads are directly related to the amount of fine particulates, or silt, deposited on the road surface. During the winter months, the application of anti-skid materials increases the amount of silt on the road surface, resulting in elevated PM_{10} emissions due to vehicular traffic.

The amount of silt found on road surfaces is increased by the application of anti-skid materials in two ways. First, silt is deposited directly as part of the anti-skid material. Second, larger sized particles are ground up by vehicular traffic and turned into silt. Once these PM_{10} sized particles are on the road surface, they can be entrained into the air by the movement produced by passing vehicles.

a. **Reasonably Available Control Measures**

All of the control measures listed below were implemented in the Sandpoint area by the 1994/95 Winter. These control measures meet the RACM guidance recommendations for this source category. Appendix F, Section 1 contains the road maintenance department reports which summarize their activity during the 1994/95 winter.

The control measures listed below reduce fugitive road dust emissions.

- Improve the quality of anti-skid material to reduce silt content (i.e., fines) and improve hardness;
- Reduce the total amount of anti-skid material applied within the NAA;
- Increase the frequency of street sweeping;
- Use alternative materials such as liquid deicer; and
- Perform street improvements - resurfacing and paving.

Improve the quality of anti-skid material:

Apply Anti-Skid Material with a Lower Silt Content: Most anti-skid sanding material has a silt content of 2-15 percent. If the materials used in the Sandpoint area are shown to have a naturally high silt content, switching to a cleaner material will reduce the silt loading. It is possible to lower the silt content by washing the material.

Apply a "Harder" Anti-Skid Material: The ability of a sanding material to withstand deterioration as the result of vehicle traffic is directly related to maintaining a lower road silt level. The modified "LA abrasion" test for hardness can be used to identify materials meeting the recommended 45% durability level.

Ordinances: The City of Sandpoint adopted Ordinance 939: **Material Specifications for Street Sanding Material**, on February 22, 1994, which became fully effective April 23, 1994. The Ordinance created material specification standards to reduce the amount of fines in the anti-skid material and also provided for a hardness criteria. Historically, the road maintenance

departments in the Sandpoint area used anti-skid material that had a fine content ranging from 5-10 percent. Other material types commonly used, such as aggregate crushing "reject," does not typically require any gradation measurements beyond the maximum size, e.g., 100 percent less than 3/8 inches. Currently, the SIHD and ITD use anti-skid material that meets or exceeds the City's ordinance requirements.

The City of Sandpoint is the only community in the NAA that has adopted an anti-skid materials standard ordinance. However, the Sandpoint ordinance has an impact beyond the City limits. Three State highways converge within the City of Sandpoint. The ITD has the responsibility for maintaining all of the State highways within the NAA boundaries. Even though the City has no jurisdiction over the State highways, ITD has agreed to adhere to the City's material standard ordinance and has built stock piles that meet the material specifications. Because it is impractical for ITD to commit a single truck to operate strictly within the City's boundaries with the higher quality material, the anti-skid material gets applied on the State maintained highways throughout the NAA. In fact, ITD applies the higher quality anti-skid material to several miles of State maintained roads outside of the NAA and, therefore, has some additional impact on lowering the PM_{10} emissions in the immediate surrounding area.

The cities of Kootenai and Ponderay have not adopted a similar ordinance, nor has Bonner County. According to the traffic analysis in the SIP, the greatest concentration of VMT occurs within the City of Sandpoint boundaries. This area also coincides with the area of highest PM_{10} concentrations from monitoring and modeling. Therefore, the Sandpoint ordinance should have the greatest impact on reducing fugitive road dust emissions.

Reduce Volume of Anti-skid Material:

To further reduce PM_{10} emissions from paved surfaces, ITD has developed a maintenance program to limit the amount of anti-skid material applied to the State highways within the City of Sandpoint. The adoption of the material specification ordinance by the City of Sandpoint has resulted in a significant increase in the cost of the anti-skid material from what was used historically. The material cost has increased from $0.50/yard to approximately $12.00/yard. Although the new product is more expensive, less material is applied. Therefore, in some cases, the overall cost is less.

The regional ITD office has also developed a policy to establish an "anti-skid free zone" on the State highways within the downtown portion of Sandpoint. When road and weather conditions are appropriate, liquid deicer is used instead of anti-skid material to maintain traction. As a result, the SIHD and ITD have significantly reduced the amount of material applied to the street surfaces over the course of the winter season. SIHD and ITD have reported a reduction of

approximately 90 percent in the amount of anti-skid material applied this winter as compared to last winter. The amount of traction material applied is strongly correlated with the intensity of the winter weather, and climatic variability will significantly influence the annual total application of material from year to year.

ITD has made improvements to the application process by installing ground speed control sensors on three trucks. This new equipment will vary the volume of the material applied as the speed of the vehicle changes.

Increase Street Cleaning:

Sweeping or vacuuming streets helps to reduce fugitive dust emissions by removing baseline fugitive dust materials as well as anti-skid materials. The period when streets start to dry out, and sweeping is possible, also coincides with the time when emissions from road dust are highest. As the roadways dry, so do the anti-skid materials and their silt content. The dry silt or dust is much more likely to become airborne than when it is wet or imbedded in the snow and ice.

SIHD purchased a new regenerative air vacuum sweeper (Elgin Crosswind) through the CMAQ program. The new sweeper arrived in December 1994, and subsequently, SIHD implemented an aggressive street cleaning program. The SIHD sweeps up to 170 lane miles per month within the nonattainment area, including some of the State highways under a mutual agreement with ITD. They also monitor the air quality conditions in Sandpoint through modem access to DEQ's real-time PM_{10} monitoring equipment. If local road and weather conditions are conducive to causing fugitive road dust and thereby increasing PM_{10} concentrations, the SIHD will respond with increased street sweeping in the downtown corridor. So far, this sweeping program has worked well in conjunction with the other programs for preventing elevated PM_{10} concentrations from traffic related sources.

SIHD is responsible for street maintenance in the City of Sandpoint and is the only agency with a full-time sweeper. ITD does not own a sweeper at this time and uses contractors to clean the State highways not covered under the mutual agreement with SIHD.

Based on monthly reports from SIHD, which describe their sweeping activities, it was estimated that approximately 20 percent of the local and highway lane miles are swept and approximately 40 percent of the collector lane miles are swept. A control effectiveness of 34 percent was applied to the affected vehicle miles traveled (VMT) to calculate a total PM_{10} emission reduction of approximately 113 lbs/day for the sweeping activity. Greater emission reductions are possible for 1995/96 winter when the downtown Sandpoint street surfaces are improved later in 1995 with a street overlay project. This overlay project will provide a smoother, more uniform road surface which will increase the effectiveness of the sweeping process.

Use Alternative Materials - Liquid Deicer:

Certain liquid or granular deicers are acceptable substitutes for, or additions to sanding materials, clearing roadways by melting the snow and ice without increasing the amount of solid materials and silt on the road surface.

The SIHD and ITD have acquired equipment to apply liquid deicer as an alternative to the anti-skid material. SIHD has reported using 8,750 gallons of liquid deicer between November 1994 and January 1995. The use of liquid deicer enabled the agencies to use less anti-skid material. They also found that an application of liquid deicer improved the effectiveness of the anti-skid material under certain conditions by helping it stick to the road surface.

The liquid deicer has an additional benefit in that it acts as a dust suppressant when the roads dry out. SIHD and ITD occasionally used the liquid deicer to control fugitive dust emissions until the sweeper is available to clean the street surface. Where the liquid deicer is routinely applied, this treatment acts as an effective chemical dust suppressant on the paved surface, thereby further reducing the fugitive road dust emissions within the NAA.

As mentioned earlier in this report, ITD has developed an anti-skid free zone to reduce fugitive road dust emissions in Sandpoint. Liquid deicer is used almost exclusively within this zone unless a snow floor has developed which makes the liquid deicer ineffective. This approach to identifying crucial or sensitive areas within the NAA is important for managing the road departments' limited resources and gaining maximum effectiveness.

Perform Street Improvements:

Resurfacing Projects: The effectiveness of street cleaning equipment, especially the regenerative air vacuum truck, is influenced by the condition of the street surface. Poor street surface conditions, such as rutted, patched or potholed streets, degrade the effectiveness of the street cleaning equipment. Specifically, when the regenerative air vacuum truck passes over a pothole, the vacuum seal between the truck and the pavement is broken. This results in gaps on the street surface where debris is not removed; in fact, additional material is dropped from within the vacuum line onto the street surface. In downtown Sandpoint, it is estimated that actual effectiveness of the street cleaning equipment is reduced by approximately 50% due to poor road surface conditions.

ITD and SIHD have plans to resurface streets in the downtown Sandpoint area. The downtown area has the highest VMT concentrations in the nonattainment area which also correlates with the area of highest PM_{10} concentrations. At this time, ITD has received funding approval for resurfacing the state highways through the City of Sandpoint (See Appendix F, Section 1). The SIHD resurfacing project has

not received final funding approval as of May 1995. The emission reductions, in the form of improved sweeper performance, from both projects were incorporated into the 1997 control strategy to demonstrate attainment of the standard. The 1997 emission inventory for fugitive road dust assumed a 100% capture efficiency for the sweeper.

The emission reductions associated with the SIHD project are estimated at 50 lbs/day. This emission reduction is approximately 24% of the total emission reductions from street cleaning in the nonattainment area which is relatively significant. The emission reductions from the SIHD project are approximately 3% of the total fugitive road dust emission reductions. The emission reductions from the ITD project were not calculated but are assumed to be significantly greater and are proportional to the total project length and VMT levels on the state highways.

If the resurfacing emission reductions are not available, then comparable emission reductions must be found from other sources within the nonattainment area.

5. *Industrial Sources*

The emission reductions required from the industrial sources in Sandpoint were evaluated and finalized using the dispersion model. The dispersion model protocol, methodology, and results are explained in detail in Section IV and Appendix E of this document.

For the Sandpoint area industrial facilities, the level of control effectiveness required for fugitive dust emissions was in accordance with IDAPA 16.01.01.650 of the *Rules for Control of Air Pollution in Idaho* hereinafter called the *Rules*. To control fugitive dust, the *Rules* recommend reasonable precautions and practices such as the use of water and chemicals, application of dust suppressants, and the use of hoods, fans, fabric filters, and enclosures of some nature. This level of control is standard for all the permitted facilities. Periodic inspections are conducted in addition to inspections resulting from complaints.

Typical of most industries, fugitive emissions constitute the major portion of the total facility emissions. As a first step in evaluating control measures, the above mentioned controls and practices for fugitive emissions are considered to meet the Reasonably Available Control Technology (RACT) guidelines established by EPA.

Each industrial facility also contained one or more ducted point sources. Based on engineering review by DEQ, the point or ducted sources are controlled at most of the Sandpoint facilities by technologies also considered to meet RACT guidelines, at a minimum. A facility-by-facility breakdown is presented here:

Louisiana-Pacific (L-P), Sandpoint

Wood Waste Boiler - Multiclone & EFB (electrified filter bed) vented to a baghouse
Transfer Cyclone - baghouse
Natural Gas Boilers - No additional controls needed for PM_{10}

Interstate Concrete & Asphalt

Asphalt Drum Dryer - baghouse
Cement Bin Vent - baghouse

Lignetics

Sawdust Dryer Cyclone - cyclone control
Pellet Cooler Cyclone - baghouse

LD McFarland

Cyclone - extremely small source, no additional controls needed
Natural Gas Boiler - extremely small source, no additional control needed

Lake Pre-Mix

Cement storage silo - baghouse

The summary above reveals that these control practices are equivalent to RACT as all permitted sources were in compliance with their permit limits at the time of inventory compilation for this document. Since these controls are in place and aiding compliance, the controls are considered reasonably available according to technology and cost considerations.

The controls identified above are also regarded as generally meeting the criteria for Best Available Control Technology (BACT) for the majority of applicable sources according to existing guidance. In addition to these existing controls, some facilities will pave unpaved haul road segments and install additional controls such as baghouses on certain points and enclosures on certain operations. These additional controls (referred to as "conditional control measures", in the permits) are included in the operating permits that were issued to the applicable facilities. The permits also identified a time schedule for installation of the additional controls. The application of these emission reduction techniques will significantly move Sandpoint industrial control practices toward a more total application of BACT. The additional control measures essentially allow maintenance of the same level of emissions but incorporate higher throughputs, in the projected year.

The dispersion modeling results presented in Section IV show compliance with the 24 hour NAAQS for a worst case scenario. PM_{10} impacts from industrial sources, when permit conditions are applied with existing control technology, do not cause or contribute to an exceedance of the ambient standard when the emissions are combined with controlled area sources and a background contribution. This modeling analysis further reinforces that the existing level of control at the Sandpoint industrial facilities, at the very minimum, meets RACT guidelines.

a. Permitting Strategy

The control strategy used for demonstrating attainment in this plan established emission limits for each facility based on the emission inventory and the resulting modeling analysis. The facility emission limit was developed with direct input from each facility so that the emission reductions required in the permits fit the capabilities and operating parameters of the affected sources. Within the time frame allowed, DEQ considered alternative control measures suggested by the operators as long as they met the overall emission limits for the facility.

Louisiana-Pacific Sandpoint: Due to operational time constraints and administrative deadlines, DEQ issued an operating permit that establishes two phases of emission limits for the Sandpoint facility. The first phase of the permit was effective from the date of issuance until the date when L-P completes implementation of the additional emission reduction. The permit requires that additional controls must be in place and satisfactorily operating by July 1, 1996.

The second phase of the permit will be effective from the date of successful implementation of these measures (and a PTC modification for the natural gas boilers) for the remainder of the five-year permit term. This permit will include all the requested modification with control technology enhancements. As a permit requirement, DEQ must receive official notification from L-P certifying that it has successfully implemented the proposed additional control measures.

The additional controls will reduce emissions from certain sources at the facility in order to allow increases from other emission units. This process allowed the facility to maintain a level of production that also affords a measure of operational flexiblity. The emissions are also maintained at a level where they will comply with the attainment budget. The attainment budget is the total emissions in tons per year at which level attainment is demonstrated, taking into account contigency measures.

The second phase of the permit, which incorporates a growth factor into their emission inventory, includes the following control equipment installations and process/operation modifications:

1) Pave the remaining unpaved haul road;

2) Construct the truck bin load-out enclosure according to specifications given in past correspondence with DEQ (4 sides with heavy polyethylene strips on leeward side); and

3) Remove the End Trim Cyclone (replace existing transfer cyclone with a larger cyclone if necessary).

Interstate Concrete & Asphalt (Interstate): The two phased permitting process was also applied to this facility. The date for implementation of all process and

equipment changes, and control technology changes is July 1, 1996. As part of the attainment demonstration strategy, Interstate will implement the following control measures:

1) Apply enhanced chemical treatment methods to unpaved sections of the roads;

2) Enclose conveyor transfer points in the concrete batching and asphalt process streams;

3) Install baghouses for the cement weigh hopper; and

4) Install dust collection system with a scavenger fan to baghouse in the mixer truck transfer point.

L.D.McFarland Pole Co.: The Tier II Operating Permit limits the facility's emissions to the 1997 level as identified in the emission inventory.

Lake Pre-Mix Concrete: DEQ issued an operating permit which limited the emissions to the 1997 level for the facility at the existing location. A modified permit was later issued to provide for a portable batch plant instead of a permanent facility. DEQ identified zones within the nonattainment area that were available for relocating portable sources.

b. Future Permitting in the Sandpoint NAA

New Sources: DEQ will evaluate all new industrial sources of PM_{10} emissions for applicability to the *Rules* and the control strategy in this SIP. This will include all PM_{10} emissions from portable permitted sources such as crushers, batch plants and asphalt plants. In PM_{10} nonattainment areas, DEQ will consider PM_{10} emissions from all sources associated with the facility operations. This specifically includes all fugitive emission sources, such as material transfers, vehicle traffic and storage piles, in addition to the ducted sources of PM_{10}. This practice will provide continued consistency in the evaluation of ambient impacts from industrial processes based on emission inventories and dispersion modeling analysis.

As an overview, all emission reductions for the industrial facilities described above were developed through direct consultation with the facilities and finalized with the issuance of Tier II Operating Permits. Future emission modifications by the existing facilities and any new source reviews shall be completed in accordance with the *Rules* and the control strategy identified in this plan. All applicable sections in the rules that pertain to permitting in nonattainment areas shall be complied with, in particular, sections 16.01.01.203 to 16.01.01.208, inclusive. These sections refer to permit requirements for new and modified stationary sources in attainment and non-attainment areas as well as offset requirements. Furthermore, there shall be no "Below Regulatory Concern" (BRC) exemptions granted for any air emission generating facility, in this non-attainment area (IDAPA Section 16.01.01.220.04).

B. Future Growth of PM10 Emissions

It is anticipated that PM_{10} emissions in the Sandpoint area will continue to change in the future. The rate and direction of change will vary among the main source categories; residential (area sources), transportation, and industrial, based on a variety of economic, social, and regulatory factors.

DEQ will track and report changes in the area's PM_{10} emissions as required by the CAA to support attainment and maintenance of the PM_{10} standard. Specifically, DEQ will monitor changes in industrial emissions through the permitting program. If PM_{10} emissions from industrial sources grow significantly, relative to the 1997 emission inventory, then DEQ may restrict specific permitting activity in the Sandpoint PM_{10} nonattainment area in order to maintain compliance with the ambient PM_{10} standards.

Future changes in PM_{10} emissions from residential and transportation source categories, and their associated control measures, will be addressed in the development of a maintenance plan for the Sandpoint area. The purpose of a maintenance plan is to identify the area's ability to comply with the ambient standard over a long term period, ten to fifteen years in the future. The CAA requires that DEQ develop a maintenance plan for each PM_{10} nonattainment area. A maintenance plan is one of several requirements identified in the CAA for the successful completion of the transition process from nonattainment to attainment designation.

C. Contingency Measures

The Clean Air Act, as amended under section 172(c)(9), requires that all moderate nonattainment area SIPs that demonstrate attainment include contingency measures. Contingency measures must provide for additional emission reductions beyond the control strategy that is required to attain the ambient standard. According to the General Preamble, contingency measures may go beyond RACM and must be equivalent to 25 percent of the emission reductions required to achieve attainment. The contingency measures must be fully adopted and take effect within one year without further legislative action once EPA makes a determination of the area not meeting the required deadlines. These deadlines include attainment of the standard by the applicable date and reasonable further progress milestones.

EPA has provided guidance that emission reductions resulting from over control in the attainment strategy will be accepted as contingency measures. The Sandpoint Area attainment strategy will use over control as the method to meet the contingency requirements. Emission reductions resulting from over control are achieved primarily by the mandatory residential wood burning curtailment program adopted by the City of Sandpoint in February 1995. This ordinance increases the effectiveness of the episodic wood burning curtailment program by incorporating a mandatory component into the program. A copy of the city ordinance is found in Appendix F.

Originally, the attainment strategy required a voluntary program only. The city ordinance implements an episodic curtailment program that combines a voluntary phase with a mandatory phase that is enforced by the City. A voluntary phase is used during the initial

stage of a wintertime episode; if the voluntary phase does not prevent further increases in PM_{10} concentrations, than a mandatory phase becomes effective. The trigger level for the mandatory phase is 100 $\mu g/m^3$ on a running 24-hour average. The ordinance provides exemptions for sole source homeowners, low-income households and certified stove users. The city ordinance, found in Appendix F, describes the program in greater detail.

DEQ conducted additional modeling analysis to evaluate the impact of the emission reductions resulting from the mandatory program. The dispersion modeling results, which included the emission reductions resulting from over control, demonstrated lower ambient concentrations, i.e. less than 150 $\mu g/m^3$, that satisfy the 25 percent contingency requirement. A brief discussion of the modeling results and contingency evaluation is provided below.

The mandatory episodic curtailment program as a contingency measure is further complemented by the other existing control measures which include fugitive road dust reduction programs, industrial operating permits, and the wood stove buy-out program. The control strategy, which includes these existing control measures, demonstrates attainment of the PM_{10} standard in Sandpoint.

Contingency Analysis

DEQ conducted additional modeling analyses to evaluate the effectiveness of the mandatory curtailment program and other control measures. The modeling analysis predicted a maximum 24-hour PM_{10} concentration of 196 $\mu g/m^3$ for 1994 with no controls in place. This analysis of the uncontrolled emissions provided information to determine a design value which corresponds well with maximum wintertime concentrations measured in the Sandpoint area. The control strategy with a mandatory curtailment program will reduce the maximum PM_{10} concentration to 133 $\mu g/m^3$. This represents a 63 $\mu g/m^3$ reduction.

Over control is defined as the difference between the 24-hour National Ambient Air Quality Standard for PM_{10} (150 $\mu g/m^3$) and the maximum modeled PM_{10} concentration value with control measures in place (133 $\mu g/m^3$), which equals 17 $\mu g/m^3$. This 17 $\mu g/m^3$ is equal to approximately 27% which meets the contingency requirements established by the Clean Air Act. See the calculations below.

Modeled Air Quality Data

1994 without controls:	196 $\mu g/m^3$	(Max. 24-hour value)
1995 with controls:	133 $\mu g/m^3$	(Max. 24-hour value)

Control Measure Reductions

1995 control reductions:	196 $\mu g/m^3$ - 133 $\mu g/m^3$ = 63 $\mu g/m^3$
Over control:	150 $\mu g/m^3$ - 133 $\mu g/m^3$ = 17 $\mu g/m^3$

Contingency Measure Percentages

Contingency Measure % = Over control / Control Strategy
= 17 $\mu g/m^3$ / 63 $\mu g/m^3$ = 27%

APPENDIX B

B-1: Point Source Emissions

SECTION I. INTRODUCTION AND SUMMARY OF RESULTS

1.1 Introduction

The 1993 base year and projected year point source emission inventory for Sandpoint, Idaho was prepared by engineering staff from the Idaho Department of Health and Welfare (IDHW), Division of Environmental Quality (DEQ). Latest data from all industrial sources considered significant in the Sandpoint non-attainment area (NAA), were collected to quantitatively and qualitatively characterize the sources. All information collected from the facilities was done so under the provisions of IDAPA 16.01.01.122 & IDAPA 16.01.01.123 (*Rules for the Control of Air Pollution in Idaho*) to ensure truthfulness, accuracy and completeness of submitted information. The base year for the inventory was changed from 1990 to 1993 due to changes in throughput, control and operational practices. The emission estimates were then projected for 1997. The data obtained during the period from October 1994 through April 1995 was analyzed and tabulated into inventories containing latest emission factors and all process and control technology changes. These inventory spreadsheets are attached to the latter portion of this report.

1.2 Summary of Results

All industrial facilities in the Sandpoint NAA, which were in the AIRS database, were potentially short-listed to be included in the inventory. Five industrial facilities were identified as having a potential to emit over 1 ton/yr of PM_{10} and thus, above the significance level for inclusion in the point source inventory. Three of these idenitified facilities had air quality permits for some or all of the operations conducted at their facility.

Annual emission estimates were based on annual throughput logs and material balance calculations, thereby making annual emissions calculations more straightforward and reliable, for most sources. However, short-term averages, specifically the maximum 24 hour emissions, were determined based on several assumptions. For instance, such assumptions would include the maximum operational rates for discrete processes namely truck loading and transport activities. The objective of the short-term average inventory was to tabulate a conservative worst-case estimate of emissions for the period.

1.3 Confidential Information

The attached emission calculation spreadsheets show inventories for 1993 and 1997. This appendix contains source confidential information and is not available to the public or other facilities prior to removal of the confidential information. DEQ is responsible for determining confidentiality of the information after reviewing the submitted material.

SECTION II. METHODS FOR DATA COLLECTION AND ANALYSIS

This section describes data needs for the inventory, data collection methodologies, and emission calculation methodologies. Data collection involved source identification, initial source screening, data gathering, and data validation. Emission calculations involved emission factor identification, development of emission calculation spreadsheets, and verification of calculated values.

2.1 Data Requirements

The Sandpoint PM_{10} emission inventory was based on 1993 operations at identified sources. For the base year inventory, "actual" emission values were calculated where possible. In cases where certain actual operational parameters or emission values were not known, conservative maximum emissions estimates were made. Emission rates were calculated for maximum hourly and annual average periods.

Projected emissions were calculated for the year 1997. Projections were based on Potential to Emit (PTE as defined in the Rules) of the "bottleneck" in the process for non-permitted facilities. In some cases throughput limitations were requested by the facilities, which were less than the PTE limits, and the requested limits were used in those cases. Allowable emissions, as established in either permits to construct (PTCs) or operating permits (OPs), were used to determine emissions for 1997, for permitted sources. These estimates were obtained directly from facilities and facility permitting source files located at DEQ.

2.2 Source Identification

2.2.1 Inventory Area

Initially, the inventory area was considered as all of Bonner County. After initial source identification and data gathering, the inventory area was narrowed for final inventory analysis. The refined inventory area is considered to be the city boundaries of Sandpoint, Dover, Ponderay, and Kootenai, all in Bonner County. This area includes sections 1-3, 9-12, 15-17, 20-23, and 26-32 of T57N R2W. The identified PM_{10} nonattainment area is slightly smaller (15 square miles vs 21 square miles) compared to the initial inventory area.

2.2.2 Initial Source Identification

DEQ source files were scanned as a first step in identifying sources in the inventory area. DEQ air quality personnel in the Coeur d'Alene field office were then consulted to identify any other non-permitted sources.

The local telephone directory was searched as a final check on potential sources. DEQ conservatively identified businesses that could have a potential to generate PM_{10} emissions of over 1 ton/year. Businesses using products from industries that could generate emissions were also listed. For example, asphalt delivery companies and lumber dealers were contacted to determine their suppliers.

As a final check to verify that all sources were identified, the inventory area was visually inspected. This entailed driving along the roads in the inventory area to identify any potential sources.

2.2.3 Source Screening

Screening methods from the previous 1990 inventory were used as a starting point for the current 1993 inventory. Sources identified through the local telephone directory were contacted to determine

if they represented a potential source. Those potential sources that did not have any PM_{10} emitting processes or had annual emissions that were considerably below 1 ton/year were dropped from the inventory list.

2.3 Data Collection

2.3.1 Initial Data Collection from Potential Sources

Since this is a revision to the 1990 inventory, the compilation started off from the existing inventories. Most of the inventoried facilities claimed major changes from the 1990 inventory and therefore were asked to submit either fully revised inventories or supplement existing information. The facilities submitted entirely new inventories for the 1993 base year and either the projected year inventory or necessary information to prepare projected inventories. Additional information was exchanged through numerous phone calls and written communiquès to clarify details.

The information submitted by each facility was collected in such a manner as to compile a comprehensive industrial emission inventory for each plant with all the engineering assumptions stated and agreed upon. The inventory also incorporated the latest research findings by national research agencies to improve the accuracy and thoroughness of the inventory. Information obtained from the facilities was obtained under legal requirements dictating the information to be lawfully accurate, truthful, and complete. So the inventory was compiled using the most accurate information available, the latest research, and strong quality assurance techniques.

2.4 Emission Calculations

As a first step, emission factors were identified for many sources that were frequently present at most or all facilities. These sources included vehicle traffic on paved and unpaved facility roads, fugitive emissions from the handling of aggregate materials, and certain emission factors and production-related factors for the wood products industry. Emission calculation spreadsheets were then developed to aid in the calculation of emissions for each facility.

2.4.1 Emission Factors and Equations

Emissions were calculated for facilities using several information sources. These sources are listed in Table 1 according to their preferential use.

Table B-1: Emission Factor Source - Priority List	
Source	**Notes**
Source Tests	Preferred source for emission factors if conducted as per state approved protocols.
Source Tests of identical or similar sources	Tests on other similar equipment at the facility or at other facilities that are identical or closely similar to the source for which the emissions are being calculated. This method is only valid if the tests were conducted under operational parameters similar to those under which the source of interest operates.
Calculations based on scientific principles and latest research	Methods include mass balance and other methods based on physical and chemical principles.
AP-42 and other EPA approved documents	These documents are standard reference for emission factors unless better options are available.
Emission Factors based on engineering judgement and experience with processes	These include factors developed by a specific industry or factors developed by personnel with experience in the industry.

Emissions from Vehicle Traffic

Fugitive dust emissions from unpaved road surfaces were calculated using the equation from AP-42, Section 11.2.1 and for paved roads from the new Section 13.2.4. The new AP-42 equation has been approved for regulatory use by EPA (see attached letter). All site specific values for silt content and loading were utilized wherever such information was available. In cases where such information was not available, AP-42 defaults were used in their place.

Control efficiencies for the application of water or road oil, unless otherwise specified, were obtained from Table 2.1.1-3 of ***Fugitive Dust Control Technology*** (Orlemann et. al., 1983) and in consultation with Permits and Enforcement, DEQ. During the winter season, unpaved roadways are typically wet or frozen. It was assumed that such conditions reduced emissions by 100% for days with precipitation ≥ 0.01 inches. For roads that were treated by dust suppressants other than water, it was assumed that winter conditions would also control emissions by an additional 50%.

Emissions from Handling of Aggregate Materials

Aggregate handling emissions result from the transfer of sand, gravel, or stone materials at applicable facilities, typically concrete or asphalt batch plants and rock crushing facilities. Emission rates were calculated using the equation from AP-42, Section 11.2.3.

Emissions from Wind Erosion of Aggregate Material Storage Piles

The equation for total particulate emissions from the ***"Control of Open Fugitive Dust Sources"***: Equation 4-9 was used to calculate wind erosion emissions from active storage piles.

PM_{10} emissions were calculated by estimating a PM_{10} fraction of total particulate emissions. A more detailed equation in section 11.2.7 is more suited to account for wind erosion of storage piles, but was not used. This equation requires detailed knowledge of turbulence parameters governing wind shear forces during different wind regimes that affect wind erosion from similarly shaped objects. Since wind erosion emissions from storage piles are a very minor emission source and maximum emissions only occur during high winds, using the complicated and time consuming equation in section 11.2.7 is not justified.

Wood Products Industry Factors

Many of the point sources in the Sandpoint area are wood products facilities, including a sawmill, a pole processing plant, and a wood pelletizing facility.

Emissions from cyclones were based on calculation techniques used by PEI Associates, Inc. for the 1990 Boise PM_{10} emission inventory. The technique assumes that 2% of the sawdust (dry sawdust only) handled has the potential to become suspended in the atmosphere, and of that suspendable sawdust, 75% is controlled by the cyclone separator. This results in an emission factor of 40 lb/ton, not including the 75% control efficiency of the cyclone. According to *PM10 Emission Factor Listing* (EPA, 1989), 40% of the airborne particulate from cyclones is assumed to be PM10.

2.4.2 Operational Data

Accurately quantified operational data is as important for determining emissions as using appropriate emission factors. Most industries inventoried were able to confidently provide reasonably accurate, annual production and operational rates for most sources.

The actual scenario was obtained by records of annual throughput and operating scenarios provided by the facilities. The future scenarios were often projected from existing levels and sometimes used permit allowable limits. In a facility where there were permitted and unpermitted processes, the projections were based on permit allowables for permitted processes and the maximum design capacity of the rate limiting piece of process equipment in the product flow-stream for the unpermitted process. Short-term averages were computed assuming maximum hourly operational rates and using permit limits or maximum allowable hours as applicable and requested.

Process Equipment

Data to calculate the annual and maximum hourly operational rates were fairly well known for the 1993 base year for most of the process equipment because annual throughput of materials were available for the unpermitted facilities. In the case of permitted processes, the data was obtained from annual record keeping requirements for the permit. Maximum daily rates were less well known, as

many facilities indicated that source operation fluctuated significantly throughout a 24-hour period. In cases where daily throughput logs were available, the support processes were linked to the main product material flow quantity. In cases where such information was not available, DEQ consulted with the facilities to assume certain hours of operation based on days when facilities operated.

Vehicle Traffic

Emission factors for fugitive emissions from vehicle traffic on facility roads were based on VMT. Most sources in the Sandpoint area did not keep mileage records for facility vehicles. For those that did keep records, there was no distinction between on-site and off-site mileage. Therefore, VMT were estimated using the total amount of material handled during the period of interest, the amount of material handled by each vehicle trip, and the total distance traveled on the site during each vehicle trip.

Maximum hourly and annual average VMT were estimated. Material delivery and product export rates were highly variable from day-to-day and therefore, determining a maximum VMT/hour was based essentially on assumptions. Maximum VMT/hour was typically estimated from the annual VMT and the number of hours of operation for that process for which the transport segment was needed.

2.4.3 Emission Calculation Spreadsheets

Spreadsheets were developed to aid in emission calculations and to minimize computational errors. These spreadsheets were developed on LOTUS 1-2-3, and each facility was assigned its own file. Completed spreadsheets are attached in the latter part of this section. Each spreadsheet includes general information, emissions from combustion/process equipment, emissions from the handling of aggregate materials, and emissions from vehicle traffic on facility roads. All spreadsheets are fairly self-explanatory and fully documented regarding methodology, assumptions, and sources of information.

2.5 Quality Assurance

Several quality assurance measures were conducted at different stages of the inventory, including source identification, data collection, and emission calculation. The inventories were material balanced and cross-checked by DEQ engineering staff in the permits and enforcement bureau and community programs.

2.5.1 Source Identification

A multi-step source identification approach ensured that all substantial PM10 industrial point sources were identified. These steps were as follows:

1) Search of DEQ source files to identify all sources in the inventory area that have been issued permits or are inspected.

2) Search of the local telephone directory yellow pages to identify facilities that may have substantial PM10 emissions.

3) Consult with DEQ field inspectors to identify any sources missed by items 1 or 2.

4) "Window shield" survey of the inventory area to identify any sources missed by items 1, 2, and 3.

Using this multi-step source identification process, it is highly unlikely that any substantial emission point sources (over 1 ton/yr of PM10) were not identified.

2.5.2 Quality of Collected Data

The quality of information collected from sources was assured through an internal and external review process. When process information was obtained from an industry, those data were initially reviewed for reasonableness. For example, material input values were compared to material output, waste generated, and emission quantities. When errors or inconsistencies were identified, sources were usually contacted to resolve the problem. In some instances, assumptions were made for certain operations based on typical operations of other facilities in the industry.

When there were multiple sources of operational data, such as permitting related data, inspection reports, miscellaneous correspondence with DEQ, and returned questionnaires, these sources were compared against each other for consistency. DEQ field personnel and permitting staff were also consulted to review pertinent information.

Finally, all data used to calculate emissions for a specific facility were resubmitted to the facility for their review and confirmation of data. Any errors identified by the facility were discussed with the facility and the emission estimates were altered accordingly.

2.5.3 Quality Assurance of Emission Calculations

Before an emission factor was used, the appropriateness of that factor for the proposed application was reviewed. Assumptions inherent in the development of the emission factor were compared to operational parameters of the source. Also, control efficiencies claimed by facilities were compared to control efficiencies of similar equipment present in similar industries. Discrepancies were addressed by consulting with the source, DEQ field personnel, and DEQ permitting staff.

Emission calculation errors were minimized by using computerized emission calculation spreadsheets. Facility specific spreadsheets, constructed from the basic form spreadsheet, were also spot checked for accuracy.

SECTION III. RESULTS AND DISCUSSION

This section summarizes the results of the emission inventory, and discusses the implications of the results.

3.1 Description of Facilities

Only five facilities were identified in the inventory area that had potential PM10 emissions in excess of 1 ton/year. Table 5 lists these facilities along with a brief description of their operations. As indicated, all facilities were either wood products facilities or mineral processing type facilities.

Table 3-B: List of PM10 Point Source Facilities and Related Descriptions

Facility Name	Description	Primary Emission Source
Interstate Concrete & Asphalt	Asphalt & Concrete batch plant	Asphalt Drum Dryer; Handling & Storage of Aggregate
Lake Pre-Mix Concrete	Concrete Batch Plant	Mixer truck loading fugitives
L.D. McFarland Pole Co.	Wood pole peeling and treating facility	Vehicle fugitives
Lignetics of Idaho	Sawdust pelletizing plant	Sawdust dryer cyclone
Louisiana-Pacific Corp., Sandpoint	Lumber trim/planing mill for finishing rough lumber from mills	Woodwaste boiler, lumber drying kilns

3.2 Emission Calculation Results

PM_{10} emissions from the inventoried facilities are shown in the table below for 1993 actual and 1997 scenarios. Only the 1997 permittable scenario was modeled for attainment demonstration. The modeled values are highlighted. Most of the sources have BACT stipulations in 1997.

Table B-4: PM_{10} Emissions from Inventoried Facilities

Facility Name	Year	Source type	Lbs/hr	Tons/year
Lignetics of Idaho	1993 & 1997	process	6.57	29.32
		Fugitives	0.45	1.17
		Total	7.02	30.49
Louisiana-Pacific Corp.	1993	Process/Handling	11.53	45.24
		Vehicle Fugitives	2.68	9.81
		Total	14.22	55
	1997	Process/Handling	14.17	62.0
		Fugitives	1.24	5.5
		Total	**15.4**	**67.5**
L.D. McFarland Pole Co.	1993	Process/Handling	1.07	0.61
		Vehicle Fugitives	1.13	1.25
		Total	2.20	1.9
	1997	Process/Handling	1.07	2.7
		Vehicle Fugitives	1.26	2.5
		Total	**2.33**	**5.2**
Interstate Concrete & Asphalt	1993	Process/Handling	1.74	1.22
		Vehicle Fugitives	2.77	1.84
		Total	4.50	3.06
	1997	Process/Handling	1.63	2.07
		Vehicle Fugitives	1.6	0.6
		Total	**3.23**	**2.13**
Lake Pre-Mix Concrete	1993	Process/Handling	0.99	0.16
		Vehicle Fugitives	[1]0.06	0.03
		Total	1.06	0.19
	1997	Process/Handling	.184	0.73
		Vehicle & Fugitives	.068	0.29
		Total	**0.252**	**1.01**

Facility Descriptions:

In this section process descriptions are summarized for each facility. PM_{10} sources are identified in each process flow stream.

3.3.1 Lignetics of Idaho

Lignetics of Idaho is a sawdust pelletizing plant. The previous inventory performed for the original Sandpoint SIP has been directly used here with changes in the pelletizing process being documented.

The facility imports sawdust from surrounding saw mills. This material is moved by a front- end loader into a receiving bin for future processing in the plant. The incoming material is dried in a rotary dryer heated by a combined gas and wood dust burner. The dried material is transferred by a cyclone to a grinder and into a pellet mill. The air from the dryer is exhausted through an induced draft to a 40 ft stack. The pellets are cooled and stored in bins or bulk and 70% of the pellets are put in plastic bags and stacked on pallets in one-ton loads and later shipped by truck.

There was a change in the sawdust pelletizing process in 1993. Dried wood waste is augered out of the pellet mill feed bin into a surge bin bypassing the pellet mill and pellet cooling screen. From the surge bin the dried wood waste is augered into a small surge bin near the presto log machine. From this bin it is augered into a feeding hopper on the presto log machine. The presto log machine compresses the wood waste into a long continuous log which feeds out onto a cooling roller conveyor. At the end of this conveyor the log is broken into short presto logs and packaged into boxes for shipping. This new line does not increase emissions at the facility as the pellet machine, pellet cooling screen and bagging process would be operating at a reduced rate during the operation of the presto log line. The new presto log machine is not hooded or directly vented to the atmosphere in any way. No dust was observed around the machine during the inspections. The new presto log line is enclosed in a new building attached to the existing facility.

The earlier emission inventory data for Lignetics of Idaho were obtained from 1988 inventory spreadsheets, inspection reports, and permitting related activity from 1990 through 1992. The permit modifications involved installation of a new sawdust drier and changes to the handling and control of emissions from various cyclones, including the addition of a multi-clone. Prior to these modifications, the facility had a history of periodic compliance problems associated with emissions from the cyclone immediately downstream of the sawdust drier. The emissions were both sawdust and blue smoke from incomplete combustion of wood (sawdust).

Emissions ffrom the sawdust drier for 1990 were based on source tests results from sawdust driers associated with the wood panel-board industry (NCASI, 1986). Source test results from 1985 were available for Lignetics, but DEQ permitting personnel indicated that these results significantly underestimated typical emissions for 1990 conditions at the facility.

Emissions for the cyclones handling material from the grinder were based on the emission factor for sawmill cyclones used in this inventory (40 lb/ton, and 40% PM10). However, a control efficiency of 85%, rather than 75%, was used because the cyclones are of a high efficiency design. Emissions for 1994 and 1997 were based on allowable emissions expressed in the revised PTC. These limits were based on source testing conducted after the plant modification.

The permit allowable for Lignetics was used for the projected years emission inventory and modeling scenario because no significant changes were noted since the last permit date.

3.3.2 Louisiana-Pacific Corporation

This facility's operations were covered under an operating permit issued February 27, 1989. This permit was altered by two settlement agreements-one signed in 1989, and the other in 1991. This permit is currently effective.

Louisiana Pacific Corporation's Sandpoint, Idaho facility is a planing mill that produces kiln-dried dimensional lumber. Described below is the process flow through the facility.

Rough-cut green lumber is delivered by haul trucks to the Sandpoint facility by off-site sources. The green lumber is unloaded and stored temporarily before being placed in drying kilns to reduce the moisture content. Dried lumber is then planed for a smooth surface finish and cut to the desired dimensions by the trim saw. The finished lumber is restacked and banded for shipping. For the major portion of the lumber produced, one side of the banded stack is spray painted. This process is called end coating. The lumber is transported to haul trucks or rail cars for shipment off-site. Waste streams include planer shavings from the planer, and sawdust and hogged trim ends from the trim saw. These materials are of kiln-dried lumber and are routed through various cyclones to the truck bin, where the material is batch dropped into haul trucks for off-site transport.

Haul trucks carrying woodwaste derived from off-site sources deliver hogged fuel with approximately 50% moisture content to a dump pit. The fuel is transferred from the dump pit by a conveyor to a three-sided fuel storage building. The woodwaste is transferred by covered conveyor from the temporary storage building to the woodwaste boiler fuel metering bin, where it is weighed and delivered to the boiler for combustion. Emissions from the hogged fuel handling were considered negligible. Front-end loaders clear these areas of woodwaste when necessary.

Sources that emit PM_{10} at this facility can be divided into three main categories: combustion sources, cyclones and baghouse, and fugitive emission sources.

Combustion Sources

Combustion sources include a Kipper and Sons woodwaste boiler and two natural gas-fired boilers. The Kipper and Sons woodwaste boiler is designed to produce 60,000 pounds of steam per hour (lb steam/hr) from combusting woodwaste with a moisture content of approximately 50%.

The woodwaste consists of hogged fuel of shavings and bark, and is derived from other Louisiana Pacific facilities. This boiler operates nearly continuously to supply the kilns with process steam to drive off the excess moisture in the green lumber.

Particulate matter (PM) and PM_{10} emissions are controlled by a multiclone connected in series with an electrified filter bed (EFB). The multiclone removes the larger particles from the exhaust stream before the exhaust is filtered by the EFB. The EFB is fitted with a media baghouse to control particulate emissions from the cleaning of the filter media (gravel in this case) before it is recycled through the EFB. A continuous opacity monitoring system (COMS) is an applicable operating requirement on the woodwaste boiler stack pursuant to New Source Performance Standard (NSPS) Subpart Db, because the permitted heat input rating of the boiler is greater than 100 MMBtu/hr.

Two Cleaver Brooks natural gas-fired boilers operate as backup boilers, and operate when the woodwaste boiler and/or its pollution control equipment are shut down for maintenance. The boilers each have a rated capacity of 14,000 lb steam/hr. Emissions from the natural gas boilers vent from individual stacks and are uncontrolled. Point source emissions from these combustion process include criteria pollutant emissions consisting of PM, PM_{10}, NO_x, SO_x, CO, and VOCs. The natural gas boilers are very minor point sources of PM_{10}.

Cyclones and Truck Bin Baghouse

The cyclones and related pneumatic equipment are used as a means of process control. The woodwaste gathered from operation of this facility is of a very low moisture content, and historically has presented an economic incentive for use at other L-P facilities. This woodwaste is collected and transferred pneumatically to the woodwaste loadout bin where it is transferred to haul trucks.

The facility's pneumatic system consists of three cyclones and related blowers connected in series. Larger particles and shavings from an upstream cyclone remain in the conveyance system, and collect with the input from subsequent downstream cyclones. Particulate matter smaller than each cyclone's designed collection size are emitted from the vent at the cyclone's top to ambient air.

Current Pneumatic Conveyance System

This is an area where the original 1989 permit and old SIP emission inventory are drastically different from what is currently in place. Dried lumber is removed from the kilns and planed to desired dimensions. Planer shavings are collected and transported pneumatically to the Planer Cyclone where the planer shavings drop out into the Truck Bin. The Planer Cyclone is a point source of particulate matter (PM) and PM_{10} emissions.

From the planer, the lumber is conveyed to the end trimmer area where the lumber is sawed to desired length. Sawdust and trim ends are waste products. Trim ends too small to be utilized at other off-site facilities are hogged and, like the sawdust, are routed to the End Trim Cyclone. A Transfer Cyclone conveys this material to the Planer Cyclone where it joins the planer shaving waste stream for eventual deposition in the Truck Bin. The End Trim and Transfer cyclones are point sources of PM and PM_{10} emissions. The planer cyclone's exhaust vent emissions are routed directly to the Truck Bin Baghouse, which is a source of PM_{10} emissions.

The woodwaste captured by the Truck Bin Baghouse is shook out and transferred to the Truck Bin via the closed-loop (does not exhaust to the atmosphere) Truck Bin Cyclone. A cut shop hog unit that is only used intermittently is routed to a the Cut Shop Hog Cyclone. This closed-loop cyclone's ductwork connects to a target box above the Truck Bin. A vent is located on this target box which is assumed to provide pressure relief for the Cut Shop Hog Cyclone dropout, Planer Cyclone dropout, and the Truck Bin Cyclone dropout.

Fugitive Emission Sources

Fugitive PM_{10} emission sources at this facility are created by vehicle traffic on paved and unpaved roads and areas, woodwaste loadout from the truck bin, venting of the truck bin, handling of ash from the woodwaste boiler, and end coating (sealing paint) of finished product bundles prior to short term storage.

Vehicle Traffic

Fugitive PM_{10} emissions result from haul truck traffic on unpaved roads, material transfer, and front-end loader traffic in unpaved areas.

Other sources of fugitive PM_{10} emissions result from haul trucks transporting green lumber on-site on paved roads, other facility vehicle traffic on paved roads, and ash handling, material handling of hogged fuel for the boiler

Dry Kilns

The five (5) drying kilns process green lumber from off-site sources. and are a significant source of VOC and condensible PM_{10} emissions. The dry kilns are considered to be the process throughput limiting operation (referred to as the process "bottleneck"). The kilns are capable of producing approximately 200 million board feet of finished lumber according to L-P personnel. This source was not in any previous inventory or permit.

Truck Bin Loadout

Planer shavings, hogged trim ends, and shavings are loaded into haul trucks. The waste is from kiln-dried material and is therefore more likely to be a source of fugitive emissions. To abate PM_{10} emissions, L-P currently has a two-sided enclosure in place.

L.D. McFarland Pole Company

L.D. McFarland Pole Company treats wooden poles with a heated preservative for protection against rot and insect damage, and then sells the poles for power and telephone lines. A brief description of the process is presented below:

Haul trucks deliver raw logs to the facility, which are then stored or debarked and trimmed to the desired uniform surface requirements. The wood-waste/bark is size sorted through a cyclone on a wigwam wood-waste burner. The waste is eventually transported off-site.

The poles are sorted, stored, and seasoned to the desired moisture content and then transported to be worked on, to various configurations. After this process, the poles are ready to be treated with the preservative. The preservative of choice in this process is comprised of an oil/pesticide solution of 95% Base Oil (P-9) and 5% penta-chlorophenol (PCP), heated to about 180 °F to enhance impregnation of preservative into the poles. The oil is heated by a natural gas-fired boiler through a closed-loop heat exchanger, boiler emissions being vented directly into the atmosphere. On completion of the treatment process, the logs are placed on a drip pad for temporary storage to be transported off-site.

The primary source of particulate matter emissions in this site are the peeler, the natural gas boiler, and the cyclone which transports wood waste from the peeler to the wigwam used for storage of peeler wood-waste. There are 43 to 45 pole storage piles located on the property depending on the time of the year. Emissions from these piles are thought to be negligible. Discussion with EPA and

other regulatory agencies regarding how to treat this souce concluded that it was insignificant; the activity data around these piles was the more significant source of PM_{10} emissions. So the other major sources of emissions from this facility are vehicle and transport related.

A minor source of PM_{10} condensible emissions is thought to be from the preservative dip tanks, and from the after-treatment drip pads. However, attempts to quantify such emissions have been unsuccessful until this point in time. The emissions from this facility, based on the currently permittable and modeled scenario, is presented below. The calculations for this inventory have been based entirely on facility submitted information and on their requested increase in throughputs.

3.3.5 Interstate Concrete and Asphalt

This facility operates both an asphalt batch plant and a concrete batch plant. Interstate also sells aggregate that is stored at the site.

a) **The Asphalt Plant** drum dryer was issued a PTC in 1990, limiting the hourly and annual throughput rates. The operation is a batch type plant. The asphalt plant consists of a Barber Greene Model 1864 asphalt plant, a 100 ton load-out silo and several asphalt storage tanks, a set of cold feed bins with associated conveyors and debris screen, a front end loader and a flex-kleen bag-house. The brief summary of the process is as follows.

Crushed rock and blended sand are dumped on site, using trucks, to form the storage piles. A front-end loader transfers the material, as needed, to cold feed bins, which proportions the aggregate onto a conveyor. This conveyor passes the aggregate through a screen and eventually into the rotating drum dryer. In the natural gas fired drum dryer the aggregate is heated to 300 °F, transported by a bucket conveyor to a size segregating screen, and stored shortly before being reproportioned in a weigh hopper prior to transfer into a pug-mill mixer. In the pug-mill mixer the aggregate gets thoroughly mixed with the asphalt oil for 60 (sixty) seconds before being dropped into trucks for direct delivery or onto a drag slat conveyor, which transport the mixture into storage silos. These silos can hold the heated asphalt for 24 hours before truck delivery. The delivery trucks are weighed and ticketed before leaving the site.

Asphalt oil is delivered to the site in bulk tankers, where it is pumped into one of the storage tanks. There is also a weigh tank in the facility, in which the stored oil is weighed before it flows into the pug-mill mixer to be blended with the aggregate.

Dust and gases from the weigh hopper, hot aggregate bins, screen, bucket line, and the dryer are ducted to a Flex-Kleen bag-house. A dust return system conveys the collected dust back to the bottom of the bucket conveyor. The gases exit the plant through the common bag-house stack. Since the emissions from the aggregate dryer for the asphalt plant are vented to a bag-house, this is only a minor source. Therefore, most of the emissions from the facility result from the handling of aggregate materials.

The Concrete Plant Batch Plant does not currently have an air quality permit. The concrete operations are fairly straightforward. The plant is a 1964 Spomac Batcher with cement and aggregate weigh hoppers and a load-out belt, two bare cement silos, one cement silo with a weigh hopper, overhead aggregate storage bins with charging hopper and conveyor, a front end loader, and various mixer trucks.

Washed rock and sand are brought onto the property in trucks and dumped on-site to form storage piles. These are subsequently transferred as needed to the charging hopper, by a front-end loader, from where it flows to the overhead storage bins via a 200 ton per hour conveyor. The concrete is batched by proportioning the aggregate into the weigh hopper and transferring it directly into a mixer truck through a conveyor. The cement flow stream starts from a bulk tank truck which transports cement into the property, from where it is pneumatically transferred to three overhead storage silos. Cement is batched in two locations: the first one discharges directly to the aggregate conveyor and the second discharges into the mixer truck. Water is metered at the common cement/aggregate entry point as a simultaneously timed operation. Aggregate and two-thirds of the volume of water are introduced into the mixture prior to introduction of cement. The last third of water is introduced after all the other ingredients are mixed together. After all the raw materials enter the truck, the mixers blends the mixture for three minutes before the truck leaves the property for delivery.

All the submitted emission inventory data was certified as true, accurate, and complete, and supported by facility records and production logs. The hours of operation, during the days when the facility operated, randomly varied from 2 to 17 hours daily. So the hourly averages are computed using a very conservative estimate of 24 hours.

3.3.6 Lake Pre-Mix Concrete

Lake Pre-Mix Concrete is a concrete batch plant. Sand and aggregate delivered on site are transferred to conveyors by a front end loader, where they are transported to elevated storage bins. Cement is pneumatically transferred to storage silos. All the ingredients are proportioned in the weigh hopper gravity fed into the mixer truck with water where it is mixed prior to delivery.

The facility is not inspected by DEQ and has not been issued an air quality permit. All emission estimates were based on responses to a 1994 inventory questionnaire and subsequent consultation with the facility owner. Future production was based on Potential to Emit for the aggregate weigh hopper.

APPENDIX B

B-2: POINT SOURCE EMISSIONS INVENTORY SPREAD SHEETS

PM_{10} Emission Inventory for Interstate Concrete & Asphalt, Sandpoint, Idaho.

Company: Interstate Concrete & Asphalt
Mailing Address: P.O. Box 1113
City/State/Zip: Sandpoint, Idaho 83864

The information in this inventory has been supplied as certified, accurate, true, and complete, from Interstate Concrete and Asphalt, by Paul Franz and Bruce Cyr of that facility.
Any changes to the utilization of the information different from original submission have been discussed and documented.

Contacts: Larry Peck or Paul Franz
Phone: (208)/263-0539
Fax: (208)/263-5430

Nature of Business: The facility manufactures asphaltic and cement concrete for sales.
Aggregate is also sold from the facility.

Current Permit Status: The Drum Dryer has a permit to construct dated June 12, 1990.
No other source in this facility has an air permit from DEQ.

UTM Coordinates of Facility (Km): 332.5, 5346.30

Maximum Capacity of Operations – Asphalt Plant

This inventory is based on permit allowables and associated process throughputs related to that throughput limitation.
The site limiting process for the Asphalt plant is the Barber Greene Model 864 Asphalt plant, which has a Permit to Construct (PTC) limiting throughput on it to 140 tons/hour. The PTC is dated June 12, 1990. The facility has requested for 200 tons/hr of throughput limitation.

A revision to 200 tons/hr of the permit limitation of 140 tons/hr will require a PTC modification, based on conversations with Ron Hill, AQ Engineer, DEQ, who worked on the PTC. Since these requested limits will require a PTC modification, calculations here are performed based on maximum throughputs that can be allowed based on the existing PTC, ie: based on a 140 ton/hour throughput limitation on the Barber Greene Asphalt Plant assuming 24 hours of operation per day.

Throughput	Units	Total Daily Process Throughput	Units	Total Annual Process Throughput	Units
140.00	tons/hr	3360.00	tons/day	120960.00	Tons/year

Since the permit allowables for the drum dryer @24 hrs/day at a rate of 140 tons/hour is higher than the amount requested by the facility, the the facility requested rate is utilized for the drum dryer limits and associated processes. Actual throughputs for 1993 were requested confidential, so only the 1993 summary is presented here.
For more information on this please contact Kristina Viswanathan, IDEQ at (208)/373-0200 or the facility.
The annual limitation is calculated based on the PTC limitation of 864 hours per year. This figure is approximated to 121000 tons/year for calculations.

1993 Actuals – Plant-wide PM_{10} Emissions Summary	lbs/hr	Tons/year
All Sources	4.30	3.06

Plant-wide PM_{10} Emissions Summary – based on Permit Maximums and existing controls.	lbs/hr	Tons/year
All Sources	9.73	9.52

Maximum throughput calculations based on permit limits and existing controls

Asphalt Batch Plant

Vehicle Fugitives – Uncovered Roads

Source Description	Maximum annual Throughput (Tons per year)	Maximum daily Throughput (Tons per day)	Unpaved Round trip distance (ft)	Tons per load	Trips/year	VMT per year	Trips/day	VMT per day	W Mean vehicle weight tons	w Mean # wheels	Annual PM10 emission factor (lb/VMT)	Daily PM10 emission factor (lb/VMT)	Control Efficiency %	Uncontrolled PM10 emissions lb/day	Controlled PM10 emissions lb/day	Uncontrolled PM10 emissions tons/year	Controlled PM10 emissions tons/year
EQUATION #1.																	
Loader to plant	121000.00	2400.00	300.00	4.00	30250.00	1716.73	600.00	34.08	22.00	4.0	0.92	0.77	75.00	26.37	6.59	0.45	0.11
Oil tanker	7260.00	224.00	600.00	32.00	226.88	34.38	7.00	1.06	30.00	14.0	1.42	2.12	75.00	2.25	0.56	0.02	0.01
Asphalt trucks	121000.00	2400.00	600.00	18.00	7562.50	1145.63	150.00	22.73	21.00	7.0	0.66	0.99	75.00	22.51	5.63	0.36	0.10
Gravel haul in	133970.00	2400.00	600.00	26.00	5152.69	780.71	82.31	13.99	29.00	11.0	1.04	1.56	75.00	21.77	5.44	0.41	0.10
Gravel haul out	12970.00	400.00	600.00	15.00	864.67	131.06	26.87	4.04	20.00	6.0	0.59	0.89	75.00	3.58	0.90	0.04	0.01
Loader to truck (sales)	12970.00	400.00	200.00	4.00	3242.50	127.62	100.00	3.79	22.00	4.0	0.92	0.77	75.00	2.93	0.73	0.03	0.01
Misc. light vehicles	--	--	600.00	--	1200.00	181.82	9.20	1.39	2.00	4.0	0.10	0.14	75.00	0.20	0.05	0.01	0.00
															19.90		0.33

FOOTNOTES:

EQUATION #1:
AP42, 11.2.1 - UNPAVED ROADS

where: E, Emission Factor = $k*5.9*(s/12)*(S/30)*(W/3)^{0.7}*(w/4)^{0.5}*(365-p)/365)$
E = Emission Factor (lb/VMT)
k = Particle Size Multiplier (dimensionless)
s = Silt Content of Road Surface Material (%)
S = Mean Vehicle Speed (mph)
W = Mean Vehicle Weight (ton)
w = Mean Number of Wheels
p = Number of Days with ≥ 0.01 in. Precipitation per Year

Facility provided information is used for all other parameters in the equation.
k = particle size multiplier for pm10 = 0.36
p = # of days/year with precipitation ≥ .01" = 0 for daily and 120 for annual.
s = silt content = 6.5% as per facility provided information
S = average vehicle speed = 5 miles per hour
75% control efficiency is based on ESCDS based on the currently applicable PTC.

Vehicle Fugitives – Paved Roads

Source Description	Maximum annual Throughput (Tons per year)	Maximum daily Throughput (Tons per day)	Paved Round trip distance (ft)	Tons per load	Trips/year	VMT per year	Trips/day	VMT per day	W, mean vehicle weig tons	PM10 Emissbn factor (lb/VMT)	Control Efficiency %	Uncontrolled PM10 emissbns (lb/day)	Controlled PM10 emissbns (lb/day)	Uncontrolled PM10 emissbns (tons/year)	Controlled PM10 emissbns (tons/year)
Oil tanker	726000	224 00	400 00	32 00	226 88	47 19	7.00	0 53	38 00	1.17	80 0	0 6	0 2	0 0101	0 0040
Asphalt trucks	121000 00	2400 00	400 00	18 00	7562 50	972 92	150 00	11.36	21 00	0 49	80 0	5 5	4 1	0 1377	0 0551
Gravel haul in	133970 00	2400 00	400 00	26 00	5152 69	390 38	82 31	6 89	29 00	0 78	80 0	5 5	4 1	0 1523	0 0609
Gravel haul out	12970 00	400 00	400 00	15 00	864 67	65 51	28 87	2 02	22 00	0 52	80 0	1 0	0 8	0 0189	0 0076
Misc. light vehicles		0 00	400.00	0.00	1200 00	90 91	8.20	0.70	2 00	0 01	80 0	0 0	0 0	0.0008	0 0003
													9.2		0.1270

Particle size multiplier, k = 0.016
s = assumed to be 16 % as per submitted plant data; sL is estimated from submitted silt tested to be 4.21 g/m ^2.
The emission factor is estimated using new AP 42 equation, EQUATION #2: E = k*(sL/2)^0.91 (W/3)^1.02
The control efficiency of 80% is based on road sweeping on all paved areas averaged with precipitation control on 120 days.

Asphalt Plant Process Emissions (Materials Drops and Stack Emissions)

Point	Maximum annual throughput (tons/year)	Maximum daily throughput (tons/day)	Emission factor source	Wind speed u (mph)	Moisture content m %	PM10 Particle size multiplier (k)	PM10 emission factor (lb/ton)	Control efficiency %	Uncontrolled PM10 emissbns (lb/day)	Controlled PM10 emissbns (lb/day)	Uncontrolled PM10 emissbns (tons/year)	Controlled PM10 emissbns (tons/year)
Loader to Plant Hopper	121000 00	2400.00	EQUATION #3	0 50	4 00	0 35	0.0008	--	1.9	1.9	0 04	0 04
Conveyor to Plant (3 drops)	363000 00	7200.00	EQUATION #3	0 50	4 00	0 35	0 0008	--	4 3	4 3	0 11	0 11
Loader to trucks	12970 00	400 00	EQUATION #3	0 50	4.00	0 35	0 0008	--	0 2	0 2	0 00	0 00
Gravel haul in	133970 00	2400.00	EQUATION #3	0 50	4.00	0 35	0 0008	--	1 9	1 9	0 04	0 04
Drum dryer emissbns	121000 00	2400.00	Stack test, 08/20/99	--	--	0 4 (a)	0 0008	--	15 8	15 8	0.40	0.40
Aggregate Storage Pile (d)	1 acre	1 acre	EQUATION #4	--	--	0 5(b)	5.22 (c)	--	2 8	2.8	0.47	0.47
										25.94		1.06

EQUATION #3
AP 42, Section 11.2.3 Aggregate Handling and Storage Piles
E = k*(0.0032)*(U/5)^1.3/(M/2)^1.4

where: U = mean wind speed (mph)
M = material moisture content (%)
k = particle size multiplier (dimensionless)
E = emission factor (lb/ton)

Facility supplied information:
U = 8 5 mph
M = 4 %
These parameters are within the tested range for this equation.

EQUATION #4
Control of Open Fugitive Dust Sources; EPA 450/3 – 88 – 008
E (lb/acre/day) = 1.7*(s/1.5)*(365– p/235)*(f/15)

where: E = TSP emission factor
s = silt content of aggregate, percent
p = number of days with greater than or equal to 0 01" precipitation per year.
f = percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Facility supplied information:
s = silt content = 5.1% average of all piles.
f = 13%
p = 120 for annual and 0 for daily

(a) Using TSP – – > PM10 ratio of 40% as per Table 8 1 2, AP 42.
(b) Using TSP – – > PM10 ratio of 50% as per section 4.1.3 of Control of Open Fugitive Dust Sources; EPA 450/3 – 88/008
(c) Units of lbs/acre/day.
(d) Emissbns for this source based on worst case assumption of 365 continuously active days.
Emissbn factor for Drum Dryer from 08/20/99 stack test 2 1 lb/hr PM @ 140 tons/hour = 0.015 lb/ton of PM.
However an estimate of 10% above the stack test value is used for operational flex.
So the value is 2 31 lb/hr of PM @ 140 tons/hour = 0 0165 lb/ton of PM.
The PM_{10} emission factor is 0.0080 lb/ton.

Process Steps
Material drops and processes:
1) Crushed rock and blend sand delivered on site to storage piles
2) Aggregate delivered to cold feed bins from pile by front end loader
3) Aggregate proportioned and dropped onto collector belt (vented to Flexkleen baghouse).
4) Collector belt to aggregate screen and onto the drum dryer (vented to flexkleen baghouse).
5) Dried aggregate conveyed to enclosed screen to be reproportioned in a weigh hopper (vented to flexkleen baghouse)
6) Proportioned mix dropped into pug - mill mixer for blending with asphalt oil
7) Mixture dropped onto conveyor to trucks or storage silo, for 24 hr storage.
8) Asphalt oil delivered to site and pumped to storage tanks
9) Transferred to weight tanks and onto pugmill mixer for blending with aggregate.
10) Some aggregate transported off site for sales
11) Vehicle traffic on unpaved roads (80% control efficiency contingent on approved fugitive dust control plan)
a) Aggregate delivery trucks and off - site transport trucks
b) Front - end loader
c) Asphalt Oil trucks
d) Light vehicle traffic
12) Wind erosion from storage piles

PM_{10} Emissbns Summary for the Asphalt Plant based on requested limits & existing controls (permittable).				
Source Category	Map Cross Index	lbs/hr	Tons/year	Grams/sec
Vehicle Fugitives				
Loader to plant	20	0 27	0.11	0 0014
Oil tanker	21	0 03	0 01	0 0002
Asphalt trucks	22	0 41	0 15	0 0021
Gravel haul in	23	0 40	0.16	0 0021
Gravel haul out	24	0 07	0 02	0 0004
Loader to truck (sales)	25	0 03	0 01	0 0002
Misc. light vehicles	33	0.00	0.00	0 0000
Process Point and Fugitives				
Loader to Plant Hopper	26	0 08	0 04	0 0000
Conveyor to Plant (3 drops)	27	0 18	0.11	0 0009
Loader to trucks	28	0 01	0 00	0 0001
Gravel haul in	29	0 08	0 04	0 0000
Drum dryer emissbns	30	0 66	0 40	0 0035
Aggregate Storage Pile (d)	31	0 11	0 47	0 0009
Total Emissbns		2.29	1.52	

PM_{10} Gross Emissbns Summary for the Asphalt Plant		
Source category	lbs/hr	Tons/year
Unpaved Roads	0 83	0.33
Paved Roads	0 38	0.13
Processes	1.08	1.06
Total Emissbns	2.29	1.52

Concrete Plant

Maximum Capacity of Operations – Concrete Plant

The rate limiting process equipment in the Concrete Plant is the aggregate weigh hopper. The rate is 75 cubic yards/hour of finished product at the aggregate loadout. This translates to approximately 150 tons/hour of aggregate. At a rate of 24 hours of operation the daily limit is 3600 tons/day. Since the requested limit is 2360 tons/day the lower requested limit is used for the rate limiting process.

Process:

Vehicle Fugitives – Unpaved Roads

Source Description	Maximum annual Throughput (Tons per year)	Maximum daily Throughput (Tons per day)	Paved Round trip distance (ft)	Tons per load	Trips/year	VMT per year	Trips/day	VMT per day	W, mean vehicle weig tons	Mean # wheels	Annual PM10 Emission factor (lb/VMT)	Daily PM10 emission factor (lb/VMT)	Control Efficiency %	Uncontrolled PM10 emissions (lb/day)	Controlled PM10 emissions (lb/day)	Uncontrolled PM10 emissions (tons/year)	Controlled PM10 emissions (tons/year)
EQUATION #1																	
Mixer Trucks	149000.00	2970.00	1280.00	11.00	13545.45	3283.75	270.00	65.45	20.00	7.00	0.64	0.96	50.00	62.65	31.3	1.05	0.5276
Loader to Plant	119000.00	2380.00	300.00	4.00	29750.00	1690.34	595.00	33.81	22.00	4.00	0.52	0.77	50.00	26.15	13.1	0.44	0.2194
Loader to PG Hopper	30000.00	1000.00	300.00	4.00	7500.00	426.14	250.00	14.20	22.00	4.00	0.52	0.77	50.00	10.99	5.5	0.11	0.0553
Loader to Trucks	10000.00	300.00	200.00	4.00	2500.00	84.70	75.00	2.54	22.00	4.00	0.52	0.77	50.00	2.20	1.1	0.02	0.0120
Cement tanker	17500.00	420.00	1280.00	20.00	875.00	151.52	15.00	3.84	30.00	14.00	1.37	2.04	50.00	7.43	3.7	0.16	0.0819
PG trucks	30000.00	1000.00	1280.00	14.00	2142.86	519.40	71.43	17.32	21.00	7.00	0.68	0.99	50.00	17.15	8.6	0.17	0.0863
Gravel trucks	10000.00	300.00	1280.00	15.00	666.67	181.62	20.00	4.85	20.00	8.00	0.58	0.86	50.00	4.30	2.1	0.05	0.0240
Agg. haul in Trucks	159000.00	1000.00	1280.00	20.00	6115.38	1482.53	38.46	9.32	29.00	11.00	1.04	1.56	50.00	14.51	7.3	0.77	0.3872
Misc. light vehicles	0.00	0.00	1280.00	0.00	1200.00	290.91	9.20	2.23	2.00	4.00	0.10	0.14	50.00	0.32	0.2	0.01	0.0070
															72.85		1.37

The aggregate loadout is used for estimating design capacity for the process limiting rate and all other processes scaled linearly from the 1996 proposed emissions for estimation of 24 hr emissions. The annual limits are directly used as proposed in the facility submittal.

EQUATION #1:
AP42, 11.21-1 UNPAVED ROADS

where E, Emission Factor = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*(365 – p)/365)
E = Emission Factor (lb/VMT)
k = Particle Size Multiplier (dimensionless)
s = Silt Content of Road Surface Material (%)
S = Mean Vehicle Speed (mph)
W = Mean Vehicle Weight (ton)
w = Mean Number of Wheels
p = Number of Days with at least 0.01 in. Precipitation per Year

k = particle size multiplier for pm10 = 0.36
p = # of days/year with precipitation > .01" = 0 for daily and 120 for annual.
s = silt content = 8.5% as per facility provided information
S = average vehicle speed = 5 miles per hour
Control efficiency of 50% based on reasonable fugitive dust control of the Rules for Control of Air Pollution in Idaho.

Vehicle fugitives – Paved roads

	Maximum annual Throughput (Tons per year)	Maximum daily Throughput (Tons per day)	Paved Round trip distance (ft)	Tons per load	Trips/year	VMT per year	Trips/day	VMT per day	W, mean vehicle weig tons	PM10 Emission factor (lb/VMT)	Control Efficiency %	Uncontrolled PM10 emissions (lb/day)	Controlled PM10 emissions (lb/day)	Uncontrolled PM10 emissions (tons/year)	Controlled PM10 emissions (tons/year)
EQUATION #2															
Mixer Trucks	149000.00	2970.00	420.00	11.00	13545.45	300.00	270.00	21.48	20.00	0.45	60.00	9.6	3.8	0.0703	0.0313
Cement Tanker	17500.00	420.00	420.00	20.00	875.00	18.20	15.00	1.19	30.00	1.08	60.00	1.3	0.5	0.0087	0.0035
PG trucks	30000.00	1000.00	420.00	14.00	2142.86	36.00	71.43	5.88	21.00	0.48	60.00	2.7	1.1	0.0137	0.0055
Gravel Trucks	10000.00	300.00	420.00	15.00	666.67	28.70	20.00	1.58	20.00	0.45	60.00	0.7	0.3	0.0084	0.0038
Agg. haul in Trucks	159000.00	1000.00	420.00	20.00	6115.38	177.40	38.46	3.06	29.00	0.78	60.00	2.4	1.0	0.0432	0.0177
Misc light vehicles	0.00	0.00	420.00	0.00	1200.00	47.70	9.20	0.73	2.00	0.01	60.00	0.0	0.0	0.0009	0.0001
													6.69		0.07

Facility supplied information:
Particle size multiplier, k = 0.36
s = assumed to be 16 % as per submitted plant data. s is estimated from submitted silt tested to be 4.21 g/m^2.
The emission factor is estimated using new AP 42 equation, EQUATION #2: E = k*(sL/2)^0.91*(W/3)^1.02
Control efficiency based road sweeping and precipitation control of 120 days of the year.

Process Emissions (Material Drops and Stockpiles)

Point	Maximum annual throughput (tons/year)	Maximum daily throughput (tons/day)	Emission factor source	Wind speed u (mph)	Moisture content m %	PM10 Particle size multiplier (k)	PM10 emission factor (lb/ton)	Control efficiency %	Uncontrolled PM10 emissions (lb/day)	Controlled PM10 emissions (lb/day)	Uncontrolled PM10 emissions (tons/year)	Controlled PM10 emissions (tons/year)
Conveyor to Silo (a)	119000.00	2380.00	EQUATION #3	8.50	2.00	0.35	0.0016	--	3.75	3.75	0.09	0.09
Hopper to conveyor	119000.00	2380.00	EQUATION #3	8.50	2.00	0.35	0.0016	50.00	3.75	1.87	0.09	0.05
Silo to weigh (aggregate)	119000.00	2380.00	EQUATION #3	8.50	2.00	0.35	0.0016	50.00	3.75	1.87	0.09	0.05
Loader to Hopper	119000.00	2380.00	EQUATION #3	8.50	2.00	0.35	0.0016	--	3.75	3.75	0.09	0.09
Loader to Truck (Sales)	10000.00	200.00	EQUATION #3	8.50	2.00	0.35	0.0016	--	0.47	0.47	0.01	0.01
Loader to PQ Hopper	30000.00	1000.00	EQUATION #3	8.50	2.00	0.35	0.0016	--	1.58	1.58	0.02	0.02
PQ Hopper to trucks	30000.00	1000.00	EQUATION #3	8.50	2.00	0.35	0.0016	--	1.58	1.58	0.02	0.02
Silo to weigh	17500.00	305.00	0.02 lb/ton (a)	--	--	0.85	0.02	--	5.19	5.19	0.13	0.13
Weigh to truck (cement/aggregate) (e)	70000.00	1400.00	0.04 lb/cu. yd (a)	--	--	0.85	0.03	--	47.60	47.60	1.19	1.19
Cement bin vent	17500.00	420.00	0.27 lb/ton (a)	--	--	0.85	0.23	99.00	96.39	1.93	2.01	0.04
Gravel Haul to stockpile	159000.00	1000.00	EQUATION #3	8.50	2.00	0.35	0.0016	--	1.58	1.58	0.13	0.13
Aggregate storage pile (d)	1 acre	1 acre	EQUATION #4	--	--	0.5 (b)	7.9 (c)	--	3.90	3.90	0.71	0.71
										75.06		2.55

Control efficiencies from baghouses taken as submitted by facility. The level of controls applied here reflect controls existing at the time of this inventory.

The lb/hr values are calculated using the rate limiting piece of equipment which is the weigh hopper.
The maximum weigh hopper througput rate is 75 cu yd aggregate/hour
The annual throughput rate is limited at the quantity that was requested for the 1998 proposed throughput increase scenario.

EQUATION #3
AP 42, Section 11.2.3 Aggregate Handling and Storage Piles
$E = k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$
where: U = mean wind speed (mph)
M = material moisture content (%)
k = particle size multiplier (dimensionless)
E = emission factor (lb/ton)

Facility supplied information:
U = 8.5 mph for open sources and 1.1 mph for enclosed ones.
M = 4 %
These parameters are within the tested range for this equation

EQUATION #4
Ref #1: Control of Open Fugitive Dust Sources; EPA 450/3-88-008
E (lb/acre/day) = 1.7*(s/1.5)*(365-p/235)*(f/15)
where: E = TSP emission factor
s = silt content of aggregate, percent
p = number of days with precipitation per year
f = percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Facility supplied information:
s = silt content = 0.1% average of all piles.
f = 13%
p = 120 for annual and 0 for daily

(a) Table 8.10-1, AP42 and using a PM10 ratio from Appendix C-2, AP42.
(b) Using TSP --> PM10 ratio of 50% as per section 4.1.3 of Ref #1.
(c) Units of lbs/acre/day.
(d) Emissions for this source based on worst case assumption of 365 continuously active days.
(e) Units for throughput in this category are expressed in cubic yards of concrete produced, as an industry standard.

PM_{10} Emissions Summary for the Concrete Plant based on requested limits & existing controls (permittable)

Source Category	Hop Cross Index	lbs/hr	Tons/year	Grams/sec
Vehicle Fugitives				
Mixer Trucks	1	1.47	0.56	0.0077
Loader to Plant	2	0.54	0.22	0.0029
Loader to PQ Hopper	3	0.23	0.06	0.0012
Loader to Trucks	4	0.05	0.01	0.0002
Cement Tanker	5	0.19	0.08	0.0009
PQ Trucks	6	0.40	0.08	0.0021
Gravel Trucks	7	0.10	0.03	0.0005
Agg. Haul in Trucks	8	0.34	0.41	0.0018
Misc Light Vehicles	34	0.01	0.01	0.0000
Process Point and Fugitives				
Conveyor to Silo	9	0.18	0.08	0.0009
Hopper to conveyor	32	0.08	0.05	0.0004
Silo to weigh (aggregate)	10	0.08	0.05	0.0004
Loader to Hopper	11	0.18	0.08	0.0009
Loader to Truck (Sales)	12	0.02	0.01	0.0001
Loader to PQ Hopper	13	0.07	0.02	0.0003
PQ Hopper to trucks	14	0.07	0.02	0.0003
Silo to weigh	15	0.22	0.15	0.0011
Weigh to truck (cement/aggregate)	16	1.98	1.19	0.0104
Cement bin vent	17	0.08	0.04	0.0004
Gravel Haul to stockpile	18	0.07	0.13	0.0003
Aggregate storage pile	19	0.16	0.71	0.0009
Total Emissions		6.44	3.99	

PM_{10} Gross Emissions Summary for the Concrete Plant

Source Category	lb/hr	Tons/year
Unpaved Roads	3.04	1.73
Paved Roads	0.28	0.07
Processes	3.13	2.55
Total Emissions	6.44	3.99

PM_{10} Emission Inventory for Interstate Concrete & Asphalt, Sandpoint, Idaho.

Company: Interstate Concrete & Asphalt
Mailing Address: P.O. Box 1113
City/State/Zip: Sandpoint, Idaho 83864

The information in this inventory has been supplied as certified, accurate, true, and complete, from Interstate Concrete and Asphalt, by Paul Franz and Bruce Cyr of that facility.
Any changes to the utilization of the information different from original submission have been discussed and documented.

This inventory requires a PTC modification and is based on BACT. This constitutes the 1997 projected inventory.

Maximum Capacity of Operations – Asphalt Plant

This inventory is based on permit allowables and associated process throughputs related to that throughput limitation.
The rate limiting process for the Asphalt plant is the Barber Greene Model 864 Asphalt plant, which has a Permit to Construct (PTC) limiting throughput on it to 140 tons/hour. The PTC is dated June 12, 1990. The facility has requested for 200 tons/hr of throughput limitation.

A revision to 200 tons/hr of the permit limitation of 140 tons/hr will requires a PTC modification, based on conversations with Ron Hill, Air Engineer, DEQ, who worked on the PTC. Since these requested limits will requires PTC modification, calculations here are performed based on maximum throughputs that can be allowed based on the existing PTC, i.e. based on a 140 ton/hour throughput limitation on the Barber Greene Asphalt Plant and assuming 24 hours of operation per day.

Throughput	Units	Total Daily Process Throughput	Units	Total Annual Process Throughput	Units
140.00	tons/hr	3360.00	tons/day	120000.00	tons/year

Since the permit allowable maximum @ 24 hrs/day is more than the facility requested upper limit for throughput, the latter is used for computations of the daily throughput limit. On this basis the Drum Dryer will operate on the maximum (140 tons/hr) for 17 hrs/day at most. The facility has requested 2400 tons/day of throughput.

The annual limitation is calculated based on the PTC limitation of 864 hours of operation per year, of the Drum Dryer. This figure is approximated to 121000 tons/year for calculations. All other annual processes are scaled from the submitted 1996 projections proportionally.

Total Plant-wide PM_{10} Emissions Summary		
	lbs/hr	Tons/year
All Sources	0.22	2.67

Maximum throughput calculations based on requested limits and proposed BACT controls

Asphalt Batch Plant

Vehicle Fugitives – Unpaved Roads

Source Description	Maximum annual throughput (Tons per year)	Maximum daily throughput (Tons per day)	Unpaved Round trip distance (ft)	Tons per load	Trips/year	VMT per year	Trips/day	VMT per day	W Mean vehicle weight tons	w Mean # wheels	Annual PM_{10} emission factor (lb/VMT)	Daily PM_{10} emission factor (lb/VMT)	Control Efficiency %	Uncontrolled PM_{10} emissions (lb/day)	Controlled PM_{10} emissions (lb/day)	Uncontrolled PM_{10} emissions (tons/year)	Controlled PM_{10} emissions (tons/year)
LOCATION #1.																	
Loader to plant	121000.00	2400.00	300.00	4.00	30250.00	1718.75	600.00	34.09	22.00	4.0	0.52	0.77	90.00	26.37	2.64	0.45	0.04
Oil tanker	7260.00	224.00	600.00	32.00	226.88	34.38	7.00	1.06	30.00	14.0	1.42	2.12	90.00	2.25	0.23	0.02	0.00
Asphalt trucks	121000.00	2400.00	600.00	16.00	7562.50	1145.83	150.00	22.73	21.00	7.0	0.66	0.99	90.00	22.51	2.25	0.38	0.04
Gravel haul in	13070.00	2400.00	600.00	26.00	5152.69	780.71	92.31	13.99	29.00	11.0	1.04	1.56	90.00	21.77	2.18	0.41	0.04
Gravel haul out	12970.00	400.00	600.00	15.00	864.67	131.01	26.67	4.04	20.00	6.0	0.59	0.89	90.00	3.58	0.36	0.04	0.00
Loader to truck (sales)	12970.00	400.00	200.00	4.00	3242.50	122.62	100.00	3.79	22.00	4.0	0.52	0.77	90.00	2.93	0.29	0.03	0.00
Misc light vehicles	--	--	600.00	--	1200.00	181.82	8.20	1.38	2.00	4.0	0.10	0.14	90.00	0.20	0.02	0.01	0.00
															7.06		0.13

FOOTNOTES:

Notes on throughput calculation:
The maximum daily throughput based on permit allowables is estimated for the drum dryer. All other process throughputs are linearly scaled based on the proposed 1996 throughputs and rounded to the nearest 10 tons. A linear increase from the 1993 actuals yields closure difference. So the 1996 figures are used for proportioning throughputs.

LOCATION #1:
AP-42, 11.2.1-1 UNPAVED ROADS

where E, Emission Factor = $k*5.9*(s/12)*(S/30)*(W/3)^{0.7}*(w/4)^{0.5}*(365-p)/365$

E = Emission Factor (lb/VMT)
k = Particle Size Multiplier (dimensionless)
s = Silt Content of Road Surface Material (%)
S = Mean Vehicle Speed (mph)
W = Mean Vehicle Weight (ton)
w = Mean Number of Wheels
p = Number of Days with ≥ 0.01 in. Precipitation per Year

Facility provided information is used for all other parameters in the equation.
k = particle size multiplier for PM_{10} = 0.36
p = # of days/year with precipitation ≥ .01" = 91 for daily and 120 for annual
s = silt content = 8.5% as per facility provided information
S = average vehicle speed = 5 miles per hour
90% control efficiency subject to submission of a provable fugitive dust control plan.

Vehicle Fugitives – Paved Roads

Source Description	Maximum annual throughput (tons per year)	Maximum daily throughput (tons per day)	Paved Round trip distance (ft)	Tons per load	Trips/year	VMT per year	Trips/day	VMT per day	W, mean vehicle weight tons	PM_{10} Emission factor (lb/VMT)	Control Efficiency %	Uncontrolled PM_{10} emissions (lb/day)	Controlled PM_{10} emissions (lb/day)	Uncontrolled PM_{10} emissions (tons/year)	Controlled PM_{10} emissions (tons/year)
Oil tanker	7260.00	224.00	400.00	32.00	226.88	17.19	7.00	0.53	38.00	1.17	60.0	0.6	0.2	0.0109	0.0040
Asphalt trucks	121000.00	2400.00	400.00	16.00	7562.50	572.92	150.00	11.36	21.00	0.40	60.0	5.5	4.1	0.1377	0.0551
Gravel haul in	13070.00	2400.00	400.00	26.00	5152.88	390.36	92.31	8.99	23.00	0.70	60.0	5.5	4.1	0.1523	0.0609
Gravel haul out	12970.00	400.00	400.00	15.00	864.67	65.51	26.67	2.02	22.00	0.52	60.0	1.0	0.8	0.0169	0.0068
Misc. light vehicles	--	0.00	400.00	0.00	1200.00	90.91	9.20	0.70	2.00	0.01	60.0	0.0	0.0	0.0006	0.0003
													9.2		0.1270

Particle size multiplier, k = 0.016
s = assumed to be 16 % as per submitted plant data, s is estimated from submitted silt tested to be 4.21 gm^{-2}
The emission factor is estimated using new AP - 42 equation, EQUATION #2: $E = k*(s/12)^{0.9}*(W/3)^{0.45}$
The control efficiency of 60% is based on road watering on all active roads averaged with precipitation control on 120 days

Asphalt Plant Process Emissions (Materials Drops and Stack Emissions)

Point	Maximum annual throughput (tons/year)	Maximum daily throughput (tons/day)	Emission factor source	Wind speed u (mph)	Moisture content m %	PM_{10} Particle size multiplier (k)	PM_{10} emission factor (lb/ton)	Control efficiency %	Uncontrolled PM_{10} emissions (lb/day)	Controlled PM_{10} emissions (lb/day)	Uncontrolled PM_{10} emissions (tons/year)	Controlled PM_{10} emissions (tons/year)
Loader to Plant Hopper	121000.00	2400.00	EQUATION #3	6.50	4.00	0.35	0.0008	--	1.4	1.4	0.04	0.04
Conveyor to Plant (3 drops)	363000.00	7200.00	EQUATION #3	1.10	4.00	0.35	0.0001	--	0.4	0.4	0.01	0.01
Loader to trucks	12970.00	400.00	EQUATION #3	6.50	4.00	0.35	0.0008	--	0.2	0.2	0.00	0.00
Gravel haul in	13070.00	2400.00	EQUATION #3	6.50	4.00	0.35	0.0008	--	1.4	1.4	0.04	0.04
Drum dryer emissions	121000.00	2400.00	Stack test, 09/2(	--	--	0.4(a)	0.0165	--	15.8	15.8	0.40	0.40
Aggregate Storage Pile (d)	1 acre	1 acre	EQUATION #4	--	--	0.5(b)	5.22(c)	--	26	26	0.47	0.47
										21.97		0.96

The Drum Dryer vents to a baghouse

EQUATION #3
AP 42, Section 11.2.3 Aggregate Handling and Storage Piles
$E = k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$
where: U = mean wind speed (mph)
M = material moisture content (%)
k = particle size multiplier (dimensionless)
E = emission factor (lb/ton)

Facility supplied information:
U = 6.5 mph
M = 4 %
These parameters are within the tested range for this equation

EQUATION #4
Control of Open Fugitive Dust Sources; EPA 450/3-88-008
E (lb/acre/day) = $1.7*(s/1.5)*(365-p/235)*(f/15)$
where: E = TSP emission factor
s = silt content of aggregate, percent
p = number of days with greater than or equal to 0.01" precipitation per year
f = percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Facility supplied information:
s = silt content = 5.1% average of all piles
f = 10%
p = 120 for annual and 0 for daily

(a) Using TSP --> PM_{10} ratio of 40% as per Table 8.1-2, AP 42
(b) Using TSP --> PM_{10} ratio of 50% as per section 4.1.3 of Ref #1
(c) Units of lb/acre/day
(d) Emissions for the source based on worst case assumption of 365 continuously active days.
(e) Calculated based on 2.1 lb/hr increased 10% on a 140 ton/hr stack test

Process Steps
Material drops and processes:
1) Crushed rock and blend sand delivered onsite to storage piles
2) Aggregate delivered to cold feed bins from pile by front end loader
3) Aggregate proportioned and dropped onto collector belt (vented to Fleekleen baghouse).
4) Collector belt to aggregate screen and onto the drum dryer (vented to fleekleen baghouse)
5) Dried aggregate conveyed to enclosed screen to be separated into a weigh hopper (vented to fleekleen baghouse).
6) Proportioned mix dropped into pug-mill mixer for blending with asphalt oil
7) Mixture dropped onto conveyor to trucks or storage silo for 24 hr storage

8) Asphalt oil delivered to site and pumped to storage tanks
9) Transferred to weight tanks and onto pugmill mixer for blending with aggregate
10) Some aggregate transported off site for sales

11) Vehicle traffic on unpaved roads (90% control efficiency contingent on approved fugitive dust control plan)
a) Aggregate delivery trucks and off-site transport trucks
b) Front-end loader
c) Asphalt Oil trucks
d) Light vehicle traffic
12) Wind erosion from storage piles

PM_{10} Emissions Summary for the Asphalt Plant based on requested limits & BACT.

Source Category	Map Cross Index	lbs/day	Tons/year	Grams/sec
Vehicle Fugitives				
Loader to plant	20	2.64	0.04	0.0139
Oil tanker	21	0.47	0.01	0.0025
Asphalt trucks	22	6.26	0.09	0.0330
Gravel haul in	23	8.27	0.10	0.0329
Gravel haul out	24	1.14	0.01	0.0060
Loader to truck (sales)	25	0.29	0.00	0.0015
Misc. light vehicles	30	0.03	0.00	0.0001
Process Point and Fugitives				
Loader to Plant Hopper	26	1.40	0.04	0.0075
Conveyor to Plant (3 drops)	27	0.43	0.01	0.0022
Loader to trucks	28	0.24	0.00	0.0013
Gravel haul in	29	1.43	0.04	0.0075
Drum dryer emissions	30	15.84	0.40	0.0830
Aggregate Storage Pile (d)	31	2.60	0.47	0.0136
Total Emissions		39.18	1.23	

PM_{10} Gross Emissions Summary for the Asphalt Plant

Source category	lbs/hr	Tons/year
Unpaved Roads	0.30	0.13
Paved Roads	0.39	0.13
Processes	0.92	0.97
Total Emissions	1.60	1.23

Concrete Plant

Maximum Capacity of Operations – Concrete Plant

The rate limiting process equipment in the Concrete Plant is the aggregate weigh hopper. The hopper is 75 cubic yards/hour of finished product at the aggregate load out. This translates to approximately 150 tons/hour of aggregate. At a rate of 24 hours of operation the daily limit is 3600 tons/day. Since the requested daily throughput limits are lower than daily permit allowable assumions the latter is used for calculations.

Process:

Vehicle Fugitives – Unpaved Roads

Source Description	Maximum annual Throughput (Tons per year)	Maximum daily Throughput (Tons per day)	Unpaved Round trip distance (ft)	Tons per load	Trips/year	VMT per year	Trips/day	VMT per day	W, mean vehicle weight tons	Mean # wheels w	Annual PM_{10} Emission factor (lb/VMT)	Daily PM_{10} emission factor (lb/VMT)	Control Efficiency %	Uncontrolled PM_{10} emissions (lb/day)	Controlled PM_{10} emissions (lb/day)	Uncontrolled PM_{10} emissions (tons/year)	Controlled PM_{10} emissions (tons/year)
EQUATION #1																	
Mixer Trucks	149000.00	2970.00	1280.00	11.00	13545.45	3260.75	270.00	65.45	20.00	7.00	0.64	0.96	90.00	62.85	6.3	1.05	0.1055
Cement Tanker	119000.00	2200.00	300.00	4.00	29750.00	1690.34	505.00	33.61	22.00	4.00	0.52	0.77	90.00	26.15	2.6	0.44	0.0437
PG Trucks	30000.00	1000.00	300.00	4.00	7500.00	426.14	250.00	14.20	22.00	4.00	0.52	0.77	90.00	10.99	1.1	0.11	0.0111
Gravel Trucks	10000.00	300.00	200.00	4.00	2500.00	94.70	75.00	2.84	22.00	4.00	0.52	0.77	90.00	2.20	0.2	0.02	0.0025
Agg haulin Trucks	17500.00	420.00	1280.00	28.00	625.00	151.52	15.00	3.64	36.00	14.00	1.37	2.04	90.00	7.43	0.7	0.10	0.0104
Misc light vehicles	30000.00	1000.00	1280.00	14.00	2142.86	519.48	71.43	17.32	21.00	7.00	0.66	0.99	90.00	17.15	1.7	0.17	0.0173
	10000.00	300.00	1200.00	15.00	666.67	161.82	20.00	4.85	20.00	8.00	0.59	0.88	90.00	4.30	0.4	0.05	0.0049
	150000.00	1000.00	1200.00	26.00	5115.38	1462.52	38.46	9.32	29.00	11.00	1.04	1.56	90.00	14.51	1.5	0.77	0.0774
	0.00	0.00	1200.00	0.00	1200.00	290.91	9.20	2.23	2.00	4.00	0.10	0.14	90.00	0.32	0.0	0.01	0.0014
															14.57		0.27

The aggregate load out is used for estimating design capacity. The process limiting rate and all other processes scaled linearly from the 1998 proposed emissions for estimation of 24-hr emissions. The annual limits are directly used as proposed in the facility submittal.

EQUATION #1:
AP-42 11.2.1 – UNPAVED ROADS

where E, Emission factor = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*(365 - p)/365)

E = Emission Factor (lb/VMT)
k = Particle Size Multiplier (dimensionless)
s = Silt Content of Road Surface Material (%)
S = Mean Vehicle Speed (mph)
W = Mean Vehicle Weight (ton)
w = Mean Number of Wheels
p = Number of Days with at least 0.01 in. Precipitation per Year

k = particle size multiplier for PM_{10} = 0.36
p = # of days/year with precipitation > .01" = 0 for daily and 120 for annual
s = silt content = 6.5% as per facility provided information
S = average vehicle speed = 5 miles per hour
Control efficiency of 90% subject to submission of approvable fugitive dust control plan.

Vehicle fugitives – Paved roads

	Maximum annual Throughput (Tons per year)	Maximum daily Throughput (Tons per day)	Paved Round trip distance (ft)	Tons per load	Trips/year	VMT per year	Trips/day	VMT per day	W, mean vehicle weight tons	PM_{10} Emission factor (lb/VMT)	Control Efficiency %	Uncontrolled PM_{10} emissions (lb/day)	Controlled PM_{10} emissions (lb/day)	Uncontrolled PM_{10} emissions (tons/year)	Controlled PM_{10} emissions (tons/year)
EQUATION #2															
Mixer Trucks	149000.00	2970.00	420.00	11.00	13545.45	350.00	270.00	21.46	20.00	0.45	80.00	8.6	3.0	0.0783	0.0313
Cement Tanker	17500.00	420.00	420.00	28.00	625.00	16.20	15.00	1.19	36.00	1.08	80.00	1.3	0.5	0.0087	0.0035
PG trucks	30000.00	1000.00	420.00	14.00	2142.86	55.60	71.43	5.68	21.00	0.46	80.00	2.7	1.1	0.0137	0.0055
Gravel Trucks	10000.00	300.00	420.00	15.00	666.67	20.70	20.00	1.58	20.00	0.45	80.00	0.7	0.3	0.0064	0.0026
Agg haulin Trucks	150000.00	1000.00	420.00	26.00	5115.38	177.40	38.46	3.06	29.00	0.79	80.00	2.4	1.0	0.0692	0.0277
Misc light vehicles	0.00	0.00	420.00	0.00	1200.00	47.70	9.20	0.73	2.00	0.01	80.00	0.0	0.0	0.0003	0.0001
													6.60		0.07

Facility supplied information:
Particle size multiplier, k = 0.016
s = assumed to be 16 % as per submitted plant data, s is estimated from submitted silt tested to be 4.21 gm^-m^2
The emission factor is estimated using new AP-42 equation, EQUATION #2: E = k*(s/2)^0.8*(W/3)^0.4

Process Emissions (Material Drops and Stockpiles)

Point	Maximum annual throughput (tons/year)	Maximum daily throughput (tons/day)	Emission factor source	Wind speed u (mph)	Moisture content m %	PM_{10} Particle size multiplier (k)	PM_{10} emission factor (lb/ton)	Control efficiency %	Control Device	Uncontrolled PM_{10} emissions (lb/day)	Controlled PM_{10} emissions (lb/day)	Uncontrolled PM_{10} emissions (tons/year)	Controlled PM_{10} emissions (tons/year)
Conveyor to Silo	119000.00	2000.00	EQUATION #3	1.10	2.00	0.35	0.0002	--	Enclosed Drop Point	0.3723	0.37	0.01	0.01
Hopper to conveyor	119000.00	2000.00	EQUATION #3	1.10	2.00	0.35	0.0002	--	Enclosed Drop Point	0.3723	0.37	0.01	0.01
Silo to weigh (aggregate)	119000.00	2000.00	EQUATION #3	1.10	2.00	0.35	0.0002	--	Enclosed Drop Point	0.3723	0.37	0.01	0.01
Loader to Hopper	119000.00	2000.00	EQUATION #3	6.50	2.00	0.35	0.0018	--		3.7491	3.75	0.09	0.09
Loader to Truck (Silos)	10000.00	300.00	EQUATION #3	6.50	2.00	0.35	0.0018	--		0.4726	0.47	0.01	0.01
Loader to PQ Hopper	30000.00	1000.00	EQUATION #3	6.50	2.00	0.35	0.0018	--		1.58	1.58	0.02	0.02
PQ Hopper to trucks	30000.00	1000.00	EQUATION #3	1.10	2.00	0.35	0.0002	--	Enclosed Drop Point	0.16	0.16	0.00	0.00
Silo to weigh	17500.00	305.00	0.02 lb/ton (b)	--	--	0.65	0.02	98.00	Mini - Baghouse	5.18	0.10	0.15	0.00
Weigh to truck (cement/aggregate) (e)	70000.00	1400.00	0.0410 lb/cu. yd (b)	--	--	0.65	0.03	95.00	Scav. Fan to B House	47.60	2.38	1.18	0.06
Cement bin vent	17500.00	420.00	0.27 lb/ton (b)	--	--	0.65	0.23	98.00	Baghouse	96.39	1.93	2.01	0.04
Gravel Haul to stockpile	150000.00	1000.00	EQUATION #3	6.50	2.00	0.35	0.0018	--		1.58	1.58	0.13	0.13
Aggregate storage pile (d)	1 acre	1 acre	EQUATION #4	--	--	0.5 (b)	7.0 (c)	--		3.90	3.90	0.71	0.71
											16.98		1.10

Control efficiencies from baghouse vendor as requested

The lb/hr values are calculated using the site limiting piece of equipment which is the weigh hopper.
The maximum weigh hopper throughput rate is 75 cu yds aggregate/hour
The annual throughput rates limited at the quantity that was requested for the 1998 proposed throughput increase scenario.

EQUATION #3
AP 42, Section 11.2.3 Aggregate Handling and Storage Piles
$E = k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$
where: U = mean wind speed (mph)
M = material moisture content (%)
k = particle size multiplier (dimensionless)
E = emission factor (lb/ton)

Facility supplied information:
U = 6.5 mph for open sources and 1.1 mph for enclosed ones
M = 4 %
These parameters are within the tested range for this equation.

EQUATION #4
Control of Open Fugitive Dust Sources, EPA 450/3-88-008
E (lb/acre/day) = 1.7*(s/1.5)*(365-p/235)*(f/15)
where: E = TSP emission factor
s = silt content of aggregate, percent
p = number of days with greater than or equal to 0.01" precipitation per year
f = percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Facility supplied information:
s = silt content = 5.1% average of all piles
f = 13%
p = 120 for annual and 0 for daily

(a) Table 6.10-1, AP42 and using PM_{10} ratio from Appendix C-2, AP42
(b) Using TSP --> PM_{10} ratio of 50% as per section 4.1.3 of Rd #1
(c) Units of lb/acre/day
(d) Emissions for this source based on worst case assumption of 365 continuously active days
(e) Units for throughput in this category are expressed in cubic yards of concrete produced, as an industry standard.
Enclosed drop points are estimated to have a significant decrease in wind speeds affecting the process.
The decrease from 6.5 mph to 1.1 mph is an engineering judgement factor.

PM_{10} Emissions Summary for the Concrete Plant (based on requested limits and BACT Controls. (PTC M-00.)

Source Category	Map Cross Index	lbs/day	Tons/year	Grams/sec
Vehicle Fugitives				
Mixer Trucks	1	10.10	0.14	0.0530
Loader to Plant	2	2.61	0.04	0.0137
Loader to PQ Hopper	3	1.10	0.01	0.0058
Loader to Trucks	4	0.22	0.00	0.0012
Cement Tanker	5	1.26	0.01	0.0066
PQ Trucks	6	2.81	0.02	0.0147
Gravel Trucks	7	0.71	0.01	0.0037
Agg Haulen Trucks	8	2.41	0.11	0.0126
Misc Light Vehicles	34	0.04	0.00	0.0002
Process Point and Fugitives				
Conveyor to Silo	9	0.37	0.01	0.0020
Hopper to conveyor	30	0.37	0.01	0.0020
Silo to weigh (aggregate)	10	0.37	0.01	0.0020
Loader to Hopper	11	3.75	0.09	0.0197
Loader to Truck (Silos)	12	0.47	0.01	0.0025
Loader to PQ Hopper	13	1.58	0.02	0.0083
PQ Hopper to trucks	14	0.16	0.00	0.0008
Silo to weigh	15	0.10	0.00	0.0005
Weigh to truck (cement/aggregate)	16	2.38	0.06	0.0125
Cement bin vent	17	1.93	0.04	0.0101
Gravel Haul to stockpile	18	1.58	0.13	0.0083
Aggregate storage pile	19	3.90	0.71	0.0205
Total Emissions		20.22	1.44	

PM_{10} Gross Emissions Summary for the Concrete Plant

Source category	lbs/hr	Tons/year
Unpaved Roads	0.81	0.27
Paved Roads	0.26	0.07
Processes	0.71	1.10
Total Emissions	1.58	1.44

PM_{10} Emission Inventory for L.D. McFarland Company, Sandpoint, ID.

Company: LD McFarland Pole Company.
Mailing Address: P.O. Box 1356
City/State/Zip: Sandpoint, Idaho 83864

The information in this inventory has been generated from truthful, accurate, and complete certified information submitted by Les Lonning of L.D. McFarland. by Les Lonning, L.D. McFarland, Tacoma, WA.

Contacts: Les Lonning/Thor Bendiksen
Phone: (206)/572-3033
Fax: (206)/627-0764

Nature of Business: Pole treatment facility.

Current Permit Status: The Wigwam Burner has a permit stipulating cessations of operations from this source.

UTM Coordinates of Facility (KM): 532.4; 5347.90

Brief Process Description:

The facility receives processed and unprocessed poles for treatment with preservatives to increase the durability of the poles, for various end uses. Finished poles are stockpiled for subsequent treatment, and the unfinished poles are peeled and finished. The poles are dipped in preservative solution in vats, where the solution is heated to a temperature of 180 °F, by a natural gas boiler. PM10 emissions are generated mainly by the pole peeler, the natural gas boiler, and the various transportation activities that occur in moving the poles from process to process.

A wigwam burner which is on site, is currently shut down by an operating permit, and is being used for storage of peeling waste. The waste is transported pnuematically by a cyclone to the wigwam and some emissions are also estimated from the cyclone. Finished poles are subsequently transported off-site by trucks.

Emission Inventory Projection

Maximum Capacity of Operations

The vats are the rate limiting piece of process equipment at the plant. A typical average weight of 0.6532 tons/pole is utilized in this calculation. This average weight is obtained by assuming all the poles to be Barkle Poles, which is a worst case scenario. This throughput limitation has been accepted by L.D. McFarland as an acceptable upper limit for their production levels in future years.

Maximum Throughput	Units	Annual Hours per year	Annual Throughput through vats	Units	Annual Throughput through vats	Units
7.00	poles/hour	4992.00	34944.00	poles/yr	22842.89	tons/yr

All calculations will be based on this requested operational limit, pending changes based on attainment demonstration.

Capacity Derivation:

The maximum capacity is derived based on an assumption of maximum of 16 hour/day, 6 days/week and 52 weeks/ year, which is 4992 hours/year, of operations processing 1003392 ft^3/year of poles per year.

Rate/hour = 1003392/4992 = 201 ft^3/hr, @29.79 ft^3/pole = 6.75 or 7 poles/hour.

Controlled Potential to Emit (Assumes enforceable permit requirements on pollution control equipment and practices).

Process:

Source Description	Max Hourly Throughput	Units	Maximum Annual Throughput	Units	hr/year	Average weight per peeled pole (tons)	PM_{10} Fraction (%/100)	Control Efficiency (%/100)**	Emission Factor	Units	Uncontrolled Emission (lb/hr)	Uncontrolled Emission (ton/yr)	Controlled Emission (lb/hr)	Controlled Emission (ton/yr)
Pole Peeler (1)	14 37	tons per hour	22842.69	tons per year	4992.00	0.65	0.55	0.00	0 024	lbs/ton	0.190	0.151	0.190	0.151
Wigwam Burner Cyclone (2)	1 32	tons per hour	6605.00	tons per year	4992.00	0.65	0.40	0.00	2.000	lbs/hr	0.800	1.997	0.800	1.997
Natural Gas Boiler (3)	0.01	lbs/10^6 BTU/hr	50.32	10^6 scf/year	7466.00	0.65	1.00	0.00	12.00	lb/10^6 cu. ft	0.081	0.302	0.081	0.302
													1.07	2.45

(1) Units for the emission factor are 0.024 lb/ton, AP-42: 10.3-1, Log Debarking.

(2) Assuming peeling waste to be 30% by weight of poles on an average:
Quantity of waste = 22018 * 30/100 = 6605.4 tons/year.
AP-42: 10.4.1 TSP emissions of 2 lb/hr is used as a direct emission rate from this source.
The hours per year fro this operation is based on the worst case assumption that the cyclone operates for the entire time that the peeler is operating. On this basis we obtain the following numbers:
6605 tons/year / 4992 hours/year = 1.32 tons/hour.

(3) Using a maximum of 6.72 * 10^6 BTU/hr and using an average heating value of 1000 BTU/scf for the fuel used the hourly fuel usage is:
6.72 * 10^6 BTU/hr * 1/1000 scf/BTU = 6720 scf/hr = 0.00672*10^6 cu. ft/hr
Units for hourly and annual throughputs are in standard cubic feet/hr and standard cubic feet/year.
Units for emission factor is 12.0 lb/10^6 cu. ft, AP-42: Table 1.4-1.

As per facility diagram and aerial photos (scale 1 7300, obtained from ITD) there are anywhere from 42-45 piles on the property, covering an approximate area of 5.74 acres. Conversations with EPA Region X, Washington DOE, and industry reveal that emissions from storage piles as such are smaller and insignificant compared to activity around storage piles and related emissions. So it is recommended by EPA and other experienced agencies that a quantification of activity data around piles is an adequate characterization of the emissions generated due to existence of piles in the property.

Summary of Projected PM_{10} Emissions from LD McFarland Co.

Source	lb/hr	Tons/year	grams/sec
Process Emissions			
Pole Peeler	0.19	0.15	0.02
Wigwam Burner Cyclone	0.80	2.00	0.10
Natural Gas Boiler	0.08	0.30	0.01
Vehicle Fugitives			
Petibones - log transfers/handling	1 14	2.29	0.14
Petibones - Wigwam to Storage pile	0.01	0.02	0.00
Petibones - Storage pile to Trucks	0.04	0.08	0.01
Log trucks (to and from site)	0 07	0.13	0.01
Total PM10 Emissions	2 33	4.97	

LD McFarland Vehicle Fugitives

Unpaved Roads – Vehicle Fugitives

Source Description	Miles Travel Per Hour	Miles Travel Per Year	k	s %	S mph	W ton	w	P	E lb/VMT	Control Equipment	Control Efficiency %/100	Uncontrolled Emissions (lb/hr)	Uncontrolled Emissions (ton/yr)	Controlled Emissions (lb/hr)	Controlled Emissions (ton/yr)
Concrete Batching (EQUATION #2)															
Petibones – log transfers/handling	0.57	2352.06	0.36	5.00	5.00	23.00	4.00	120.00	0.412	Water & Oiling	0.65	0.35	0.46	0.12	0.17
Petibones – Wigwam to Storage pile	0.07	278.22	0.36	5.00	5.00	23.00	4.00	120.00	0.412	Water & Oiling	0.65	0.04	0.06	0.01	0.02
Petibones – Storage pile to Trucks	0.03	120.52	0.36	5.00	5.00	23.00	4.00	120.00	0.412	Water & Oiling	0.65	0.02	0.02	0.01	0.01
Log trucks (to and from site)	0.04	181.79	0.36	5.00	5.00	13.50	18.00	120.00	0.602	Water & Oiling	0.65	0.04	0.05	0.01	0.02
														0.16	0.22

EQUATION #1:
AP42, 11.2.1-1 UNPAVED ROADS

where: E, Emission Factor = $k*5.9*(s/12)*(S/30)*(W/3)^{0.7}*(w/4)^{0.5}*(365-p)/365$
E = Emission Factor (lb/VMT)
k = Particle Size Multiplier (dimensionless)
s = Silt Content of Road Surface Material (%)
S = Mean Vehicle Speed (mph)
W = Mean Vehicle Weight (ton)
w = Mean Number of Wheels
p = Number of Days with at least 0.01 in. Precipitation per Year

Paved Roads – Vehicle Fugitives

Source Description	Miles Travelled Per Hour	Miles Travelled Per Year	k	sL g/m^2	S mph	W ton	E lb/VMT	Control Technique	Control Efficiency %/100	Uncontrolled Emissions (lb/hr)	Uncontrolled Emissions (ton/yr)	Controlled Emissions (lb/hr)	Controlled Emissions (ton/yr)
Concrete Batching (EQUATION #2)													
Petibones – log transfers/handling	0.85	3527.68	0.016	12.00	5.00	23.00	2.000	Sweepers	0.40	1.70	3.53	1.02	2.12
Petibones – Storage pile to Trucks	0.03	120.52	0.016	12.00	5.00	23.00	2.000	Sweepers	0.40	0.06	0.12	0.03	0.07
Log trucks (to and from site)	0.10	424.32	0.016	12.00	5.00	13.50	0.899	Sweepers	0.40	0.09	0.19	0.06	0.11
												1.11	2.30

EQUATION #2

The emission factors estimated using new AP-42 equation: $E(lb/VMT) = k*(sL/2)^{0.91}(W/3)^{1.3}$

Where k = particle size multiplier
sL = silt loading in gm^{-2} = 12 g/m^2 as per facility information.
W = Mean vehicle weight in tons

Assigned control efficiency of 60% for 120 days of ≥ 0.01" of precipitation and daily watering of roads.

Mile Travelled Calculations:
Annual: The VMT annual information submitted by the facility is linearly increased to the future year production figure and proportioned between unpaved and paved road segments as specified by the facility. The paved to unpaved travel ratio ranges from 60% to 70% on the average
Hourly: The number of hours of facility operations are assumed based on 16 hrs/day, 5 day/week, 52 weeks/year as 4160 hours/year.

1993 Actual Emission Inventory

The 1993 actual inventory is prepared based on the operational data for 1993 as provided by the facility. This information is taken to be accurate, truthful, and complete as certified by Les Lonning of this company.

Process:

Source Description	Max Hourly Throughput	Units	Maximum Annual Throughput	Units	hours/year	Average weight per peeled pole (tons)	PM_{10} Fraction (%/100)	Control Efficiency (%/100)**	Emission Factor	Units	Uncontrolled Emission (lb/hr)	Uncontrolled Emission (ton/yr)	Controlled Emission (lb/hr)	Controlled Emission (ton/yr)
Pole Peeler (1)	14.37	tons per hour	6239.00	tons per year	923.00	0.65	0.55	0.00	0.024	lbs/ton	0.190	0.054	0.190	0.054
Wigwam Burner Cyclone (2)	1.32	tons per hour	2392.00	tons per year	923.00	0.65	0.40	0.00	2.000	lbs/hr	0.800	0.369	0.800	0.369
Natural Gas Boiler (3)	0.01	lbs/10^6 BTU/hr	31.11	10^6 scf/year	4630.00	0.65	1.00	0.00	12.00	lb/10^6 cu. ft	0.081	0.187	0.081	0.187
													1.07	0.61

(1) Units for the emission factor are 0.024 lb/ton, AP-42: 10.3-1, Log Debarking.

(2) Assuming peeing waste to be 30% by weight of poles on an average:
Quantity of waste = 22018 * 30/100 = 6605.4 tons/year.
AP-42: 10.4.1 TSP emissions of 2 lb/hr is used as a direct emission rate from this source.
The hours per year fro this operation is based on the worst case assumption that the cyclone operates for the entire time that the peeler is operating. On this basis we obtain the following numbers:
6605 tons/year / 4992 hours/year = 1.32 tons/hour.

(3) Using a maximum of 6.72 * 10^6 BTU/hr and using an average heating value of 1000 BTU/scf for the fuel used the hourly fuel usage is:
6.72 * 10^6 BTU/hr * 1/1000 scf/BTU = 6720 scf/hr = 0.00672*10^6 cu. ft/hr
Units for hourly and annual throughputs are in standard cubic feet/hr and standard cubic feet/year.
Units for emission factor is 12.0 lb/10^6 cu. ft, AP-42: Table 1.4-1.
In 1993 the boiler operated for 4630 hours with 40% of this time at idle. So a consideration of 4630 hours of full-blown operations would constitute a conservative estimate.

As per facility diagram and aerial photos (scale 1:7300, obtained from ITD) there are anywhere from 42-45 piles on the property, covering an approximate area of 5.74 acres. Conversations with EPA Region X, Washington DOE, and Industry reveal that emissions from storage piles as such are smaller and insignificant compared to activity around storage piles and related emissions. So it is recommended by EPA and other experienced agencies that a quantification of activity data around piles is an adequate characterization of the emissions generated due to existence of piles in the property.

Summary of 1993 Actual PM_{10} Emissions from LD McFarland Co.			
Source	lb/hr	Tons/year	grams/sec
Process Emissions			
Pole Peeler	0.19	0.05	0.02
Wigwam Burner Cyclone	0.80	0.37	0.10
Natural Gas Boiler	0.08	0.19	0.01
Vehicle Fugitives			
Petibones - log transfers/handling	1.02	1.13	0.13
Petibones - Wigwam to Storage pile	0.01	0.00	0.00
Petibones - Storage pile to Trucks	0.01	0.02	0.00
Log trucks (to and from site)	0.09	0.10	0.01
Total PM10 Emissions	2.20	1.86	

LD McFarland Vehicle Fugitives

Unpaved Roads – Vehicle Fugitives

Source Description	Miles Travel Per Hour	Miles Travel Per Year	k	s %	S mph	W ton	w	P	E lb/VMT	Control Equipment	Control Efficiency %/100	Uncontrolled Emissions (lb/hr)	Uncontrolled Emissions (ton/yr)	Controlled Emissions (lb/hr)	Controlled Emissions (ton/yr)
Concrete Batching (EQUATION #2)															
Petibones – log transfers/handling	0.56	1304.00	0.36	5.00	5.00	23.00	4.00	120.00	0.412	Water & Oiling	0.65	0.35	0.27	0.12	0.09
Petibones – Wigwam to Storage pile	0.02	55.00	0.36	5.00	5.00	23.00	4.00	120.00	0.412	Water & Oiling	0.65	0.01	0.01	0.01	0.00
Petibones – Storage pile to Trucks	0.01	24.00	0.36	5.00	5.00	23.00	4.00	120.00	0.412	Water & Oiling	0.65	0.01	0.00	0.00	0.00
Log trucks (to and from site)	0.06	133.00	0.36	5.00	5.00	13.50	16.00	120.00	0.602	Water & Oiling	0.65	0.05	0.04	0.02	0.01
														0.15	0.11

EQUATION #1:
AP42, 11.2.1-1 UNPAVED ROADS

where E, Emission Factor = $k*5.9*(s/12)*(S/30)*(W/3)^{0.7}*(w/4)^{0.5}*(365-p)/365$

E = Emission Factor (lb/VMT)
k = Particle Size Multiplier (dimensionless)
s = Silt Content of Road Surface Material (%)
S = Mean Vehicle Speed (mph)
W = Mean Vehicle Weight (ton)
w = Mean Number of Wheels
p = Number of Days with at least 0.01 in. Precipitation per Year

Paved Roads – Vehicle Fugitives

Source Description	Miles Travelled Per Hour	Miles Travelled Per Year	k	sL g/m^2	S mph	W ton	E lb/VMT	Control Technique	Control Efficiency %/100	Uncontrolled Emissions (lb/hr)	Uncontrolled Emissions (ton/yr)	Controlled Emissions (lb/hr)	Controlled Emissions (ton/yr)
Concrete Batching (EQUATION #2)													
Petibones – log transfers/handling	0.75	1733.00	0.016	12.00	5.00	23.00	2.000	Sweepers	0.40	1.50	1.73	0.90	1.04
Petibones – Storage pile to Trucks	0.01	24.00	0.016	12.00	5.00	23.00	2.000	Sweepers	0.40	0.02	0.02	0.01	0.01
Log trucks (to and from site)	0.13	309.00	0.016	12.00	5.00	13.50	0.899	Sweepers	0.40	0.12	0.14	0.07	0.08
												0.98	1.14

EQUATION #2

The emission factor is estimated using new AP-42 equation: $E(lb/VMT) = k*(sL/2)^{0.65}(W/3)^{1.5}$

Where k = particle size multiplier
sL = silt loading in gm^{-2} = 12 g/m^2 as per facility information.
W = Mean vehicle weight in tons

Assigned control efficiency of 60% for 120 days of ≥ 0.01" of precipitation and daily watering of roads.

Miles Travelled Calculations:

Annual: The VMT annual information submitted by the facility is utilized directly to obtain the VMT and is proportioned between unpaved and paved road segments as specified by the facility. The paved to unpaved travel ratio ranges from 60% to 70% on the average.

Hourly: The number of hours of facility operations are assumed based on a conservative assumption of the vehicle activity taking place atleast for the time that the process operates, which is 289 days @8 hrs/day is 2312 hrs/yr.

APPENDIX C: AREA & MOBILE SOURCE EMISSIONS

I. INTRODUCTION

A. BACKGROUND

Sandpoint, Idaho has been designated as a non-attainment area for PM_{10} by the EPA, based on violations of the 24-hour standard. Idaho is therefore required by Section 110 of the Federal Clean Air Act to submit a State Implementation Plan (SIP) for Sandpoint. This SIP must show strategies for attainment and maintenance of PM_{10} standards. Development of comprehensive emission inventories is an integral part of the SIP.

B. APPROACH

This report, prepared by the Idaho Division of Environmental Quality (DEQ), serves to summarize the procedures and results of a PM_{10} area and mobile source emission inventory for the Sandpoint nonattainment area. The 1993 Sandpoint Area SIP included an emission inventory for 1990, 1994, and 1997. A series of events has lead to several revisions of the 1993 Sandpoint Area SIP which has included modifications of the emission inventory. For the 1995 SIP, the 1990 emission inventory was not included because it was not applicable to the modeling analysis DEQ had to complete. The 1994 and 1997 emission inventories were updated to include corrected emission calculations and control efficiencies, however no changes were made to the activity data base for these time periods.

The Sandpoint area and mobile source PM_{10} emission inventory is of crucial importance since these sources constitute the highest contribution to Sandpoint's particulate problems. The procedures for completing the emission inventory included identifying the emission sources, collecting data, and calculating emissions from these sources.

The geographic area included in the inventory encompassed the cities of Sandpoint, Ponderay and Kootenai. The inventoried area was further divided into grid cells to apportion PM_{10} emissions for modeling purposes.

C. AREA AND MOBILE SOURCES

Table 1 shows the complete inventory of area and mobile sources applicable to the Sandpoint non-attainment area. These sources were identified by consulting the following documents: 1) ***Procedures for Emission Inventory Preparation Volume III: Area Sources, EPA-450/4-81-026c, September 1981***, and 2) ***Procedures for Emission Inventory Preparation Volume IV: Mobile Sources, EPA-450/4-81-026d, December 1988.***

Area sources were divided into the following categories: 1) residential, commercial and industrial fuel combustion, 2) fugitive dusts from construction activities, 3) fugitive road dust, 4) miscellaneous burning, and 5) agricultural tilling.

Mobile sources were segregated into the following categories: 1) vehicle traffic (tail pipe emissions), 2) transportation tire and brake wear, 3) aircraft emissions, and 4) railroad locomotives.

Table C-1: Area and Mobile Source Categories Applicable to the Sandpoint Area

Area Sources

Residential, commercial, and industrial fuel combustion
- home heating oil combustion (distillate #1 and #2)
- natural gas combustion
- wood stove/fireplace

Fugitive dust from construction activities
- building construction
- road construction

Fugitive road dust
- vehicle traffic on paved roads
- vehicle traffic on unpaved roads
- vehicle traffic on roads applied with anti-skid material

Miscellaneous burning
- forest wild fires
- structural fires
- managed burning (slash/leaves/prescribed burning)

Agricultural tilling

Mobile Sources

Vehicle traffic (tailpipe emissions)
- light duty gasoline
- light duty trucks 1
- light duty trucks 2
- heavy duty gasoline
- heavy duty diesel

Transportation tire and brake wear

Aircraft emissions
- civil
- military

Railroad Locomotives

II. IDENTIFIED SOURCES

The sources identified in Sandpoint represent non-point sources that are emitted within the boundary of the inventory area. These sources are area sources, such as residential heating, and mobile sources generated by vehicular traffic and other transportation modes.

A. STATIONARY AREA SOURCES

1. *Residential, Commercial, & Industrial Fuel Combustion*

Residential fuel combustion involve usage of oil, natural gas and wood. Heating oil generally used in Sandpoint is of two types, distillate #1 or #2.

2. *Fugitive Dust from Construction Activities*

These emissions result from the disturbance of earth due to road construction and residential, commercial, and industrial building construction activities.

3. *Fugitive Road Dust*

Fugitive road dust is generated due to vehicular traffic on paved and unpaved roads. Applications of wintertime anti-skid material increases the quantity of dust on paved roads, and therefore, enhances emissions generated by vehicular traffic on the roadway.

4. *Miscellaneous Burning*

Miscellaneous burning emissions consist of forest wild fires, structural fires and managed burning. The miscellaneous burning emissions vary by season, with the exception of structural fires.

B. MOBILE SOURCES

1. *Vehicle Tailpipe Emissions*

Tailpipe emissions result from the combustion of gasoline/diesel fuel used by automobiles and trucks. In this analysis, cars, light duty trucks and heavy duty trucks are considered.

2. *Transportation Tire and Brake Wear Emissions*

The particles emitted from vehicle tires and brakes are known to be related to the traffic type and use. These sources are considered in our analysis.

3. *Aircraft Emissions*

The emissions from aircraft are based on the landing, idle and take off cycles (LTOs) performed by the different aircraft at the Sandpoint airport.

4. *Railroad Locomotive Emissions*

The emissions from railroad locomotives are a function of fuel usage and the emission factor.

III. PRIMARY DATA COLLECTION

A. HOUSEHOLD DATA

1. *Approach*

For some area sources, the quantity of PM_{10} emissions released in the airshed is dependent upon the number of households (occupied dwelling units) within the area of concern. Such sources include residential wood stoves, fireplaces, gas furnaces, and oil furnaces.

The number of housing units was obtained from data collected by Intermountain Demographics. According to Intermountain Demographics, household data are based primarily on 1990 U. S. Census block data. Additional methods included field verification, subdivision development patterns, and discussions with local planners. Households were calculated by multiplying the number of housing units in a block or grid cell by the 1990 census block group occupancy rate. Subsequently, an occupancy factor for each grid cell was applied.

The total number of occupied houses in 1990 was counted as 2,816. Growth factors for the area were used to adjust the number of occupied households for future years. This data would be crucial for determining emissions from area sources including residential wood stoves, fireplaces, gas furnaces, oil furnaces, and coal furnaces.

2. *Quality Assurance*

The household data were rated excellent or reasonable by Intermountain Demographics. Most of the data was field checked. Other quality control measures taken included double checking all manual calculations, and reviewing and cross checking the computer files.

B. VEHICLE MILES TRAVELED DATA

1. *Approach*

Vehicle miles traveled (VMT) is required to compute the emissions due to vehicular traffic on roads, vehicle tailpipe, and brake and tire wear. The VMT is usually obtained for paved and unpaved roads. Paved roads were categorized as local, collector, artery and highway.

VMT with respect to roadway categories was obtained from Intermountain Demographics. According to Intermountain Demographics, VMT was available from three sources. The Idaho Transportation Department (ITD) has VMT for the state highways and secondary roads in the Sandpoint non-attainment area. Additional information was provided by the Sandpoint Independent Highway District, the Bonner County Road Department, and field verification.

For other areas not covered by the available data, VMT was estimated by Intermountain Demographics. The estimation for a zone was based on the number of households in that zone, trip rate (number of trips per day), and the average trip or segment length. The number of households was counted from the United States Census block data. The mileage was calculated from USGS maps, ITD maps, and maps generated by the Sandpoint Independent Highway District.

The available data and the estimation of VMT were collected into grids with coordinates to signify the area. The data were summed up for 1990 and the total 1990 VMT by road type for the Sandpoint area are as follows: 10,034 VMT/day for local streets, 23,316 VMT/day for collectors, and 107,528 VMT/day for highways. VMT growth projections for the area were used to forecast VMT for 1994 and 1997.

The VMT for unpaved roads in the Sandpoint area was obtained in a similar way as that of the paved roads. For unpaved roads, the summation yielded 1465 VMT/day. This would be assumed as unpaved local streets.

2. *Quality Assurance*

Vehicle Miles Traveled data from the ITD were verified by Intermountain Demographics with the mileage calculated from Bonner County assessor maps, ITD maps, and ITD Milepost Log database.

IV. EMISSION CALCULATIONS

A. BASE YEAR - 1990

As discussed earlier in this appendix, the 1990 emissions are not applicable to the attainment demonstration and modeling analysis provided in this report. Therefore, the 1990 emission calculation are not presented here.

V. 1994 AND 1997 PROJECTIONS

A. EXPLANATION OF PROJECTION METHODS

1. *Residential Wood Combustion*

Residential wood combustion emissions are assumed to increase with the increase in the number of occupied households. The population of the Sandpoint area is predicted to increase from 1990 to 1997. The IMD report presents the population and occupied household projections for 1994 and 1997. The assumptions used to calculate projected residential wood combustion emissions are simplified down to adjusting for changes in the number of occupied households. All other distributions and activity levels are assumed to remain constant. This is a conservative approach that will result in a maximum estimate of the residential wood combustion emissions for each of the projected years.

2. *Residential Natural Gas Combustion*

The increase in emissions from natural gas is based on projected future sales as reported by Washington Water and Power. Separate projections are made for residential, commercial, and industrial use. The emissions due to natural gas for 1994 and 1997 are expected to increase over the 1990 levels.

3. *Building and Road Construction*

Building construction emissions for the Sandpoint area in 1990 are assumed to be high due to one major construction project, a new school in Sandpoint, which accounted for almost eighty percent of the emissions calculated for 1990. Road construction in the Sandpoint area during 1990 did not contribute any calculable emissions. Having major building projects the size of a new school, and the absence of any road construction are not assumed to be normal yearly events, but the norm is assumed to fall somewhere in the middle. Lacking the ability to forecast a specific years construction levels, projections for the 1994 and 1997 construction emissions are assumed to be equal to the combined 1990 road and building construction emissions, therefore the 1990 construction emissions will be used.

4. *Miscellaneous Burning*

No significant changes above the 1990 level of emissions are expected for open burning in the projected years.

5. *Fugitive Road Dust*

Fugitive road dust is assumed to increase proportionately with the vehicle miles traveled, as projected by Intermountain Demographics.

6. *Tailpipe, Brake, and Tire Wear*

Mobile source emissions due to tailpipe, brake and tire wear are proportional to changes in VMT in all projected years.

7. *Aircraft*

According to the Airport Development Group, Aeronautics Bureau, Idaho Transportation Department, there will be no change during the projected years.

8. *Railroad Locomotives*

Based on information provided by the Idaho Transportation Department, no significant change is expected for the projected years.

B. Table C-02: Residential Wood Combustion - 1994

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1994

Distribution of Wood Burning Devices in Sandpoint NAA

Number of Households in NAA 1990	2816
Additional 1994 Households in	
Existing Housing Units	256
New Housing Units	213
Number of Households in NAA 1994	3285
Number of Devices per Wood Burning Ho	1.126

Device Type	# of Devices 1990	% HH with Device	Additional Devices Existing H	Additional Devices New HH	# of Devices 1994
Conventional Wood Stove	1046	33.0%	95	0	1141
Certified Wood Stove	304	9.6%	28	14	346
Fireplace	269	8.5%	25	0	294
Conventional Fireplace Inse	222	7.0%	20	0	242
Certified Fireplace Insert	99	3.1%	9	2	110
Furnace/Boiler	169	5.3%	15	0	184
Pellet Stove	152	4.8%	14	7	173
Total	2261	71.3%	206	23	2491

Sources

-Number of households in the nonattainment area provided by Intermountain demographics. All other data obtained from the Bonner County Air Quality Study, survey results, June 1992, and assumed equal to 1990 values.
-Estimated # for NAA = (Number of Households in NAA) x (# of Devices-Survey/ Number of Households Surveyed).
-% HH with Device = (Estimated # for NAA/Number of Devices per Wood Burning Household) / Number of Households in NAA x 100%.
-Assuming 10% or 21 of the new homes having RWC device, 60% being certified stoves, 30% being pellet stoves, and 10% certified fireplace insert.

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1994

Wood Fuel Usage

Species	Dry Wood Density (lb/ft3)	Solid Wood/ Cord (ft3/cord	Dry Wood /Cord (lb/cord)	% Wood Used/ Species	Weighted Average Mass/Cord (ton/cord)
Western Larch	28.9	80	2,312	38.8	0.449
Fir	27.8	80	2,224	24.5	0.272
Pine	21.1	80	1,688	13.0	0.110
Lodgepole Pine	22.8	80	1,824	2.2	0.020
Cottonwood	19.5	80	1,560	1.2	0.009
Aspen	21.4	80	1,712	1.0	0.009
Western Hemlock	25.0	80	2,000	0.7	0.007
Alder	22.8	80	1,824	0.5	0.005
Cedar/Juniper	17.8	80	1,424	4.6	0.033
Other Hardwoods	32.0	80	2,560	13.5	0.173
Total (excluding Pellet Stoves)				100	1.086

Sources

-Dry Wood Density - Wood Handbook, Agricultural Handbook No. 72, USDA, 1974
-Solid Wood/Cord - Guidance Document for Residential Wood Combustion Emissio Control Measures, EPA-450/2-89-015, September 1989 (RWC Guidance) p.A-9.
-Dry Wood per Cord = Dry Wood Density x Solid Wood/Cord
-Percent of Wood Used/Species - Bonner County Air Quality Study, survey p.31 Assumed equal to 1990 percent values.
-Weighted Average Mass/Cord = Sum of (Dry Wood per Cord x Percent of Wood Used/Species) for all species.

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1994

Wood Usage per Device Type

Device Type	# of Devices	Average Cords/ Device/ Year	Total Cords/ Year	Weighted Average Mass/Cord (ton/cord)	Wood Used (ton/year)
Conventional Wood Stove	1,141	3.02	3,446	1.086	3,742
Certified Wood Stove	346	3.02	1,045	1.086	1,135
Fireplace	294	1.00	294	1.086	319
Conventional Fireplace Inse	242	3.07	743	1.086	807
Certified Fireplace Insert	110	3.07	339	1.086	368
Furnace/Boiler	184	3.53	650	1.086	706
Total	2,317		6,518		7,077

Device Type	# of Devices	Average Tons/ Device/ Year	Wood Used (ton/year)
Pellet Stove	173	3.10	536.4

Sources

-Average Cords/Device/Year obtained from Bonner County Air Quality Study, survey results, p.6, assumed equal to 1990 values.
-Total Cords/Year = # of Devices x Average Cords/Device/Year.
-Wood Used (ton/year) = Total Cords/Year x Weighted Average Mass per Cord, for Pellet Stoves = # of Devices x Average Tons/Device/Year

---

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1994

Emissions from Residential Wood Consumption

Device Type	Wood Used (ton/year	PM10 Emission Factor (lb/ton)	PM10 Emission (lb/year)	PM10 Emission (ton/year)
Conventional Wood Stove	3,742	29.8	111,506.4	55.75
Certified Wood Stove	1,135	19.0	21,560.5	10.78
Fireplace	319	21.6	6,883.5	3.44
Conventional Fireplace Insert	807	29.8	24,056.5	12.03
Certified Fireplace Insert	368	19.0	6,987.9	3.49
Furnace/Boiler	706	29.8	21,047.8	10.52
Pellet Stove	536.4	3.8	2,038.3	1.02
Total	7,613.0		194,080.9	97.04

Sources

-PM10 Emission Factors - Wood Stoves, Inserts, Wood Furnace, and Pellet Stoves - AP-42 Table 1.10-1, Fireplaces - AP-42 Table 1.9-1, September 1991
-PM10 Emissions = Wood Used x PM10 Emission Factor

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1994

Calculation of Daily PM10 Emission Factor

Heating Season Month	Actual Heating Degree Day (HDD)	Seasonal Heating Factor	Effective Heating Degree Day (EDD)	Emission Factor (lbs/EDD/ Household)
January	1,000	1.0	1,000.0	
February	1,011	1.5	1,516.5	
March	827	1.0	827.0	
April	501	0.5	250.5	
May	387	0.5	193.5	
June	224	0.5	112.0	
September	134	0.5	67.0	
October	619	1.0	619.0	
November	801	1.0	801.0	
December	1,366	1.5	2,049.0	
Total	6,870		7,435.5	0.00795

Sources

-Heating Season Months - All months with over 100 HDD, RWC Guidance p.A-19, months with over 100 HDD in 1990 obtained Climatological Data-Idaho, NOAA,
-Heating Degree Days - NOAA Climatological Data-Idaho, 1990.
-Seasonal Heating Factor - 1.5 for Heating Season Months with average temper of 30 or less, 1.0 for Heating Season Months with average temperature great 30 and less than or equal to 45, and 0.5 for Heating Seasons Months with av temperature greater than 45, average temperatures (NOAA Climatological Data
-Effective Heating Degree Days = HDD x Seasonal Heating Factor.
-Emission Factor = Annual Emissions (lbs)/EDD/Number of Households in NAA.

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1994

Calculation of Maximum Daily PM10 Emissions

Date	Maximum Heating Degree Day	Seasonal Heating Factor	Number Household in NAA	Emission Factor (lbs/EDD/ Household)	Maximum PM10 Emission (lbs/day)
12/29/90	73.5	1.5	3,285	0.00795	2878

Sources

-Maximum Heating Degree Day - Maximum value when the daily maximum and minimum temperatures are averaged and subtracted from 65, NOAA Climatologic Data-Idaho. Assumed equal to 1990 values.
-Maximum PM10 Emission = Maximum Heating Degree Day x seasonal heating facto Number of Households in NAA x Emission Factor. Assumed equal to 1990 values

C. Table C-03: Fuel Oil Combustion - 1994

Annual Emissions Summary

Total Fuel Oil Use (gal/yr)	Emission Factor (lbs/ 1000 gal)	Annual Emission (ton/yr)
123,112	1.25	0.077

Worst-case Daily Emissions Summary

Heating Degree Day	Fuel Oil Use (gal/EHDD /household)	Daily Emission (lbs/day)
74	0.005	1.53

Sources

- Total fuel oil use is calculated by assuming that usage increases proportionately with the projected increase in households, so the 1990 fuel oil usage of 105,535 gallons is multiplied by 1994 number of households (3,285) and divided by the number of households in 1990 (2,816).
- The PM_{10} emission factor for distillate oil of 1.25 lbs./1000 gallons was obtained in EPA-450/4-89-022, p.5, November 1989.
- Worst-case daily calculations are made using a population and temperature dependent factor. This factor is calculated by dividing total annual fuel oil usage by the number of effective degree days and then by the number of households. The number of effective degree days is 7,435 (see climatological data collection), and the number of households is 3,285 (see demographic data collection).
- Worst-case daily fuel oil use is calculated by multiplying the usage factor by the number of households by the worst-case degree day for the season. Emissions calculation use the annual emission factor.
- Worst-case degree days assumed to be equal to 1990 value.

D. Table C-04: Natural Gas Combustion - 1994

Annual Emissions Summary

	Total Natural Gas Use (therm/yr)	Emission Factor (lbs/ mil ft3)	Conversion Factor (lbs/ 1000 therm)	Annual Emission (ton/yr)
Residential	1,365,241	3.00	0.2857	0.195
Commercial	1,871,608	3.00	0.2857	0.267
Industrial	1,901,287	3.00	0.2857	0.272
Total	4,439,923			0.734

Worst-case Daily Emissions Summary

	Heating Degree Day	Natural Gas Use (therm/EHDD /Household)	Daily Emission (lbs/day)
Residential	74	0.056	3.88
Commercial			1.46
Industrial			1.49
Total			6.84

Sources

- Projected natural gas usage for 1994 was obtained from the Washington Water and Power Co. for the north Idaho region, it is assumed that Sandpoint usage changes are equal to the north Idaho region.
- The PM_{10} emission factor for natural gas of 3.00 lbs./1,000,000 cubic feet was obtained from EPA-450/4-89-022, p.5, November 1989. The conversion factor is calculated by multiplying the emission factor by 1 cubic foot/1050 BTU's, and then by 100,000,000 BTU's/ 1000 therms.
- Worst-case daily calculations are made using a population and temperature dependent factor. This factor is calculated by dividing total annual natural gas usage by the number of effective degree days and then by the number of households. The number of effective degree days is 7,435 (see climatological data collection), and the number of households is 3,285 (see demographic data collection).
- Worst-case daily natural gas use is calculated by multiplying the usage factor by the number of households by the worst-case degree day for the season. Emissions calculation use the annual emission factor.
- Worst-case degree days assumed to be equal to the 1990 value.
- Commercial and industrial natural gas usage for Worst-Case Day is assumed to be equal throughout the year.

E. Table C-05: Fugitive Dust-Vehicle Traffic - 1994

CALCULATION OF FUGITIVE ROAD DUST EMISSIONS - SANDPOINT

YEAR 1994

Non-winter Fugitive Emissions

ROAD CATEGORY	NON-WINTER VMT	SILT LOADING gr/ft2	PM-10 EMISSION FACTOR (lbs/vmt	PM-10 EMISSIONS (lb/day)	Correction Factor Tailpipe & Tire Wear Emissions (lb/day)	DAILY ROAD DUST PM-10 EMISSIONS (lb/day)	ANNUAL ROAD DUST PM-10 EMISSIONS (tons/year)
LOCAL	12252.9	2.02	0.0189	231.7	2.4	229.3	24.5
COLLECTOR	24101.3	1.32	0.0135	324.3	3.5	320.8	34.3
HIGHWAY	120169.5	0.52	0.0064	767.4	39	728.4	77.9
UNPAVED	1490.8	N/A	0.7847	1169.8	0	1169.8	125.2
					TOTAL	2448.3	262.0

Wintertime Fugitive Emissions

Treated Roads -- Antiskid material applied

ROAD CATEGORY	WINTER VMT	SILT LOADING gr/ft2	PM-10 EMISSION FACTOR (lbs/vmt	PM-10 DAILY WINTER EMISSIONS (lb/day)
LOCAL	6126.5	6.06	0.0455	279.0
COLLECTOR	12050.7	3.96	0.0324	390.5
HIGHWAY	60084.8	1.56	0.0154	924.0

Untreated Roads -- No antiskid material applied (baseline)

LOCAL	6126.5	2.02	0.0189	115.9
COLLECTOR	12050.7	1.32	0.0135	162.1
HIGHWAY	60084.8	0.52	0.0064	383.7

CATEGORY	TOTAL WINTER EMISSIONS (lb/day)	Correction Factor Tailpipe & Tire Wear Emissions (lb/day)	DAILY WINTER ROAD DUST PM-10 EMISSIONS (lb/day)	ANNUAL WINTER ROAD DUST PM-10 EMISSIONS (tons/year)
LOCAL	394.8	2.4	392.4	7.7
COLLECTOR	552.6	3.5	549.1	10.7
HIGHWAY	1307.7	39	1268.7	24.7
		TOTAL	2210.2	43.1

NUMBER NON-WINTER DAYS	NUMBER WINTER DAYS	WINTER REDUCTION FACTOR	TOTAL PM10 EMISSIONS (tons/yr)
214	39	1	305.1

Wintertime Maximum Daily Fugitive Road Dust Emissions = 2210 lbs./day

Emission Factor

Paved Roadway

E = k(1) * (sL/0.7)^p(1)

Where

E = emission factor, lbs./VMT

k(1) = base emission factor = 0.0081 lbs./VMT

sL = silt loading factor

p(1) = exponent = 0.8

Emission Factor

Unpaved Roadway

E = k(2) * 5.9 * (s/12) * (S/30) * (W/3)^0.7 * (w/4)^0.5 * [(365-p(2))/365]

Where

E = emission factor, lbs./VMT

k(2) = particle size multiplier = 0.36

s = silt content = 5%

S = mean vehicle speed = 20

W = mean vehicle weight = 10 tons

w = mean number of wheels per vehicle = 4

p(2) = number of days with at least 0.01 inches of precipitation = 156

Fugitive Dust-Vehicle Traffic - 1994

Sources

Paved roadway
-The equation for paved roadway, and values for the variables k(1), p(1), and sL, comes from AP-42, section 11.2.5. Winter sL was judged to be 3 times higher than non-winter sL, hence the higher winter emission factor.

Unpaved roadway
-The equation for unpaved roadway, and values for parameters k(2), s, W, and w, come from from AP-42, sec. 11.2.1. The variable p(2) is from NWS met data.

All categories
-VMT data - see VMT data collection.
-Winter days = all the days in the months November through March with less than 0.01 inches of precipitation.
-Winter reduction factor is based on the "wetness" of the winter, worst-case determined to be "1" (no reduction) based on receptor modeling, EPA 600/2-78-050, March 1978.
-Treated Roads = paved VMT x percentage of paved roads actually treated with antiskid material. City and county road departments reported 50% treatment, so winter silt loading was applied to only 50% of the local, collector and highway VMT. For the remaining VMT, the baseline (non-winter) silt loading was used.
-Silt loading and emission factor values include contributions from vehicle tailpipe and brake and tire wear. The PM-10 Emission Totals (only) have had these additional emission contributions subtracted out, using values calculated in this inventory. (see Vehicle Traffic - Tailpipe Emissions, and - Brake and Tire Wear)

F. Table C-06: Vehicle Traffic - Tailpipe Emissions - 1994

Vehicle Miles Traveled (VMT) per Day

Roadway Category	VMT (miles/day)	VMT Mix by Roadway Category
Local	12,253	7.8%
Collector	24,101	15.4%
Highway	120,524	76.8%
Total	156,524	100.0%

Source

-VMT data obtained from Intermountain Demographics.
-VMT Mix by Roadway Category = VMT/Total VMT x 100.

VMT Mix by Vehicle Type

Vehicle Type	VMT Mix by Vehicle Type
LDGV	47.5%
LDGT1	32.9%
LDGT2	7.7%
HDGV	3.5%
Diesels	8.4%
Total	100.0%

Source

-VMT Mix by Vehicle Type - Assumed equal to 1990 values.
-LDGV & LDGT1 mix values assumed equal to 1990 values.

Vehicle Mix Data Summary

Vehicle Type	Local	Collector	Highway
LDGV	0.0372	0.0731	0.3647
LDGT1	0.0258	0.0507	0.2526
LDGT2	0.0060	0.0119	0.0591
HDGV	0.0027	0.0054	0.0269
Diesel	0.0066	0.0129	0.0645

Source

-VMT Mix Data = VMT Mix by Roadway Category x VMT Mix by Vehicle Type.

Vehicle Traffic-Tailpipe Emissions - 1994

Emissions Factors (lb/1000 miles)

Vehicle Type	Local	Collector	Highway
LDGV	0.0693	0.0709	0.0709
LDGT1	0.0798	0.0813	0.0811
LDGT2	0.0785	0.0813	0.0811
HDGV	0.4747	0.4747	0.4747
Diesels	3.95	3.95	3.95

Source

-Emissions Factors assumed equal to 1990 values.

Tailpipe Emissions PM_{10}

	Daily Emissions (lb/day)				Annual Emissions (ton/yr)			
Vehicle Type	Local	Collector	Highway	Total	Local	Collector	Highway	Total
LDGV	0.032	0.125	3.107	3.264	0.006	0.023	0.567	0.596
LDGT1	0.025	0.099	2.462	2.586	0.005	0.018	0.449	0.472
LDGT2	0.006	0.023	0.576	0.605	0.001	0.004	0.105	0.110
HDGT	0.016	0.062	1.533	1.610	0.003	0.011	0.280	0.294
Diesel	0.318	1.231	30.612	32.161	0.058	0.225	5.587	5.869
Total	0.397	1.540	38.289	40.227	0.072	0.281	6.988	7.341

Source

-Daily Emissions = Vehicle Mix x Total VMT x Emissions Factor
-Annual Emissions = Daily Emissions x 365 / 2000

G. Table C-07: Vehicle Traffic - Brake and Tire Wear - 1994

Activity Level and Emissions Summary

Vehicle Miles Traveled (all roads)	Brake Emissions Factor (lbs/1000VMT)	Brake Emissions (lbs/day)	Brake Emissions (tons/yr)
158,015	0.0276	4.36	0.80

	Tire Emissions Factor (lbs/1000VMT)	Tire Emissions (lbs/day)	Tire Emissions (tons/yr)
	0.004	0.63	0.12

		Daily Total Emissions (lbs/day)	Annual Total Emissions (tons/yr)
		4.99	0.91

Sources

-Emission factors come from AP-42 Appendix L, Size Specific Total Particulate Emission Factors for Mobile Sources, PP.2-22 to 2-24.
-Daily Vehicle Miles Traveled obtained from Intermountain Demographics.
-Daily Emissions Factors are considered constant throughout the year.
-Vehicle Miles Traveled x Emissions Factor = Emissions
-Annual emissions obtained by multiplying daily emissions by 365 days/year.

H. Table C-08: Residential Wood Combustion - 1997

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1997

Distribution of Wood Burning Devices in Sandpoint NAA

Number of Households in NAA 1994	3285	
Additional 1997 Households in		
Existing Housing Units	0	
New Housing Units	370	
Number of Households in NAA 1997	3,655	
Number of Devices per Wood Burning Household	1.126	(1990)

Device Type	# of Devices 1994	Additional Devices New HH	# of Devices 1997
Conventional Wood Stove	1141	0	1141
Certified Wood Stove	346	25	371
Fireplace	294	0	294
Conventional Fireplace Insert	242	0	242
Certified Fireplace Insert	110	4	114
Furnace/Boiler	184	0	184
Pellet Stove	173	12	185
Total	2490	42	2532

Sources

-Number of households in the nonattainment area provided by Intermountain demographics. All other data obtained from the Bonner County Air Quality Study, survey results, June 1992, and assumed equal to 1990 values.
-Estimated # For NAA = (Number of Households in NAA) x (# of Devices-Survey/ Number of Households Surveyed).
-% HH with Device = (Estimated # for NAA/Number of Devices per Wood Burning Household) / Number of Households in NAA x 100%.
-Assuming 10% or 37 of the new homes having RWC devices, with 60% being certified wood stoves, 30% pellet stoves, and 10% certified fireplaces. Also assuming 1.126 devices per household, same as in the 1990 study.

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1997

Wood Fuel Usage

Species	Dry Wood Density (lb/ft3)	Solid Wood/ Cord (ft3/cord	Dry Wood /Cord (lb/cord)	% Wood Used/ Species	Weighted Average Mass/Cord (ton/cord
Western Larch	28.9	80	2,312	38.8	0.449
Fir	27.8	80	2,224	24.5	0.272
Pine	21.1	80	1,688	13.0	0.110
Lodgepole Pine	22.8	80	1,824	2.2	0.020
Cottonwood	19.5	80	1,560	1.2	0.009
Aspen	21.4	80	1,712	1.0	0.009
Western Hemlock	25.0	80	2,000	0.7	0.007
Alder	22.8	80	1,824	0.5	0.005
Cedar/Juniper	17.8	80	1,424	4.6	0.033
Other Hardwoods	32.0	80	2,560	13.5	0.173
Total (excluding Pellet Stoves)				100	1.086

Sources

-Dry Wood Density - Wood Handbook, Agricultural Handbook No. 72, USDA, 1974
-Solid Wood/Cord - Guidance Document for Residential Wood Combustion Emission Control Measures, EPA-450/2-89-015, September 1989 (RWC Guidance) p.A-9.
-Dry Wood per Cord = Dry Wood Density x Solid Wood/Cord
-Percent of Wood Used/Species - Bonner County Air Quality Study, survey p.31 Assumed equal to 1990 percent values.
-Weighted Average Mass/Cord = Sum of (Dry Wood per Cord x Percent of Wood Used/Species) for all species.

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1997

Wood Usage per Device Type

Device Type	# of Devices	Average Cords/ Device/ Year	Total Cords/ Year	Weighted Average Mass/Cord (ton/cord)	Wood Used (ton/year)
Conventional Wood Stove	1,141	3.02	3,446	1.086	3,741
Certified Wood Stove	371	3.02	1,120	1.086	1,217
Fireplace	294	1.00	294	1.086	319
Conventional Fireplace In	242	3.07	743	1.086	807
Certified Fireplace Inser	114	3.07	350	1.086	381
Furnace/Boiler	184	3.53	650	1.086	705
Total	2,346		6,603		7,170

Device Type	# of Devices	Average Tons/ Device/ Year	Wood Used (ton/year
Pellet Stove	185	3.10	575.0

Sources

-Average Cords/Device/Year obtained from Bonner County Air Quality Study, survey results, p.6, assumed equal to 1990 values.
-Total Cords/Year = # of Devices x Average Cords/Device/Year.
-Wood Used (ton/year) = Total Cords/Year x Weighted Average Mass per Cord for Pellet Stoves = # of Devices x Average Tons/Device/Year

---

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1997

Emissions from Residential Wood Consumption

Device Type	Wood Used (ton/year	PM10 Emission Factor (lb/ton)	PM10 Emission (lb/year)	PM10 Emission (ton/year)
Conventional Wood Stove	3,741	29.8	111,494.2	55.75
Certified Wood Stove	1,217	19.0	23,114.0	11.56
Fireplace	319	21.6	6,895.2	3.45
Conventional Fireplace Insert	807	29.8	24,038.8	12.02
Certified Fireplace Insert	381	19.0	7,230.6	3.62
Furnace/Boiler	705	29.8	21,016.1	10.51
Pellet Stove	575.0	3.8	2,185.2	1.09
Total	7,744.7		195,974.0	97.99

Sources

-PM10 Emission Factors - Wood Stoves, Inserts, Wood Furnace, and Pellet Stoves - AP-42 Table 1.10-1, Fireplaces - AP-42 Table 1.9-1, September 1991.
-PM10 Emissions = Wood Used x PM10 Emission Factor

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1997

Calculation of Daily PM10 Emission Factor

Heating Season Month	Actual Heating Degree Day (HDD)	Seasonal Heating Factor	Effective Heating Degree Day (EDD)	Emission Factor (lbs/EDD/ Household)
January	1,000	1.0	1,000.0	
February	1,011	1.5	1,516.5	
March	827	1.0	827.0	
April	501	0.5	250.5	
May	387	0.5	193.5	
June	224	0.5	112.0	
September	134	0.5	67.0	
October	619	1.0	619.0	
November	801	1.0	801.0	
December	1,366	1.5	2,049.0	
Total	6,870		7,435.5	0.00721

Sources

-Heating Season Months - All months with over 100 HDD, RWC Guidance p.A-19, months with over 100 HDD in 1990 obtained (Climatological Data-Idaho, NOAA)
-Heating Degree Days - NOAA Climatological Data-Idaho, 1990.
-Seasonal Heating Factor - 1.5 for Heating Season Months with average temperature of 30 or less, 1.0 for Heating Season Months with average temperature greater than 30 and less than or equal to 45, and 0.5 for Heating Season Months with average temperature greater than 45, average temperatures (NOAA Climatological Data-Idaho).
-Effective Heating Degree Days = HDD x Seasonal Heating Factor.
-Emission Factor = Annual Emissions (lbs)/EDD/Number of Households in NAA.

Sandpoint Area and Mobile Source PM10 Emissions Inventory
Residential Wood Combustion - 1997

Calculation of Maximum Daily PM10 Emissions

Date	Maximum Heating Degree Day	Seasonal Heating Factor	Number Household in NAA	Emission Factor (lbs/EDD/ Household)	Maximum PM10 Emission (lbs/day)
12/29/90	73.5	1.5	3,655	0.00721	2906

Sources

-Maximum Heating Degree Day - Maximum value when the daily maximum and minimum temperatures are averaged and subtracted from 65, NOAA Climatological Data-Idaho. Assumed equal to 1990 value.
-Maximum PM10 Emission = Maximum Heating Degree Day x Seasonal Heating Factor x Number of Households in NAA x Emission Factor. Assumed equal to 1990 value.

I. Table C-09: Fuel Oil Combustion - 1997

Annual Emissions Summary

Total Fuel Oil Use (gal/yr)	Emission Factor (lbs/ 1000 gal)	Annual Emission (ton/yr)
136,978	1.25	0.086

Worst-case Daily Emissions Summary

Heating Degree Day	Fuel Oil Use (gal/EHDD /household)	Daily Emission (lbs/day)
74	0.005	1.70

Sources

- Total fuel oil use is calculated by assuming that usage increases proportionately with the projected increase in households, so the 1990 fuel oil usage of 105,535 gallons is multiplied by 1997 number of households (3,655) and divided by the number of households in 1990 (2,816).
- The PM_{10} emission factor for distillate oil of 1.25lbs./1000 gallons was obtained in EPA-450/4-89-022, p.5, November 1989.
- Worst-case daily calculations are made using a population and temperature dependent factor. This factor is calculated by dividing total annual fuel oil usage by the number of effective degree days and then by the number of households. The number of effective degree days is 7,435 (see climatological data collection), and the number of households is 3,655 (see demographic data collection).
- Worst-case daily fuel oil use is calculated by multiplying the usage factor by the number of households by the worst-case degree day for the season. Emissions calculation use the annual emission factor.
- Worst-case degree days assumed to be equal to 1990 value.

J. Table C-10: Natural Gas Combustion - 1997

Annual Emissions Summary

	Total Natural Gas Use (therm/yr)	Emission Factor (lbs/ mil ft3)	Conversion Factor (lbs/ 1000 therm)	Annual Emission (ton/yr)
Residential	1,444,081	3.00	0.2857	0.206
Commercial	2,025,417	3.00	0.2857	0.289
Industrial	1,917,693	3.00	0.2857	0.274
Total	5,387,191			0.770

Worst-case Daily Emissions Summary

	Heating Degree Day	Natural Gas Use (therm/EHDD /Household)	Daily Emission (lbs/day)
Residential	74	0.053	4.11
Commercial			1.59
Industrial			1.50
Total			7.19

Sources

- Projected natural gas usage for 1997 was obtained from the Washington Water and Power Co. for the north Idaho region, it is assumed that Sandpoint usage changes are equal to the north Idaho region.
- The PM_{10} emission factor for natural gas of 3.00 lbs./1,000,000 cubic feet was obtained from EPA-450/4-89-022, p.5, November 1989. The conversion factor is calculated by multiplying the emission factor by 1 cubic foot/1050 BTU's, and then by 100,000,000 BTU's/ 1000 therms.
- Worst-case daily calculations are made using a population and temperature dependent factor. This factor is calculated by dividing total annual natural gas usage by the number of effective degree days and then by the number of households. The number of effective degree days is 7,435 (see climatological data collection), and the number of households is 3,655 (see demographic data collection).
- Worst-case daily natural gas use is calculated by multiplying the usage factor by the number of households by the worst-case degree day for the season. Emissions calculation use the annual emission factor.
- Worst-case degree days assumed to be equal to the 1990 value.
- Commercial and industrial natural gas usage for Worst-Case Day is assumed to be equal throughout the year.

K. Table C-11: Fugitive Dust - Vehicle Traffic - 1997

CALCULATION OF FUGITIVE ROAD DUST EMISSIONS - SANDPOINT
YEAR 1997

Non-winter Fugitive Emissions

ROAD CATEGORY	NON-WINTER VMT	SILT LOADING gr/ft2	PM-10 EMISSION FACTOR (lbs/vmt)	PM-10 EMISSIONS (lb/day)	Correction Factor Tailpipe & Tire Wear Emissions (lb/day)	DAILY ROAD DUST PM-10 EMISSIONS (lb/day)	ANNUAL ROAD DUST PM-10 EMISSIONS (tons/year)
LOCAL	15253.1	2.02	0.0189	288.4	2.6	285.8	30.6
COLLECTOR	24689.9	1.32	0.0135	332.2	3.5	328.7	35.2
HIGHWAY	129649.8	0.52	0.0064	827.9	42.5	785.4	84.0
UNPAVED	1490.8	N/A	0.7847	1169.8	0	1169.8	125.2
					TOTAL	2569.8	275.0

Wintertime Fugitive Emissions

Treated Roads -- Antiskid material applied

ROAD CATEGORY	WINTER VMT	SILT LOADING gr/ft2	PM-10 EMISSION FACTOR (lbs/vmt)	DAILY WINTER PM-10 EMISSIONS (lb/day)
LOCAL	7626.6	6.06	0.0455	347.3
COLLECTOR	12345.0	3.96	0.0324	400.0
HIGHWAY	64824.9	1.56	0.0154	996.9

Untreated Roads -- No antiskid material applied (baseline)

LOCAL	7626.6	2.02	0.0189	144.2
COLLECTOR	12345.0	1.32	0.0135	166.1
HIGHWAY	64824.9	0.52	0.0064	414.0

CATEGORY	TOTAL WINTER EMISSIONS (lb/day)	Correction Factor Tailpipe & Tire Wear Emissions (lb/day)	DAILY WINTER ROAD DUST PM-10 EMISSIONS (lb/day)	ANNUAL WINTER ROAD DUST PM-10 EMISSIONS (tons/year)
LOCAL	491.5	2.6	488.9	9.5
COLLECTOR	566.1	3.5	562.6	11.0
HIGHWAY	1410.8	42.5	1368.3	26.7
		TOTAL	2419.9	47.2

NUMBER NON-WINTER DAYS	NUMBER WINTER DAYS	WINTER REDUCTION FACTOR	TOTAL PM10 EMISSIONS (tons/yr)
214	39	1	322.2

Wintertime Maximum Daily Fugitive Road Dust Emissions = 2420 lbs./day

Emission Factor

Paved Roadway
E = k(1) * (sL/0.7)^p(1)

Where
E = emission factor, lbs./VMT
k(1) = base emission factor = 0.0081 lbs./VMT
sL = silt loading factor
p(1) = exponent = 0.8

Emission Factor

Unpaved Roadway
E = k(2) * 5.9 * (s/12) * (S/30) * (W/3)^0.7 * (w/4)^0.5 * [(365-p(2))/365]

Where
E = emission factor, lbs./VMT
k(2) = particle size multiplier = 0.36
s = silt content = 5%
S = mean vehicle speed = 20
W = mean vehicle weight = 10 tons
w = mean number of wheels per vehicle = 4
p(2) = number of days with at least 0.01 inches of precipitation = 156

Fugitive Dust-Vehicle Traffic - 1997

Sources

Paved roadway
-The equation for paved roadway, and values for the variables k(1), p(1), and sL, comes from AP-42, section 11.2.5. Winter sL was judged to be 3 times higher than non-winter sL, hence the higher winter emission factor.

Unpaved roadway
-The equation for unpaved roadway, and values for parameters k(2), s, W, and w, come from AP-42, sec. 11.2.1. The variable p(2) is from NWS met data.

All categories
-VMT data - see VMT data collection.
-Winter days = all the days in the months November through March with less than 0.01 inches of precipitation.
-Winter reduction factor is based on the "wetness" of the winter, worst-case determined to be "1" (no reduction) based on receptor modeling, EPA 600/2-78-050, March 1978.
-Treated Roads = paved VMT x percentage of paved roads actually treated with antiskid material. City and county road departments reported 50% treatment, so winter silt loading was applied to only 50% of the local, collector and highway VMT. For the remaining VMT, the baseline (non-winter) silt loading was used.
-Silt loading and emission factor values include contributions from vehicle tailpipe and brake and tire wear. The PM_{10} Emission Totals (only) have had these additional emission contributions subtracted out, using values calculated in this inventory.(see Vehicle Traffic - Tailpipe Emissions, and - Brake and Tire Wear)

L. Table C-12: Vehicle Traffic - Tailpipe Emissions - 1997

Vehicle Miles Traveled (VMT) per Day

Roadway Category	VMT (miles/day)	VMT Mix by Roadway Category
Local	15,253	9.0%
Collector	24,690	14.6%
Highway	129,650	76.4%
Total	156,524	100.0%

Source

-VMT data obtained from Intermountain Demographics.
-VMT Mix by Roadway Category = VMT/Total VMT x 100.

VMT Mix by Vehicle Type

Vehicle Type	VMT Mix by Vehicle Type
LDGV	47.5%
LDGT1	32.9%
LDGT2	7.7%
HDGV	3.5%
Diesels	8.4%
Total	100.0%

Source

-VMT Mix by Vehicle Type - Assumed equal to 1990 values.
-LDGV & LDGT1 mix values assumed equal to 1990 values.

Vehicle Mix Data Summary

Vehicle Type	Local	Collector	Highway
LDGV	0.0427	0.0692	0.3631
LDGT1	0.0296	0.0479	0.2515
LDGT2	0.0069	0.0112	0.0589
HDGV	0.0031	0.0051	0.0268
Diesel	0.0076	0.0122	0.0642

Source

-VMT Mix Data = VMT Mix by Roadway Category x VMT Mix by Vehicle Type.

Vehicle Traffic-Tailpipe Emissions - 1997

Emissions Factors (lb/1000 miles)

Vehicle Type	Local	Collector	Highway
LDGV	0.0693	0.0709	0.0709
LDGT1	0.0798	0.0813	0.0811
LDGT2	0.0785	0.0813	0.0811
HDGV	0.4747	0.4747	0.4747
Diesels	3.95	3.95	3.95

Source

-Emissions Factors assumed equal to 1990 values.

Tailpipe Emissions PM_{10}

	Daily Emissions (lb/day)				Annual Emissions (ton/yr)			
Vehicle Type	Local	Collector	Highway	Total	Local	Collector	Highway	Total
LDGV	0.045	0.121	3.338	3.504	0.008	0.022	0.609	0.640
LDGT1	0.036	0.096	2.645	2.777	0.007	0.018	0.483	0.507
LDGT2	0.008	0.023	0.619	0.650	0.002	0.004	0.113	0.119
HDGT	0.023	0.060	1.647	1.729	0.004	0.011	0.301	0.316
Diesel	0.455	1.193	32.886	34.534	0.083	0.218	6.002	6.302
Total	0.567	1.492	41.134	43.194	0.104	0.272	7.507	7.883

Source

-Daily Emissions = Vehicle Mix x Total VMT x Emissions Factor
-Annual Emissions = Daily Emissions x 365 / 2000

M. Table C-13: VEHICLE TRAFFIC - BRAKE AND TIRE WEAR - 1997

Activity Level and Emissions Summary

Vehicle Miles Traveled (all roads)	Brake Emissions Factor (lbs/1000VMT)	Brake Emissions (lbs/day)	Brake Emissions (tons/yr)
171,084	0.0276	4.72	0.86

	Tire Emissions Factor (lbs/1000VMT)	Tire Emissions (lbs/day)	Tire Emissions (tons/yr)
	0.004	0.68	0.12

		Daily Total Emissions (lbs/day)	Annual Total Emissions (tons/yr)
		5.41	0.99

Sources

-Emission factors come from AP-42 Appendix L, Size Specific Total Particulate Emission Factors for Mobile Sources, PP.2-22 to 2-24.
-Daily Vehicle Miles Traveled obtained from Intermountain Demographics.
-Daily Emissions Factors are considered constant throughout the year.
-Vehicle Miles Traveled x Emissions Factor = Emissions
-Annual emissions obtained by multiplying daily emissions by 365 days/year.

VI. RESULTS

The total PM_{10} emissions from different sources are presented in Tables C-1, C-2, and C-3. The tables present the annual emissions in tons; and the daily emissions for winter and non-winter conditions in pounds, each in descending order of magnitude. Fugitive road dust and residential wood combustion are considered significant sources during winter months, and thus are key elements for the annual emissions.

Table C-14

ANNUAL PM_{10} EMISSIONS, TONS/YEAR

Source	1994	% of Total	1997	% of Total
Fugitive Road Dust	305.1	62.7	322.2	63.7
Woodstoves/ Fireplaces	97.0	19.9	98.0	22.6
Building Construction	63.4	13.0	63.4	12.5
Railroad Locomotives	8.8	1.8	8.8	1.7
Tailpipe	7.3	1.5	7.9	1.6
Misc. Burning	1.5	0.3	1.5	0.3
Aircraft	1.3	0.3	1.3	0.3
Brake & Tire Wear	0.9	0.2	1.0	0.2
Natural Gas Combustion	0.7	0.2	0.8	0.2
Agricultural Tillage	0.5	0.1	0.5	0.1
Heating Oil Combustion	0.1	>0.1	0.1	>0.1
Road Construction	0.0	0.0	0.0	0.0
Total	486.6	100.0	505.5	100.0

Table C-15

DAILY WINTER PM_{10} EMISSIONS, LBS/DAY

Source	1994	% of Total	1997	% of Total
Woodstoves/ Fireplaces	2878	50.7	2906	49.1
Fugitive Road Dust	2210	38.9	2420	40.9
Building Construction	468.8	8.3	468.8	7.9
Railroad Locomotives	57.6	1.0	57.6	1.0
Tailpipe	40.2	0.7	43.2	0.7
Aircraft	7.3	0.1	7.3	0.1
Natural Gas Combustion	6.8	0.1	7.2	0.1
Brake & Tire Wear	5.0	0.1	5.4	0.1
Misc. Burning	3.3	0.1	3.3	0.1
Heating Oil Combustion	1.5	>0.1	1.7	>0.1
Road Construction	0.0	0.0	0.0	0.0
Agricultural Tillage	0.0	0.0	0.0	0.0
Total	5679	100.0	5921	100.0

Table C-16

DAILY NON-WINTER PM_{10} EMISSIONS, LBS/DAY

Source	1994	% of Total	1997	% of Total
Fugitive Road Dust	2448	80.0	2570	80.4
Building Construction	493.4	16.0	493.4	15.6
Railroad Locomotives	57.6	1.9	57.6	1.8
Tailpipe	40.2	1.3	43.2	1.4
Misc. Burning	10.0	0.3	10.0	0.3
Aircraft	7.3	0.2	7.3	0.2
Brake & Tire Wear	5.0	0.2	5.4	0.2
Agricultural Tillage	4.4	0.1	4.4	0.1
Woodstoves/ Fireplaces	0.0	0.0	0.0	0.0
Natural Gas Combustion	0.0	0.0	0.0	0.0
Heating Oil Combustion	0.0	0.0	0.0	0.0
Road Construction	0.0	0.0	0.0	0.0
Total	3065.9	100.0	3191.1	100.0

VII. QUALITY ASSURANCE

All of the data collected from different sources are checked for quality control, if possible. The data, when transferred to forms used for calculating emissions, are reviewed by DEQ staff for accuracy and precision. Any conversion factors and emission factors are verified to assure accuracy.

Some of the emission calculations involving large data sets are verified by personal computer using Lotus 1-2-3 spreadsheets. This approach significantly reduces the chance of calculational errors and makes data changes and corrections quite simple. To ensure that the spreadsheets are calculating properly, all calculations are manually checked. All manual calculations are performed twice for accuracy and precision, and subsequently verified by DEQ staff not involved in the determination of the emission inventory for Bonner County. The verification involves reasonableness of computed emissions and assumptions based on good engineering and scientific judgment.

If emissions from a source can be calculated by multiple methods, all of the methods are used to compute the emissions. All of the results are analyzed in detail to determine the reasons for the difference in results, if any, and a decision is reached to utilize one of the methods for that particular source.

VIII. REFERENCES

1. Procedures for Emission Inventory Preparation Volume III: Area Sources, EPA-450/4-81-026c, September, 1981.

2. Procedures for Emission Inventory Preparation Volume IV: Mobile Sources, EPA-450/4-81-026d, December, 1988.

3. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, AP-42, Fourth Edition, September, 1985.

4. PM_{10} Emission Factor Listing Developed by Technology Transfer and AIRS Source Classification Codes with Documentation, EPA-450/4-89-022, November, 1989.

5. Climatological Data Annual Survey for Idaho 1990, National Oceanic and Atmospheric Administration.

6. Cowherd, C. C., Jr., C. M. Guenther and D. D. Wallace, Emissions Inventories of Agricultural Tilling, Unpaved Roads, and Air Strips and Construction Sites, EPA-450/3-74-085, USEPA, Research Triangle Park, NC, November, 1974.

7. AQMP Appendix L-87, 1983 Base Year Emission Inventory Documentation,

Ventura County Air Pollution Control District, January, 1988.

8. Personal communication with Jackie Buck, Independent Highway District, August, 1992.

9. Personal communication with Rob Morris, Sandpoint Airport, August, 1992.

10. Personal communication with Jerry Foote, Bonner County Road Department, August, 1992.

11. Personal communication with Bob Ewing, Idaho Transportation Department, Coeur D'Alene, August, 1991.

12. Personal communication with Don Keck, Sandpoint Fire Department, August, 1992.

13. Personal communication with Brian Shiplett, Idaho Department of Lands, Coeur D'Alene, August, 1992.

14. Personal communication with Ron Kerr, Idaho Transportation Department, Boise, September, 1992.

15. Personal communication with Steve Cote, USDA-SCS, Sandpoint, September, 1992.

16. Personal communication with Don Carter, Sandpoint Planning and Zoning, August, 1992.

17. Personal communication with Bonner County Planning and Building, August, 1992.

18. Personal communication with Doug Benson, Idaho Transportation Department, Boise, June, 1992.

19. Personal communication with Mary Cozza, Washington Water Power Company, September, 1992.

20. Personal communication with Randy Barcus, Washington Water Power Company, September, 1992.

21. Bonner County Air Quality Study Report. ES Field Services, July 1992.

22. Guidance Document for Residential Wood Combustion Emission Control Measures, EPA-450/2-89-015, February, 1989.

23. Personal communication with Don Coggeshall, U.S. Forest Service, Sandpoint Ranger District, February, 1991.

24. U.S. Department of Agriculture, Forest Products Laboratory, Wood Handbook, Agricultural Handbook No. 72, Washington, DC. 1974.

25. 1990, 1994 and 1997 Population, Housing Unit, Household and Vehicle Miles Traveled Databases for Sandpoint, Idaho, PM_{10} Non-attainment Area. Intermountain Demographics and Scientech, Inc., July, 1992.

26. Pinehurst Particulate (PM_{10}) Air Quality Improvement Plan, Idaho Division of Environmental Quality, February, 1992.

APPENDIX D

D-1: CMB RECEPTOR MODELING

CHEMICAL MASS BALANCE (CMB)

RECEPTOR MODELING FOR SANDPOINT, IDAHO

A. INTRODUCTION

The Chemical Mass Balance (CMB) air quality model is one of several receptor models which have been applied to air resources management. The CMB model uses the chemical composition of particles measured in source emissions and on ambient PM_{10} filter samples (receptors) to identify and quantify the contributions from potential sources that affect the ambient PM_{10} levels. Receptor models are generally contrasted with dispersion models which use estimates of pollutant emissions rates, meteorological transport, and chemical transformation mechanisms to calculate the contribution of each source to receptor concentrations. The two types of models are complementary, with each type having strengths which compensate for the weaknesses of the other. A reconciliation between dispersion model results and receptor model results is the final step in the PM_{10} source attribution analysis.

This CMB analysis utilized receptor data from the long term State and Local Air Monitoring System (SLAMS) PM_{10} monitoring site located on the Post Office in downtown Sandpoint. Thirteen high PM_{10} concentration filters samples from 1988-1992 were submitted for elemental analysis and source apportionment analysis by CMB.

Wood processing is the primary industry in Sandpoint. There are four wood processing facilities in the immediate Sandpoint area. In addition to a potential industrial impact, qualitative information has indicated that the elevated ambient PM_{10} levels are influenced by residential woodburning and fugitive road dust. Sandpoint is also affected by regional wind/dust storms that occur mainly in the late summer and fall.

B. RECEPTOR PM_{10} DATA

Exceedances of the 24 hour PM_{10} standard in Sandpoint are seen during the period from September through March. Two saturation studies were initiated in 1989 and 1992 in an effort to clarify the extent of the PM_{10} problem. However, operational problems and low PM_{10} levels during the studies caused the results from these projects to be of little value in understanding the sources affecting the high ambient PM_{10} concentrations. Two filters from the 1992 Saturation Study were analyzed only for use in interpreting the results from the SLAMS filters.

The SLAMS PM_{10} monitoring site, located on top of the Sandpoint Post Office, was established in 1986. Figure D-1 is a map of the Sandpoint area indicating the location of the PM_{10} monitor. Six exceedances of the 24 hour standard have been recorded at this location. Five of the six exceedance samples from Sandpoint were analyzed. The sixth, an exceedance on September 6, 1988 (219 $\mu g/m^3$), has been determined to be an exceptional event. The smoke from the many wild fires in Idaho and neighboring states caused elevated PM_{10} levels at many monitoring locations in the Northwest during the first week of September 1988. This September 6, 1988 sample was not analyzed for CMB receptor model application.

In addition to the five exceedance samples, eight samples with concentrations greater than 100 $\mu g/m^3$ were chosen for analysis. The guidelines for CMB modeling suggest a minimum of five samples need to be compared for a representative view of the source influences in an area. To insure an adequate data set for CMB analysis, the thirteen PM_{10} samples chosen for elemental analysis were selected from the fall and winter periods from 1986 to the present. The filter concentrations and the sample dates are listed in Table D-01. All the SLAMS samples ran for 24 hours, midnight to midnight.

Table D-1: SLAMS Filters from Sandpoint Post Office Selected for CMB Analysis

2-21-88	157 $\mu g/m^3$
2-24-88	179 $\mu g/m^3$
3-16-88	101 $\mu g/m^3$
12-7-88	131 $\mu g/m^3$
3-23-89	108 $\mu g/m^3$
9-25-89	116 $\mu g/m^3$
2-26-90	192 $\mu g/m^3$
3-2-90	122 $\mu g/m^3$
3-6-90	109 $\mu g/m^3$
10-4-90	218 $\mu g/m^3$
1-22-91	110 $\mu g/m^3$
2-23-91	144 $\mu g/m^3$
2-4-92	199 $\mu g/m^3$

Quantification of the masses of 35 elements, aluminum through lead, was done by X-ray fluorescence analysis (XRF) on each of the above filter samples. Because the samples were collected on quartz filters, the silica content of the particulates was not able to be analyzed. The masses of the sulfate ($SO_4^=$), nitrate (NO^{3-}), ammonium (NH_4^+), and chloride (Cl^-) ions were determined by ion chromatography (IC). The concentrations of the potassium (K^+) ion was determined by inductively coupled plasma (ICP) analysis and the elemental carbon (EC) and organic carbon (OC) were determined by thermal/optical carbon (TOR) analysis.

C. Source Profile Data

Emission inventory results indicate that the major PM_{10} sources in the Sandpoint area are the wood products industries and area sources, such as residential woodburning, fugitive dust and vehicle exhaust. Below are discussions of the source profile types used in the CMB modeling analysis.

1. Wood Products Industry

There are four significant wood product processors in the Sandpoint area. Section III. A., *Emission Inventory and Projections*, provides complete emission inventory information. PM_{10} emissions from these sources include particulates from wood combustion and process dust collection. Source profiles have not been generated for these particular sources. Hog fuel

boiler emission profiles from Oregon facilities were included in the CMB source files, but did not show significant contributions to the ambient PM_{10} concentrations. The emission profiles from hog fuel boilers are similar to residential wood combustion profiles. The CMB results for residential wood combustion could include the emissions from the wood product industry, due to the similarity of the emissions of these two source types.

2. *Residential Woodburning*

A wood burning profile has not been developed specifically for Sandpoint. The Portland wood burning profile from the Pacific Northwest Source Profile Library was used in the CMB modeling to represent the Sandpoint wood burning emissions. This profile is referred to as RWCPORT in the CMB results.

Although there are some differences in the types of wood burned in the two areas, the Portland profile better represents the wood used in Sandpoint than any other profile that is available. The majority of wood burned in Portland is Douglas fir and alder; in Sandpoint the major types of wood burned are tamarack and fir.

3. *Fugitive Dust*

Three road dust samples from different areas of Sandpoint and one plowed field sample were collected in May 1992. The XRF elemental analysis of these four resuspended samples were compared. Since the chemistries of the three road dust samples were similar, the road samples were combined, resuspended and analyzed as a composited road dust sample. The XRF analysis was repeated for this road dust composite. The two Sandpoint fugitive dust source profiles used in the CMB analysis are listed in
Table D-02.

4. *Vehicle Tailpipes*

A mobile source profile from Denver was used in this Sandpoint analysis. The profile is made up of a mixture of diesel, leaded, and unleaded fuel emissions. Vehicle emissions did not fit into the Sandpoint receptor modeling analysis, indicating that vehicle exhaust is not a major source of PM_{10} particulates in Sandpoint.

Table D-2: Geologic Source Profiles from Sandpoint

CMB Pneumonic	Description
ROAD	Composited road dust profile comprised road dust samples from near Lincoln School, the Post Office, and from State Highway 95.
PLOWED	Agricultural dirt sample collected from a plowed filed near the University of Idaho Extension Research Center, approximately 1 mile north of Sandpoint.

5. *Diesel Emissions*

Heavy duty vehicle emissions were used in the CMB model to represent the diesel locomotive emissions. Although train traffic is heavy in Sandpoint, the receptor model did not show significant contribution from locomotive emissions.

6. *Secondary NO_3^- and SO_4^-*

Sulfate and nitrate, as $SO_4^=$ and NO_3^- respectively, were included as source types in the CMB modeling effort. Secondary sulfate and nitrate were indicated by the CMB model to be a very small, but statistically significant source of ambient PM_{10}.

D. RESULTS AND DISCUSSION

The CMB receptor modeling results from the thirteen filter samples are found in Table D-03. The individual CMB model runs are attached at the end of this appendix. Overall, the CMB model's diagnostic statistics, which indicate validity of the model results, were well within the acceptable ranges. In some cases, the model-generated PM_{10} concentrations were outside of the acceptable range. The model's guidelines suggest that the percent mass calculated by the model should be between 80 and 120% of the gravimetricly determined mass. Five of the samples had calculated masses which fell below the 80% limit. Because of the uncertainties associated with these five samples, the source apportionment results should be considered questionable. Only the CMB runs which met all the acceptability guidelines are considered in this receptor modeling analysis. The dates, PM_{10} concentrations, and the source contributions of the eight valid samples are given in Figure D-02. The CMB results in Figure D-02 are factored to 100% mass recovery for ease of comparison.

The particular causes for the low mass recovery problems are not completely known. Section E., *Limitations*, includes a discussion regarding the individual samples that do not meet the acceptable mass recovery criteria.

Three of the samples shown in Figure D-02, 2-21-88, 2-24-88, and 2-4-92, illustrate the source contributions from exceedance days. The wood combustion and fugitive road dust contributions vary slightly on these days, but **the CMB model generally indicates that approximately half of the PM_{10} mass is attributed to wood combustion and half is due to fugitive road dust**. The same average source apportionment holds true for all the other, high, non-exceedance PM_{10} samples in this analysis.

It should be noted that all the samples detailed in Figure D-02 are winter samples. Two exceedance days in the fall, 9-25-89 and 10-4-90, were analyzed, but failed to meet the percent mass recovery guidelines for valid samples. Table D-03 indicates that the CMB results of these samples are overwhelmingly influenced by fugitive dust sources. Despite the low mass recoveries in the fall samples, the CMB source apportionment is likely to be accurate since high, gusting winds and blowing dust were documented on both the analyzed days. Under such conditions, fugitive dust would be expected to be the dominant source of PM_{10}.

Table D-3: CMB Model Results with (Uncertainties) Percent Source Contributions to PM_{10} in Sandpoint

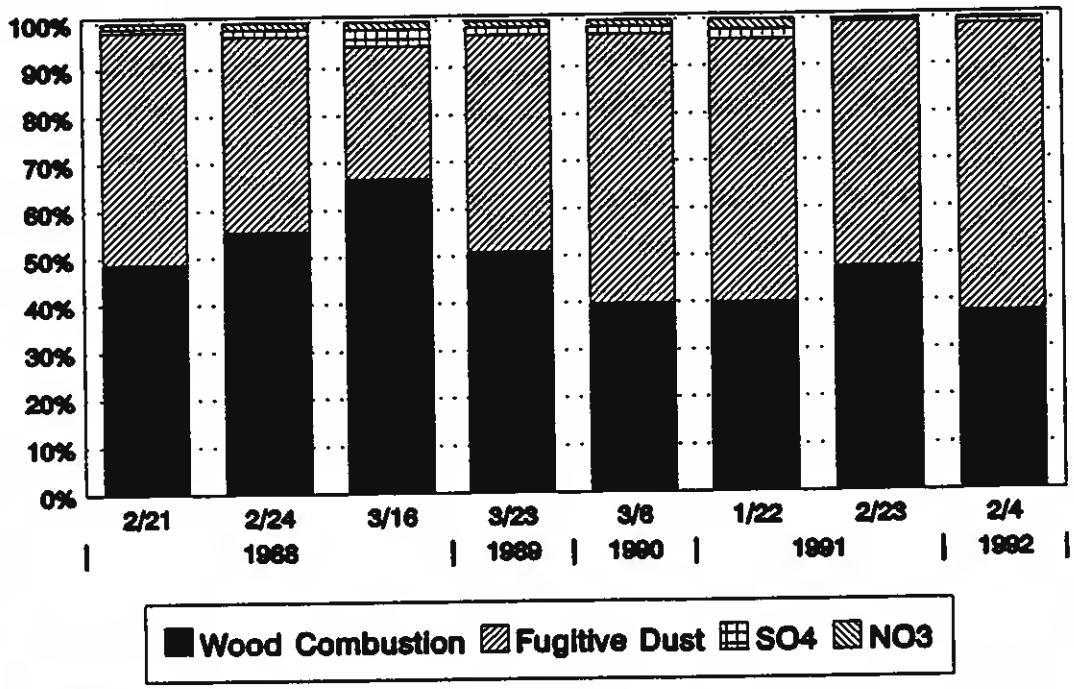
	PM_{10} $\mu g/m^3$	Wood Combust.	Fugitive Road Dust	SO_4	NO_3	Calc. % PM_{10}
2-21-88	157	42.4 (5.0)	42.8 (2.9)	0.7 (0.2)	0.9 (0.2)	86.5
2-24-88	179	44.6 (6.0)	33.4 (2.3)	1.1 (0.2)	1.3 (0.2)	80.4
3-16-88	101	59.1 (7.4)	24.9 (2.0)	3.1 (0.6)	1.5 (0.3)	88.0
12-7-88	131	41.5 (4.6)	2.5 (0.4)	1.2 (0.2)	0.7 (0.2)	45.5
3-23-89	108	42.5 (5.0)	38.3 (3.0)	1.3 (0.2)	1.2 (0.2)	83.1
9-25-89*	116	19.3 (2.9)	50.6 (3.9)	0.7 (0.1)	0.4 (0.1)	70.9
2-26-90	192	24.8 (3.6)	43.1 (2.9)	0.8 (0.1)	0.4 (0.1)	69.1
3-2-90	122	34.6 (4.6)	42.5 (3.7)	1.1 (0.2)	1.0 (0.2)	79.1
3-6-90	109	32.1 (4.4)	46.3 (3.9)	1.4 (0.2)	1.1 (0.2)	80.6
10-4-90**	218	3.9 (1.7)	66.1 (4.6)	0.4 (0.1)	0.2 (0.1)	70.4
1-22-91	110	34.3 (4.7)	48.1 (3.4)	1.7 (0.3)	1.9 (0.3)	85.6
2-23-91	144	45.7 (5.5)	49.9 (3.6)	0.6 (0.1)	0.1 (0.04)	95.8
2-4-92	199	33.3 (4.5)	54.3 (3.4)	0.8 (0.1)	0.4 (0.1)	88.6

* Exceptional Event due to high winds and blowing dust in Northern Idaho

** High winds and dust

Figure D-2

SANDPOINT PM-10 SOURCE APPORTIONMENT



Note: Includes samples with calculated percent mass > 80%
Values normalized to 100%
See Table IV-01 for actual concentrations

E. LIMITATIONS

Modeling results are only as good as the quality of data used. There were some shortcomings which limited the performance of this CMB analysis. These areas are listed below.

Differentiation between wood product industry emissions and residential woodburning emissions can not be quantitatively determined.

The CMB model was unable to distinguish between the wood product industry sources and the residential woodburning source. All wood combustion sources have similar profiles and are indistinguishable in the CMB analysis. An emission's profile for process wood handling (e.g. sawdust) would be similar to the wood combustion source profiles. Because of the similarities, the wood combustion source category listed in the results section above, includes the PM_{10} contribution from residential wood burning, and raw and combusted wood material from industrial sources. The proportion of wood combustion contributions attributable to the three types of wood sources can not be determined by CMB analysis.

Microscopy analysis was initiated in an effort to identify the types of particles on the filters. By identifying the particles and the relative number of the different types, a qualitative estimate of the impacting sources can be determined and used in conjunction with the CMB results.

Three filter samples, 2-21-88, 2-26-90, and 10-4-90, were looked at using polarized light microscopy (PLM) and scanning electron microscopy (SEM). Initial results of the PLM analysis indicated that the majority of the particles on the filters were charcoal particles. Minor constituents were soil particles and cellulose fibers. The SEM analysis indicated that the majority of the particles were soil particles. Further analyses were conducted to attempt to clarify the conflicting results. Additional PLM and SEM analyses, along with a low temperature ashing (LTA) procedure, were completed for the original three filters.

Although definitive conclusions cannot be made based on this limited study, it was determined by PLM and SEM analyses that the majority of particulates on the three analyzed filters were soil particles. The previous confusion as to type of particles on the filter samples was due to a the masking effect of a "film" of carbonaceous material which covered the soil particles. It appears that fugitive dust was the dominant source of PM_{10} during the day. Since the PM_{10} samplers operated midnight to midnight, a nighttime woodburning source likely contributed the carbon which layered over the dust particles, causing the confusion in the PLM particle identification.

The particulate mass on the filters only slightly decreased after the LTA analysis in which the samples were heated to 100° for an hour. The results of the LTA analysis indicate that there was likely only a small amount of uncombusted, but potentially combustible material (raw wood material, such as cellulose fibers) on any of the three filter samples. The LTA results provide qualitative information only. Further detail regarding the PLM, SEM, and LTA analyses is provided in the report attached to this appendix.

The information gained through the microscopy and LTA analyses has indicated that the majority of the carbonaceous material on the filters is from a combustion source, not from raw wood fibers. The cellulose filters identified in the original analysis were actually fibers from the quartz filter media. Finally, the microscopy analyses indicate that the particles on the filters are primarily from geologic sources and from combustion sources. The SEM, PLM and LTA results must be

considered qualitative. However, these limited analyses have provided enough additional information to increase the confidence in the results from the CMB analyses.

The resolution of XRF elemental analyses is not optimal on samples collected on quartz filters. The fugitive dust source apportionment may be affected.

The fiber matrix of quartz filter interferes with the signals that represent the mass of the lower weight elements found on the filter samples. The majority of the elements found in soil samples are lower weight elements, such as aluminum, silica, and calcium. The high uncertainties associated with these elements may negatively influence the CMB apportionment of the fugitive dust source. Since fugitive road dust is a major source in the Sandpoint area, its apportionment may by significantly impacted. The low data recoveries by the CMB model on the days affected by high fugitive dust impacts may be accounted for by the low estimation of the elements associated with the fugitive dust on the filters.

The wood combustion source apportionment may be affected by the questionable soluble potassium values and/or the woodburning source profile that was used in the analysis.

Soluble potassium (K^+) is generally a good indicator of woodburning emissions. However, the K^+ was not used in the CMB analysis due to poor "fit" with the other elements. This "fitting" problem could be caused by the method of analysis of the K^+ on the filters or because of the woodburning source profile that was used in the modeling.

The inductively coupled plasma (ICP) method was used to determine the mass of K^+ on the filters. This method is an acceptable method for analysis, but is different than the one used to determine the K^+ in the woodburning profile. The discrepancies in methods may have influenced compatibility of the source profile and the filter sample measurements.

A Portland woodburning profile was used to determine the wood combustion contribution for the Sandpoint receptor analysis. A high percent of the wood burned in both areas is fir. However, larch is also an important wood burned in the Sandpoint area but not in the Portland area. No existing residential woodburning profile contains emissions from the burning of larch. Therefore, the poor fit of the K^+ in the Sandpoint analysis could be due to the different types of wood burned in each area.

Five of the thirteen samples had model calculated total PM_{10} concentrations outside the suggested acceptable range.

When the CMB model is not able to account for at least 80% of the total PM_{10} mass, the problem could be expected to be caused by either: 1) a missing source that has not been included in the analysis; 2) an initially erroneous PM_{10} concentration calculation; 3) a bad analysis of a filter sample or a source emission profile. All five of the gravimetrically determined PM_{10} concentrations for the questionable samples were rechecked. There were no obvious problems regarding the initial concentration calculations. The filter analysis for 12-7-88 indicated exceptionally low concentrations of all the analyzed elements. The elemental and ionic analyses were repeated and indicated similar results as the first set of data. Therefore, it must be assumed that an initial calculation problem is likely to be the reason for its bad performance in the model. This sample should be eliminated from all further examination.

Review of the information associated with the 2-26-90 and the 3-2-90 samples indicates no observable reason for the low mass recoveries of the model. The low recoveries could be affected by the high fugitive dust impact on these PM_{10} masses. The limitation regarding the analysis of quartz filters in areas influenced by high fugitive dust impacts is discussed above.

The samples from 9-25-89 and 10-4-90 were the only fall samples analyzed and were known to be primarily impacted by blowing dust. Microscopy analysis of the 10-4-90 indicated an overwhelming majority of soil particles on the filter. Although all the possibilities regarding the causes of "bad" samples must be considered, it is likely that an analysis problem associated with the high fugitive dust impact on quartz sample filters is the likely cause of the low recoveries. The meteorological events support this conclusion. Despite the low calculated masses, the CMB results listed on Table D-03 for these two fall samples probably reflect generally valid source apportionments.

The filter samples were not refrigerated; mass may be lost from the older samples.

All the filter samples were sealed and in good condition when submitted for analysis. However, mass (particularly the organic fraction) may be lost with time, if the filters are not refrigerated. It is possible, but not quantifiable, that some particulate mass was lost from the filters prior to analysis. The woodburning apportionment would be most effected by this problem.

F. CONCLUSIONS

Considering the above discussion of the results and limitations, the following points summarize the receptor modeling analysis on source contributions to the elevated ambient PM_{10} concentrations in Sandpoint.

1. The PM_{10} mass on high, winter samples appears to be approximately equally influenced by emissions from wood combustion and fugitive road dust.

2. The CMB model was not able to differentiate between the emissions from the wood products industries and from residential woodburning. Through microscopy analysis on a limited number of samples, it appears that the emissions from process wood handling are not significant on the PM_{10} filters collected at the Sandpoint Post Office.

3. Exceedances found in the fall months occur on high wind, blowing dust days. The overwhelming majority of the ambient PM_{10} levels recorded on these days is caused by fugitive dust.

APPENDIX D-2: SANDPOINT CMB MODEL RUNS

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 02/21/88 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.98	PERCENT MASS	86.5		
CHI SQUARE	.63	DF	15		

SOURCE #	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	56.6988	4.4769	14.8984
3	rwcport	66.0862	7.7841	8.4899
77	SO4	1.4493	.2692	5.3840
78	NO3	1.4480	.2775	5.2178

MEASURED CONCENTRATION FOR SIZE: T
156.8+- 15.7

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 02/21/88 VERSION: 7.0

SAMPLE DURATION			24		START HOUR		00	SIZE:	T	
R SQUARE			.98		PERCENT MASS		86.5			
CHI SQUARE			.63		DF		15			

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	156.80000+-	15.68000	135.68230+-	8.65246	.87--	.10	-1.2
C204	NO3	*	1.63964+-	.23188	1.63964+-	.14369	1.00+-	.17	.0
C203	SO4	*	1.54955+-	.21914	1.54955+-	.14607	1.00+-	.17	.0
C206	NH4	*	.12012+-	.01699	.06509+-	.03325	.54+-	.29	-1.5
C208	K		.39400+-	.04400	.17572+-	.06786	.45+-	.18	-2.7
C201	OC	*	35.61562--	4.01608	34.99309+-	2.27620	.98+-	.13	-.1
C202	EC	*	5.21922+-	.77327	6.98598+-	1.28349	1.34+-	.32	1.2
C13	AL	*	5.31832+-	1.17955	6.15816+-	1.11474	1.16+-	.33	.5
C14	SI		.00000+-	.00000	18.06890+-	3.25364	.00+-	.00	5.6
C15	P		.00000<	.02792	.00026<	.00828	.00<	.00	.0
C16	S		.28042+-	.05202	.09828+-	.03290	.35+-	.13	-3.0
C17	CL	*	.08108+-	.02115	.05538+-	.01849	.68+-	.29	-.9
C19	K	*	2.13400+-	.32640	2.18318+-	.23058	1.02+-	.19	.1
C20	CA	*	1.13514+-	.30252	1.09227--	.12216	.96+-	.28	-.1
C22	TI	*	.29429+-	.03328	.33610+-	.03383	1.14+-	.17	.9
C23	V	*	.01000+-	.00393	.01154+-	.00425	1.15+-	.62	.2
C24	CR		.00419+-	.00166	.00894--	.00199	2.13+-	.97	1.6
C25	MN	*	.05055+-	.00597	.04375+-	.00601	.87+-	.16	-.8
C26	FE	*	2.16997+-	.25662	2.30245+-	.33016	1.04+-	.16	.3
C28	NI		.00000<	.00137	.00275<	.00155	.00<	.00	1.2
C29	CU	*	.00924+-	.00152	.00734+-	.00156	.79+-	.21	-.9
C30	ZN	*	.05477+-	.00652	.05206+-	.02602	.95+-	.49	-.1
C31	GA		.00000<	.00095	.00093<	.00102	.00<	.00	.7
C33	AS		.00249<	.00432	.00360<	.00476	1.45	2.16	.2
C34	SE		.00000<	.00120	.00032<	.00069	.00<	.00	.2
C35	BR		.00556+-	.00157	.00053+-	.00065	.10--	.12	-3.0
C37	RB	*	.01052--	.00222	.01107+-	.00129	1.05--	.23	.2
C38	SR	*	.02607+-	.00508	.01801+-	.00348	.69--	.19	-1.3
C39	Y		.00132	.00224	.00200<	.00184	1.52	2.09	.2
C40	ZR	*	.01231--	.00512	.00874+-	.00192	.67+-	.33	-.8
C42	MO		.00000<	.00865	.00147<	.00260	.00<	.00	.2
C46	PD		.00000<	.00832	.00333<	.00592	.00<	.00	.2
C47	AG		.01080--	.01066	.00213+-	.00741	.20+-	.71	-.7
C48	CD		.01787--	.01343	.00447+-	.00906	.25+-	.56	-.8
C49	IN		.00582<	.01991	.00000<	.01011	.00<	1.72	-.3
C50	SN		.00232	.01956	.01401<	.02003	6.05	11.81	.7
C51	SB		.00000<	.02509	.02301<	.01654	.00<	.00	.9
C56	BA		.00000<	.09315	.03165<	.06304	.00<	.00	.3
C57	LA		.00000<	.13212	.00377<	.09025	.00<	.00	.0
C80	HG		.00000<	.00232	.00000<	.00154	.00<	.00	.0

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 02/24/88 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.95	PERCENT MASS	80.4		
CHI SQUARE	1.31	DF	13		

SOURCE #	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	59.6879	4.0595	14.7033
3	rwcport	79.9200	10.7679	7.4221
77	SO4	2.0105	.3691	5.4476
78	NO3	2.2673	.4186	5.4159

MEASURED CONCENTRATION FOR SIZE: T
179.0+- 17.9

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 02/24/88 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T	
R SQUARE	.95	PERCENT MASS	80.4			
CHI SQUARE	1.31	DF	13			

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	179.00000+-	17.91000	143.88570+-	11.19822	.80+-	.10	-1.7
C204	NO3	*	2.44325+-	.24553	2.44325+-	.22390	1.00--	.17	.0
C203	SO4	*	2.12664+-	.20075	2.12664+-	.19980	1.00+-	.17	.0
C206	NH4		.29928+-	.04233	.07872+-	.03183	.26+-	.11	-4.2
C208	K		.42200+-	.04700	.21251+-	.07832	.50+-	.19	-2.3
C201	OC	*	53.58423+-	6.03013	41.11735+-	2.73855	.77+-	.10	-1.9
C202	EC	*	4.65950+-	.69401	8.34617+-	1.54699	1.79+-	.43	2.2
C13	AL	*	4.72461+-	1.07691	5.51106+-	.99757	1.17+-	.34	.5
C14	SI		.00000+-	.00000	16.16992+-	2.91163	.00+-	.00	5.6
C15	P		.00000<	.02862	.00032<	.00761	.00<	.00	.0
C16	S		.28280+-	.05277	.10493+-	.02975	.37+-	.13	-2.9
C17	CL		.03757+-	.01841	.06697+-	.02118	1.78+-	1.34	1.0
C19	K	*	1.83200+-	.28130	2.00608+-	.20974	1.10+-	.20	.5
C20	CA	*	1.00358+-	.28890	.97947+-	.10934	.98+-	.30	-.1
C22	TI	*	.25466+-	.02884	.30077+-	.03043	1.18+-	.18	1.1
C23	V	*	.01108+-	.00357	.01033+-	.00402	.93+-	.47	-.1
C24	CR		.00458+-	.00164	.00800+-	.00182	1.74+-	.74	1.4
C25	MN	*	.05030+-	.00592	.03926+-	.00539	.78+-	.14	-1.4
C26	FE	*	2.71625+-	.30589	2.95563+-	.29546	1.09+-	.16	.8
C28	NI		.00048<	.00136	.00263<	.00141	5.41<	15.45	1.1
C29	CU	*	.00997+-	.00159	.00657+-	.00143	.66+-	.18	-1.6
C30	ZN	*	.05556+-	.00660	.04777+-	.02330	.86+-	.43	-.3
C31	GA		.00000<	.00092	.00084<	.00106	.00<	.00	.6
C33	AS		.00177<	.00389	.00330<	.00429	1.87<	4.75	.2
C34	SE		.00000<	.00119	.00030<	.00069	.00<	.00	.2
C35	BR		.00621+-	.00158	.00064+-	.00064	.10+-	.11	-3.3
C37	RB	*	.00995+-	.00216	.01007+-	.00118	1.01+-	.25	.1
C38	SR	*	.02437+-	.00492	.01612+-	.00313	.66+-	.17	-1.4
C39			.00000	.00233	.00179<	.00169	.00<	.00	.8
C40	ZR	*	.00796+-	.00499	.00782+-	.00179	.98+-	.66	-.0
C42	MO		.00000<	.00861	.00121	.00243	.00<	.00	.1
C46	PD		.00000<	.00861	.00295<	.00543	.00<	.00	.3
C47	AG		.00030<	.01067	.00191<	.00678	1.39<	22.35	.1
C48	CD		.00000<	.01331	.00400<	.00825	.00<	.00	.3
C49	IN		.00000<	.01605	.00000<	.00922	.00<	.00	.0
C50	SN		.00000<	.01761	.00121<	.01809	.00<	.00	.3
C51	SB		.00000<	.02496	.02529<	.01505	.00<	.00	.9
C56	BA		.18871+-	.09455	.02936+-	.05725	.16+-	.31	-1.4
C57	LA		.13507+-	.13170	.00456+-	.08149	.03+-	.60	-.8
C60	NB		.00000<	.00228	.00000<	.00157	.00<	.00	.0
C82	PB	*	.04388+-	.00695	.05887+-	.03553	1.34+-	.84	.2

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 03/16/88 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.98	PERCENT MASS	88.0		
CHI SQUARE	.70	DF	11		

SOURCE *	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	24.8754	1.9620	12.6786
3	rwcport	59.1063	7.4162	7.9699
77	SO4	3.1216	.5549	5.6256
78	NO3	1.5224	.2775	5.4865

MEASURED CONCENTRATION FOR SIZE: T
100.7+- 10.1

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 03/16/88 VERSION: 7.0

SAMPLE DURATION			24		START HOUR		00		SIZE:		T
R SQUARE			.98		PERCENT MASS		88.0				
CHI SQUARE			.70		DF		11				

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	100.70000--	10.07000	88.62563+-	7.52563	.88+-	.12	-1.0
C204	NO3	*	1.61118+-	.22785	1.61118+-	.15021	1.00+-	.17	.0
C203	SO4	*	3.17479+-	.44898	3.17479+-	.30645	1.00+-	.17	.0
C206	NH4		.53627--	.07584	.05822--	.01677	.11+-	.03	-6.2
C208	K		.27100+-	.03000	.15716+-	.05553	.58+-	.21	-1.8
C201	OC	*	33.29370+-	3.75480	29.30587+-	2.01667	.88+-	.12	-.9
C202	EC	*	4.53627+-	.67643	6.07869+-	1.14093	1.34+-	.32	1.2
C13	AL	*	1.61891+-	.50417	2.29704+-	.41576	1.42+-	.51	1.0
C14	SI		.00000+-	.00000	6.73933+-	1.21345	.00+-	.00	5.6
C15	P		.00000<	.02551	.00024<	.00355	.00<	.00	.0
C16	S		.51415--	.08240	.06481+-	.01299	.13+-	.03	-5.4
C17	CL		.00000<	.01533	.04953<	.01491	.00<	.00	2.3
C19	K	*	.80330+-	.12820	.90109+-	.09384	1.12--	.21	.6
C20	CA	*	.56457--	.24685	.41070+-	.04562	.73+-	.33	-.6
C22	TI	*	.11153--	.01290	.12535--	.01299	1.12--	.17	.8
C23	V	*	.00519--	.00219	.00430+-	.00207	.83+-	.53	-.3
C24	CR	*	.00459--	.00147	.00333+-	.00088	.73+-	.30	-.7
C25	MN	*	.02160--	.00287	.01649+-	.00228	.76+-	.15	-1.4
C26	FE	*	1.24792--	.14175	1.23217+-	.12313	.99+-	.15	-.1
C28	NI		.00126<	.00131	.00109<	.00068	.87<	1.06	-.1
C29	CU		.00872--	.00145	.00274+-	.00069	.31+-	.10	-3.7
C30	ZN		.04246--	.00517	.02138+-	.00973	.50+-	.24	-1.9
C31	GA		.00000<	.00087	.00035<	.00070	.00<	.00	.3
C33	AS		.00000<	.00333	.00146<	.00185	.00<	.00	.4
C34	SE		.00000	.00116	.00012<	.00048	.00<	.00	.1
C35	BR		.00468--	.00148	.00047--	.00043	.10--	.10	-3.7
C37	RB	*	.00535--	.00189	.00440+-	.00060	.84+-	.32	-.4
C38	SR	*	.00862--	.00379	.00672--	.00126	.78--	.38	-.5
C39	Y		.00000	.00229	.00075	.00081	.00<	.00	.3
C40	ZR		.00923--	.00494	.00325--	.00088	.35+-	.21	-1.2
C42	MO		.00003	.00864	.00055<	.00121	.00<	.00	..
C46	PD		.00000	.00209	.00124<	.00253	.00<	.00	.1
C47	AG		.00000<	.01025	.00080<	.00311	.00<	.00	.1
C48	CD		.00584<	.01240	.00167	.00372	.29	.99	-.2
C49	IN		.00717	.01154	.00000	.00418	.00<	.58	-.4
C50	SN		.00162	.00914	.00522	.00786	.44<	1.9	.1
C51	SB		.00003<	.02469	.01082	.00674	.00<	.00	.2
C56	BA		.00000	.09174	.01335<	.02345	.00<	.00	..
C57	LA		.00000<	.02941	.00337	.00323	.00<	.00	.1
C80	HG		.00003<	.00217	.00000<	.00097	.00<	.00	.0
C82	PB	*	.02798--	.00564	.02436+-	.01482	.88+-	.36	-.2

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 12/07/88 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .98 PERCENT MASS 45.5
CHI SQUARE .95 DF 5

SOURCE *	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	3.2207	.4846	6.6517
3	rwcport	53.8512	6.0487	8.9030
77	SO4	1.5114	.2749	5.4976
78	NO3	.8585	.1561	5.5010

bat

MEASURED CONCENTRATION FOR SIZE: T
130.6+- 13.1

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 12/07/88 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .98 PERCENT MASS 45.5
CHI SQUARE .95 DF 5

SPECIES			MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	130.60000--	13.06000	59.44477+-	6.05337	.46+-	.06	-4.9
C204	NO3	*	.90377+-	.12781	.90377+-	.08493	1.00+-	.17	.0
C203	SO4	*	1.58648--	.22436	1.58648+-	.14868	1.00+-	.17	.0
C206	NH4		.26073+-	.03687	.05304+-	.01140	.20+-	.05	-5.4
C208	K	*	.11600+-	.01300	.14319+-	.04956	1.23+-	.45	.5
C201	OC	*	24.90247+-	2.82760	25.58724+-	1.83376	1.03+-	.14	.2
C202	EC	*	6.56697+-	.96619	5.44352+-	1.03817	.83+-	.20	-.8
C13	AL	*	.00000<	.45059	.29814<	.05397	.00<	.00	.7
C14	SI		.00000+-	.00000	.87407+-	.15727	.00+-	.00	5.6
C15	P		.00000<	.02809	.00022<	.00177	.00<	.00	.0
C16	S		.07367+-	.02845	.04614+-	.00454	.63+-	.25	-1.0
C17	CL		.00000<	.01515	.04513<	.01326	.00<	.00	2.2
C19	K		.09150+-	.03070	.23022+-	.03919	2.55+-	.96	2.8
C20	CA		.04171<	.16436	.05771<	.00634	1.38<	5.45	.1
C22	TI	*	.01022+-	.00249	.01624+-	.00348	1.59+-	.52	1.4
C23	V	*	.00000<	.00158	.00056<	.00132	.00<	.00	.3
C24	CR		.00026<	.00129	.00043<	.00038	1.64<	8.15	.1
C25	MN		.00755+-	.00164	.00237+-	.00040	.31+-	.09	-3.1
C26	FE	*	.19389+-	.02477	.16037+-	.01596	.83+-	.13	-1.1
C28	NI		.00190+-	.00144	.00014+-	.00022	.07+-	.13	-1.2
C29	CU		.00903+-	.00158	.00035+-	.00025	.04+-	.03	-5.4
C30	ZN		.03537+-	.00431	.00540+-	.00140	.15+-	.04	-6.6
C31	GA		.00000<	.00095	.00005<	.00052	.00<	.00	.0
C33	AS		.00122	.00028	.00038<	.00047	.31<	.25	-.2
C34	SE		.00000<	.00129	.00002<	.00028	.00<	.00	.0
C35	BR		.00283+-	.00158	.00043+-	.00021	.11+-	.07	-2.1
C37	RB		.00132	.00193	.00094<	.00021	.71<	1.05	-.2
C38	SR		.00517+-	.00321	.00087+-	.00032	.17+-	.12	-1.3
C39	Y		.00000<	.00248	.00010<	.00033	.00<	.00	.0
C40	ZR		.01178+-	.00551	.00042+-	.00042	.04+-	.04	-2.1
C42	MO		.02175+-	.00998	.00007+-	.00068	.00+-	.03	-2.2
C46	PD		.00000<	.00861	.00015<	.00123	.00<	.00	.0
C47	AG		.00000<	.01106	.00010<	.00145	.00<	.00	.0
C48	CD		.00364<	.01407	.00022<	.00158	.06<	.39	-.2
C49	IN		.00010<	.01575	.00000<	.00195	.00<	.00	.0
C50	SN		.00000<	.02059	.00068<	.00261	.00<	.00	.0
C51	SB		.00644<	.02717	.00191<	.00281	.30<	1.33	-.2
C56	BA		.00000<	.09870	.00381<	.01020	.00<	.00	.0
C57	LA		.00000<	.15992	.00307<	.01175	.00<	.00	.0
C80	HG		.00066<	.00233	.00000<	.00072	.00<	1.10	-.3
C82	PB		.02946+-	.00607	.00323+-	.00203	.11+-	.07	-4.1

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 03/23/89 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.98	PERCENT MASS	83.1		
CHI SQUARE	.46	DF	13		

	SOURCE * TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	41.3977	3.1702	13.0584
3	rwcport	45.9037	5.3514	8.5778
77	SO4	1.3987	.2542	5.5035
78	NO3	1.2602	.2352	5.3570

MEASURED CONCENTRATION FOR SIZE: T

108.3-- 10.8

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 03/23/89 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.98	PERCENT MASS	83.1		
CHI SQUARE	.46	DF	13		

SPECIES			MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	108.30000+-	10.83000	89.96033+-	6.03786	.83+-	.10	-1.5
C204	NO3	*	1.37809+-	.19489	1.37809+-	.12459	1.00+-	.17	.0
C203	SO4	*	1.46054+-	.20655	1.46054+-	.13879	1.00+-	.17	.0
C206	NH4		.25088+-	.03548	.04522+-	.02109	.18+-	.09	-5.0
C208	K	*	.14200+-	.01600	.12206+-	.04619	.86+-	.34	-.4
C201	OC	*	23.91048+-	2.71393	24.02396+-	1.57744	1.00+-	.13	.0
C202	EC	*	4.82921+-	.71748	4.82846+-	.89020	1.00+-	.24	.0
C13	AL	*	3.11307+-	.74914	3.82221+-	.69188	1.23+-	.37	.7
C14	SI		.00000+-	.00000	11.21482+-	2.01942	.00+-	.00	5.6
C15	P		.00000<	.02513	.00019<	.00518	.00<	.00	.0
C16	S		.25035+-	.04594	.06499--	.02049	.26+-	.09	-3.7
C17	CL	*	.03266+-	.01586	.03847+-	.01255	1.18+-	.69	.3
C19	K		1.23500+-	.19010	1.36734+-	.14384	1.11+-	.21	.6
C20	CA	*	.86160+-	.21071	.67841+-	.07583	.79+-	.21	-.8
C22	TI	*	.19659+-	.02232	.20860+-	.02103	1.06+-	.16	.4
C23		*	.00866+-	.00297	.00716+-	.00269	.83+-	.42	-.4
C24	CR	*	.00593+-	.00160	.00553--	.00125	.94+-	.33	-.2
C25	MN	*	.00051+-	.00382	.02718--	.00374	.89+-	.17	-.6
C26	FE	*	2.21273--	.24958	2.04979--	.20492	.93--	.14	-.5
C28	NI		.00366+-	.00141	.00182+-	.00097	.50+-	.33	-1.1
C29	CU		.01841+-	.00238	.00455--	.00098	.25+-	.06	-5.4
C30	ZN	*	.04151--	.00494	.03259--	.01615	.79+-	.40	-.5
C31	GA		.00000<	.00086	.00058<	.00067	.00<	.00	.5
C33	AS		.00481+-	.00300	.00225--	.00296	.47+-	.68	-.5
C34	SE		.00088<	.00115	.00021	.00046	.23<	.60	-.5
C35	BR		.00445+-	.00142	.00037--	.00043	.08+-	.10	-2.7
C37	RB	*	.00371--	.00176	.00691+-	.00081	1.86--	.32	1.9
C38	SR	*	.01248--	.00332	.01113--	.00217	.90+-	.30	-.3
C39			.00469--	.00230	.00124--	.00116	.26--	.28	-1.3
C40	ZR		.01002--	.00496	.00542--	.00122	.54+-	.29	-.9
C42	MO		.00153<	.00825	.00091	.00164	.60<	1.23	-.1
C46	PD		.00411<	.00802	.00237	.00371	.50<	1.32	-.2
C47	AG		.00856<	.01005	.00132	.00462	.15<	.57	-.7
C48	CD		.00067<	.01273	.00277	.00566	4.14<	9.21	.2
C49	IN		.00000<	.01522	.00000	.00631	.00<	.00	.
C50	SN		.00000<	.01839	.00869<	.01247	.00<	.00	.2
C51	SB		.00000<	.02429	.01744<	.01032	.00<	.00	.2
C56	BA		.00000<	.08857	.01957	.03931	.00<	.00	.0
C57	LA		.00000<	.12556	.00262	.05617	.00<	.00	.0
C80	HG		.00019<	.00215	.00000<	.00101	.00<	1.23	-.1
C82	PB	*	.02296+-	.00526	.04082--	.02464	1.78+-	1.15	.7

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 09/25/89 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	-
R SQUARE	.97	PERCENT MASS	70.9		
CHI SQUARE	1.20	DF	9		

SOURCE	* TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	58.6784	4.5061	13.0220
3	FWCDORT	22.4224	3.4372	6.5235
77	SO4	.8370	.1529	5.4753
78	NO3	.4186	.0933	4.4892

MEASURED CONCENTRATION FOR SIZE: T
116.2+- 11.6

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 09/25/89 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	-
R SQUARE	.97	PERCENT MASS	70.9		
CHI SQUARE	1.20	DF	9		

SPECIES			MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	116.20000+-	11.63000	82.35639+-	5.37113	.71+-	.08	-2.7
C204	NO3	*	.56669+-	.08014	.56669+-	.04348	1.00+-	.16	.0
C203	SO4	*	.86412+-	.12220	.86412+-	.08639	1.00+-	.17	.0
C206	NH4		.18848+-	.02665	.02209+-	.02700	.12+-	.14	-4.4
C208	K		.04100+-	.03800	.05962+-	.03360	.17+-	.10	-5.5
C201	OC	*	16.96932+-	1.93651	13.93677+-	.82077	.82+-	.11	-1.4
C202	EC	*	1.69693+-	.27867	2.54590+-	.45345	1.50+-	.36	1.6
C13	AL	*	4.06011+-	.93383	5.41730+-	.98069	1.33+-	.39	1.0
C14	SI		.00000+-	.00000	15.89561+-	2.86229	.00+-	.00	5.6
C15	P		.00000<	.02708	.00009<	.00708	.00<	.00	.0
C16	S		.15291+-	.03669	.05728+-	.02863	.37+-	.21	-2.1
C17	CL		.00000<	.01650	.01879<	.00951	.00<	.00	1.0
C19	K	*	1.54600+-	.23680	1.83061+-	.19936	1.18+-	.22	.7
C20	CA	*	1.14026+-	.24955	.95746+-	.10744	.84+-	.21	-.7
C22	TI	*	.02060+-	.03619	.29568+-	.02960	.92+-	.14	-.5
C23	V	*	.00818+-	.00410	.01015+-	.00350	1.24+-	.75	.4
C24	CR		.00391+-	.00167	.00786+-	.00171	2.01+-	.96	1.7
C25	MN		.05646+-	.00666	.03831+-	.00529	.68+-	.12	-2.1
C26	FE	*	2.45210+-	.38815	2.90480+-	.29046	.84+-	.13	-1.1
C28	NI		.00000<	.00150	.00258<	.00135	.00<	.00	1.3
C29	CU		.03025+-	.00369	.00645+-	.00135	.21+-	.05	-5.1
C30	ZN	*	.02603+-	.00329	.04376+-	.02289	1.68+-	.93	.8
C31	GA		.00155+-	.00093	.00082+-	.00074	.53+-	.37	-.5
C33	AS		.00198<	.00291	.00302<	.00417	1.52<	2.37	.1
C34	SE		.00000<	.00125	.00029<	.00054	.00<	.00	.2
C35	BR		.00397+-	.00155	.00018+-	.00054	.05+-	.14	-2.3
C37	RB	*	.00686+-	.00203	.00945+-	.00112	1.38+-	.44	.1
C38	SR	*	.01594+-	.00401	.01584+-	.00305	.84+-	.23	-.5
C39			.00000<	.00244	.00176<	.00159	.00<	.00	.5
C40	ZR		.01200+-	.00545	.00769+-	.00165	.64+-	.22	-.5
C42	MO		.00569+-	.01044	.00129+-	.00219	.04+-	.18	-3.2
C46	PD		.00389<	.00903	.00293<	.00507	.75<	2.13	-.1
C47	AG		.00000<	.01127	.00188<	.00636	.00<	.00	.1
C48	CD		.00000<	.01416	.00393<	.00783	.00<	.00	.2
C49	IN		.00000<	.01671	.00000<	.00872	.00<	.00	.0
C50	SN		.00000<	.02044	.01222<	.01746	.00<	.00	.5
C51	SB		.00000<	.02664	.02425<	.01430	.00<	.00	.5
C56	BA		.09023<	.09785	.02624<	.05460	.29<	.58	-.5
C57	LA		.02403<	.13724	.00128<	.07864	.05<	2.29	-.1
C80	HG		.00000<	.00231	.00000<	.00116	.00<	.00	.0

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 02/26/90 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T		
R SQUARE	.94	PERCENT MASS	69.1				
CHI SQUARE	2.12	DF	10				

SOURCE *	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	82.7547	5.5488	14.9139
3	rwcport	47.7085	6.8682	6.9462
77	SO4	1.4847	.2716	5.4670
78	NO3	.8509	.1777	4.7899

MEASURED CONCENTRATION FOR SIZE: T
192.1+- 19.2

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 02/26/90 VERSION: 7.0

SAMPLE DURATION		24	START HOUR		00	SIZE:	T				
R SQUARE		.94	PERCENT MASS		69.1						
CHI SQUARE		2.12	DF		10						

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	192.10000+-	19.22000	132.79880+-	8.40757	.69+-	.08	-2.8
C204	NO3	*	1.07101+-	.15146	1.07101+-	.08620	1.00+-	.16	.0
C203	SO4	*	1.54831+-	.21896	1.54831+-	.15069	1.00+-	.17	.0
C206	NH4		.21886+-	.03095	.04699+-	.03880	.21+-	.18	-3.5
C208	K		.24400+-	.02700	.12686+-	.05767	.52+-	.24	-1.8
C201	OC	*	24.74971+-	3.92903	27.24328+-	1.67914	.78+-	.10	-1.8
C202	EC	*	3.11991+-	.47573	5.21187+-	.93980	1.67+-	.39	2.0
C13	AL	*	7.52619+-	1.62331	7.64022+-	1.38308	1.02+-	.29	.1
C14	SI		.00000+-	.00000	22.41796+-	4.03686	.00+-	.00	5.6
C15	P		.00000<	.02876	.00019<	.01005	.00<	.00	.0
C16	S		.29988+-	.05522	.09393+-	.04048	.31+-	.15	-3.0
C17	CL		.12340+-	.02622	.03998+-	.01603	.32+-	.13	-2.7
C19	K	*	2.65200+-	.40530	2.62228+-	.28227	.99+-	.18	-.1
C20	CA	*	1.82771+-	.34175	1.35187+-	.15154	.74+-	.16	-1.3
C22	TI	*	.29825+-	.03785	.41700+-	.04180	1.40+-	.23	2.1
C23	V		.00000<	.00605	.01423<	.00502	.00<	.00	1.8
C24	CR	*	.01090+-	.00225	.01109+-	.00242	1.02+-	.31	.1
C25	MN	*	.07264+-	.00849	.05411+-	.00745	.74+-	.13	-1.8
C26	FE	*	5.04074+-	.56575	4.09691+-	.40964	.81+-	.12	-1.4
C28	NI		.00000<	.00142	.00364<	.00191	.00<	.00	1.5
C29	CU	*	.01177+-	.00179	.00910+-	.00192	.77+-	.20	-1.0
C30	ZN		.00000<	.03576	.06263<	.03228	.00<	.00	1.3
C31	GA		.00000<	.00102	.00116<	.00110	.00<	.00	.8
C33	AS		.00787+-	.00342	.00432+-	.00589	.55+-	.79	-.5
C34	SE		.00000<	.00115	.00041<	.00079	.00<	.00	.3
C35	BR		.00487+-	.00150	.00038+-	.00077	.08+-	.16	-2.7
C37	RB	*	.01092+-	.00237	.01346+-	.00158	1.23+-	.33	.9
C38	SR	*	.01480+-	.00362	.02234+-	.00431	1.51+-	.47	1.2
C39			.00215	.00230	.00248<	.00225	1.15<	1.62	.1
C40	ZR		.00402<	.00507	.01084<	.00235	2.70<	2.46	1.2
C42	MO		.00541	.00860	.00182<	.00312	.34<	.79	-.4
C46	PD		.00000	.00903	.00414<	.00720	.00<	.00	.4
C47	AG		.00000<	.01104	.00265	.00902	.00<	.00	.2
C48	CD		.00000<	.01366	.00554	.01109	.00<	.00	.2
C49	IN		.00000	.01602	.00000<	.01235	.00<	.00	.0
C50	SN		.03171+-	.01948	.01713+-	.02467	.53+-	.62	-.3
C51	SB		.01964<	.02473	.03427	.02025	1.75	1.43	.5
C56	BA		.00000<	.10716	.03772	.07728	.00<	.00	.3
C57	LA		.00000<	.12864	.00271	.11115	.00<	.00	.0
C60	HG		.00000<	.00239	.00000<	.00170	.00<	.00	.0
C82	PB		.02956+-	.00584	.03815+-	.04924	1.29+-	.75	1.0

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 03/02/90 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .97 PERCENT MASS 79.1
CHI SQUARE .98 DF 9

SOURCE *	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	51.8117	4.5361	11.4221
3	rwcport	42.2159	5.6075	7.5285
77	SO4	1.2832	.2338	5.4880
78	NO3	1.2501	.2361	5.2941

MEASURED CONCENTRATION FOR SIZE: T
122.0+- 12.2

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 03/02/90 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .97 PERCENT MASS 79.1
CHI SQUARE .99 DF 9

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	122.00000+-	12.20000	78.56086+-	6.85158	.79--	.10	-1.8
C204	NO3	*	1.38822--	.19632	1.38822+-	.12377	1.00+-	.17	.0
C203	SO4	*	1.34014+-	.18952	1.34014+-	.12833	1.00+-	.17	.0
C206	NH4		.22596+-	.03196	.04158+-	.02509	.18--	.11	-4.5
C208	K		.22400+-	.02500	.11225+-	.04535	.50--	.21	-2.2
C201	OC	*	27.34375+-	3.10558	22.88061+-	1.46189	.84+-	.11	-1.3
C202	EC	*	2.80649+-	.43269	4.50749+-	.82278	1.61+-	.38	1.8
C13	AL	*	3.98918--	.92516	4.78357+-	.86593	1.20--	.35	.6
C14	SI		.00000+-	.00000	14.03579+-	2.52743	.00+-	.00	5.6
C15	P		.00000<	.02718	.00017<	.00636	.00<	.00	.0
C16	S		.30060--	.05368	.06889+-	.02545	.23--	.09	-3.9
C17	CL	*	.05465+-	.01875	.03538+-	.01244	.65--	.32	-.9
C19	K	*	1.49700+-	.23360	1.67290+-	.17795	1.12--	.21	.6
C20	CA	*	.97716--	.24013	.84759+-	.09488	.87--	.22	-.5
C22	TI		.11358--	.01897	.26108+-	.02622	2.30+-	.45	4.6
C23	V		.00000<	.00473	.00896<	.00323	.00<	.00	1.6
C24	CR	*	.00415--	.00192	.00694+-	.00153	1.67--	.36	1.1
C25	MN	*	.03855+-	.00478	.03394+-	.00467	.88+-	.16	-.7
C26	FE	*	2.72776+-	.30732	2.56521+-	.25647	.94--	.13	-.4
C28	NI	*	.00244+-	.00141	.00228+-	.00121	.93--	.73	-.1
C29	CU		.01081--	.00169	.00570+-	.00121	.53--	.14	-2.5
C30	ZN		.00000<	.03684	.03992<	.02021	.00<	.00	.9
C31	GA		.00000<	.00100	.00073<	.00073	.00<	.00	.6
C33	AS		.00237<	.00306	.00276<	.00369	1.17	1.17	.1
C34	SE		.00000<	.00120	.00026<	.00053	.00	.00	.2
C35	BR		.00351+-	.00146	.00034+-	.00051	.10--	.15	-2.0
C37	RB		.00252--	.00197	.00852+-	.00100	3.38--	1.59	3.7
C38	SR		.00017	.00295	.01299<	.00271	81.81	*****	3.5
C39	Y		.00159<	.00225	.00155	.00142	.98<	1.71	-.0
C40	ZR	<	.00824--	.00531	.00679--	.00149	.82--	.36	-.3
C42	MO		.00305<	.00877	.00114	.00199	.37	1.28	-.2
C46	PD		.00000<	.00898	.00259<	.00456	.00	.00	.3
C47	AG		.00588<	.01095	.00166<	.00571	.28<	.10	-.3
C48	CD		.00220<	.01374	.00347<	.00699	1.58	10.28	.1
C49	IN		.00000<	.01627	.00000<	.00780	.00	.00	.0
C50	SN		.00000<	.02013	.01088<	.01551	.00<	.00	.4
C51	SB		.00000<	.02543	.02166<	.01277	.00<	.00	.8
C56	BA		.00000<	.10859	.02419<	.04868	.00	.00	.2
C57	LA		.00000<	.12281	.00241<	.06955	.00<	.00	.0
C80	HG		.00000<	.00237	.00000<	.00114	.00<	.00	.0

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 03/06/90 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	-
R SQUARE	.97	PERCENT MASS	80.6		
CHI SQUARE	1.12	DF	9		

SOURCE *	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	50.4636	4.2719	11.8130
3	rwcport	34.9770	4.8383	7.2285
77	SO4	1.4844	.2666	5.5686
78	NO3	1.2197	.2296	5.3126

MEASURED CONCENTRATION FOR SIZE: T
109.4+- 10.9

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 03/06/90 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.97	PERCENT MASS	80.6		
CHI SQUARE	1.12	DF	9		

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	109.40000+-	10.95000	98.14468+-	6.08643	.81+-	.10	-1.7
C204	NO3	*	1.34832+-	.19068	1.34831+-	.12071	1.00+-	.17	.0
C203	SO4	*	1.52310+-	.21540	1.52310+-	.14749	1.00+-	.17	.0
C206	NH4		.23471+-	.03319	.03445+-	.02401	.15+-	.10	-4.9
C208	K		.20700+-	.02300	.09300+-	.03944	.45+-	.20	-2.5
C201	OC	*	22.65918+-	2.58407	19.38869+-	1.21884	.86+-	.11	-1.1
C202	EC	*	2.65918+-	.41384	3.77129+-	.68450	1.42+-	.34	1.4
C13	AL	*	3.55556+-	.83537	4.65905+-	.84340	1.31+-	.39	.9
C14	SI		.00000+-	.00000	13.67052+-	2.46167	.00+-	.00	5.6
C15	P		.00000<	.02668	.00014<	.00616	.00<	.00	.0
C16	S		.31910+-	.05642	.06208+-	.02473	.19+-	.08	-4.2
C17	CL		.10356+-	.02334	.02931+-	.01088	.28+-	.12	-2.9
C19	K	*	1.40300+-	.22010	1.61389+-	.17266	1.15+-	.22	.3
C20	CA	*	.75069+-	.24176	.32494+-	.09241	.87+-	.29	-.5
C22	TI		.11136+-	.01908	.25429+-	.02551	2.28+-	.45	3.5
C23	V		.00000<	.00489	.00872<	.00310	.00<	.00	1.5
C24	CR	*	.00752+-	.00212	.00676+-	.00149	.90+-	.32	-.3
C25	MN	*	.04394+-	.00526	.03303+-	.00455	.75+-	.14	-1.6
C26	FE	*	2.89162+-	.30322	2.49837+-	.24980	.93+-	.14	-.5
C28	NI	*	.00208+-	.00143	.00222+-	.00118	1.07+-	.82	.1
C29	CU		.06998+-	.00806	.00555+-	.00118	.08+-	.02	-7.9
C30	ZN		.00000<	.03816	.03853<	.01969	.00<	.00	.7
C31	GA		.00000<	.00106	.00071<	.00071	.00<	.00	.6
C33	AS		.00274<	.00296	.00266<	.00360	.97<	1.92	-.0
C34	SE		.00000<	.00122	.00025<	.00051	.00<	.00	.2
C35	BR		.00172+-	.00148	.00028+-	.00050	.16+-	.22	-.9
C37	RB	*	.04466+-	.00210	.00825+-	.00098	1.77+-	.82	1.5
C38	SR		.00000	.00291	.01263<	.00263	.00<	.00	1.5
C39	Y		.00000<	.00242	.00151<	.00139	.00	.00	.5
C40	ZR		.00897	.00522	.00661	.00145	7.43<	22.76	1.0
C42	MO		.00451	.00914	.00111<	.00192	.25<	.68	-.4
C46	PD		.00000<	.00907	.00252<	.00441	.00<	.00	.2
C47	AG		.00223<	.01110	.00161<	.00552	.68<	4.06	-.1
C48	CD		.02838+-	.01448	.00338+-	.00677	.12+-	.25	-1.6
C49	IN		.00000	.01678	.00000<	.00756	.00<	.00	.0
C50	SN		.00000<	.02276	.01660	.01367	.00<	.00	.2
C51	SB		.00000<	.02622	.02122<	.01229	.00<	.00	.2
C56	BA		.00000<	.11130	.02227<	.04726	.00<	.00	.2
C57	LA		.02823<	.10555	.00199<	.06789	.07<	2.42	-.2
C80	HG		.00000<	.00248	.00000<	.00108	.00<	.00	.0

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 10/04/90 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.96	PERCENT MASS	70.4		
CHI SQUARE	1.55	DF	8		

SOURCE	* TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	144.1290	9.9882	14.4299
3	rwcport	8.4041	3.6430	2.3069
77	SO4	.8439	.1626	5.1906
78	NO3	.5228	.1388	3.7666

MEASURED CONCENTRATION FOR SIZE: T
218.5+- 21.9

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 10/04/90 VERSION: 7.0

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.96	PERCENT MASS	70.4		
CHI SQUARE	1.55	DF	8		

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	218.50000+-	21.85000	153.89980+-	9.37385	.70+-	.08	-2.7
C204	NO3	*	.84984+-	.12019	.84984+-	.06114	1.00+-	.16	.0
C203	SO4	*	.84345+-	.11928	.84345+-	.10539	1.00+-	.19	.0
C206	NH4		.14441+-	.02042	.00828+-	.06531	.06+-	.45	-2.0
C208	K		.37300+-	.04200	.02235+-	.06560	.06+-	.18	-4.5
C201	OC	*	12.28837+-	1.40761	12.21663+-	.79323	1.00+-	.13	-.0
C202	EC		.00000<	.05189	1.54927<	.37351	.00<	.00	4.1
C13	AL	*	10.22364+-	2.17986	13.30578+-	2.40883	1.30+-	.36	.9
C14	SI		.00000+-	.00000	39.04293+-	7.03076	.00+-	.00	5.6
C15	P		.00000<	.03263	.00003<	.01730	.00<	.00	.0
C16	S		.01806<	.03494	.10257<	.07019	5.68<	11.66	1.1
C17	CL		.04794+-	.02170	.00704+-	.01914	.15+-	.40	-1.4
C19	K	*	3.17300+-	.48030	4.37878+-	.48820	1.38+-	.26	1.8
C20	CA	*	2.26262+-	.39118	2.34723+-	.26390	1.04+-	.21	.2
C22	TI	*	.89073+-	.10003	.72627+-	.07264	.82+-	.12	-1.3
C23	V	*	.03445+-	.01042	.02493+-	.00851	.72+-	.33	-.7
C24	CR		.00192<	.00219	.01931<	.00418	10.06<	11.67	3.7
C25	MN		.14519+-	.01650	.09387+-	.01297	.65+-	.12	-2.4
C26	FE	*	9.30990+-	1.04271	7.13422+-	.71344	.77+-	.12	-1.7
C28	NI		.00000<	.00163	.00634<	.00332	.00<	.00	1.7
C29	CU		.03362+-	.00409	.01585+-	.00332	.47+-	.11	-3.4
C30	ZN		.30038+-	.03388	.10483+-	.05621	.35+-	.19	-3.0
C31	GA		.00000<	.00104	.00202<	.00173	.00<	.00	1.0
C33	AS		.00340+-	.00305	.00724+-	.01023	2.13+-	3.57	.4
C34	SE		.00000<	.00130	.00072	.00130	.00<	.00	.4
C35	BR		.00000<	.00153	.00007<	.00130	.00<	.00	.0
C37	RB	*	.01757+-	.00280	.02284+-	.00274	1.29+-	.26	1.3
C38	SR	*	.04358+-	.00554	.03891+-	.00750	.89+-	.21	-.8
C39	Y		.00210<	.00232	.00432<	.00389	2.06<	2.09	.5
C40	ZR	*	.12667+-	.00618	.11888+-	.00404	.71+-	.22	-1.1
C42	MO		.00179<	.01014	.00317<	.00532	1.77<	10.47	.1
C46	PD		.01261+-	.01043	.00721+-	.01240	.57+-	1.09	-.6
C47	AG		.00000	.01227	.00461	.01557	.00<	.00	.0
C48	CD		.01704+-	.01540	.00966+-	.01917	.56+-	.73	-.7
C49	IN		.01823<	.01753	.00000<	.02103	.00<	1.40	-.8
C50	SN		.03700+-	.02195	.03027+-	.04281	.82+-	1.25	-.1
C51	SB		.00000<	.02719	.05904<	.03503	.00<	.00	1.2
C56	BA		.55920+-	.11892	.06235+-	.13376	.11+-	.24	-2.8
C57	LA		.19962+-	.14300	.00048+-	.19285	.00+-	.97	-.8
C80	HG		.00000<	.00254	.00000<	.00273	.00<	.00	.0
C82	PB		.00991+-	.00521	.14199+-	.08576	14.33+-	11.47	1.5

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 01/22/91 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .96 PERCENT MASS 85.6
CHI SQUARE 1.35 DF 11

SOURCE *	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	52.4370	3.7422	14.0123
3	rwcport	37.3520	5.1121	7.3066
77	SO4	1.9266	.3435	5.6089
78	NO3	2.0392	.3720	5.4821

MEASURED CONCENTRATION FOR SIZE: T
109.5+- 11.0

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 01/22/91 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .96 PERCENT MASS 85.6
CHI SQUARE 1.35 DF 11

SPECIES			MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	109.50000+-	10.96000	93.75521+-	6.06767	.86+-	.10	-1.3
C204	NO3	*	2.16151+-	.30568	2.16151+-	.20111	1.00+-	.17	.0
C203	SO4	*	1.96114+-	.27735	1.96114+-	.19051	1.00+-	.17	.0
C206	NH4		.62538+-	.08844	.03679+-	.02502	.06+-	.04	-6.4
C208	K		.25880+-	.01280	.09932+-	.04175	.38+-	.16	-3.7
C201	OC	*	25.62238+-	1.89798	20.62205+-	1.30004	.80+-	.10	-1.6
C202	EC	*	2.56223+-	.39865	4.02030+-	.73041	1.57+-	.38	1.8
C13	AL	*	3.28112+-	.78360	4.84128+-	.87639	1.48+-	.44	1.3
C14	SI		.00000+-	.00000	14.20521+-	2.55795	.00+-	.00	5.6
C15	P		.00000<	.02583	.00015<	.00641	.00<	.00	.0
C16	S		.30225+-	.05353	.06533+-	.02571	.22+-	.09	-4.0
C17	CL	*	.02622+-	.01643	.03130+-	.01151	1.19+-	.87	.3
C19	K	*	1.42300+-	.21810	1.67956+-	.17951	1.18+-	.22	.9
C20	CA	*	1.13540+-	.23480	.85730+-	.09603	.76+-	.18	-1.1
C22	TI	*	.24973+-	.02842	.26422+-	.02653	1.06+-	.16	.2
C23	V	*	.01688+-	.00400	.00907+-	.00323	.54+-	.22	-1.5
C24	CR		.00044<	.00158	.00703<	.00156	15.83	6.36	3.0
C25	MN	*	.04002+-	.00480	.03432+-	.00472	.86+-	.16	-.9
C26	FE	*	2.46509+-	.27725	2.59610+-	.25957	1.05+-	.16	.3
C28	NI		.00079<	.00133	.00231	.00124	2.92<	5.19	.8
C29	CU		.01102+-	.00169	.00577+-	.00124	.52+-	.14	-2.5
C30	ZN		.30121+-	.03396	.04009+-	.02046	.13+-	.07	-8.6
C31	GA		.00000<	.00096	.00073<	.00077	.00<	.00	.6
C32	AS		.00106<	.00343	.00277<	.00374	2.61<	9.16	.2
C34	SE		.00000<	.00119	.00026<	.00057	.00<	.00	.2
C35	BR		.00227+-	.00147	.00030--	.00055	.13+-	.26	-1.2
C37	RB	*	.01136+-	.00227	.00858+-	.00104	.75+-	.17	-1.2
C38	SR		.02551+-	.00271	.01416+-	.00275	.55+-	.13	-2.5
C39	Y		.00000<	.00224	.00157<	.00146	.00<	.00	.3
C40	ZR	*	.00961+-	.00497	.00687+-	.00153	.71+-	.40	-.5
C42	MO		.00222	.00967	.00115	.00201	.52<	1.24	-.2
C46	PD		.00622	.00884	.00262	.00499	.42<	.77	-.2
C47	AG		.01469+-	.01092	.00188+-	.00579	.13+-	.40	-1.2
C48	CD		.00819<	.01366	.00351	.00706	.42<	1.12	-.3
C49	IN		.00604	.01624	.00000<	.00786	.00<	.98	-.4
C50	SN		.00712	.02008	.01101<	.01567	1.54<	4.92	.2
C51	SB		.02160<	.02563	.02156<	.01288	.01<	1.24	.0
C56	BA		.03570+-	.01901	.02422+-	.04913	.04+-	.08	-4.7
C57	LA		.19721+-	.13551	.00210+-	.07057	.01+-	.36	-.5
C60	HG		.00000<	.00222	.00000<	.00114	.00<	.00	.0
C82	PB	*	.03286+-	.00615	.05169+-	.03120	1.57+-	.99	.8

SAMPLE DURATION	24	START HOUR	00	SIZE:	T
R SQUARE	.97	PERCENT MASS	95.8		
CHI SQUARE	1.13	DF	11		

SOURCE

*	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	71.2892	5.1491	13.8449
3	rwcport	65.3149	7.8812	8.2975
77	SO4	.9607	.1861	5.1628
78	NO3	.1663	.0630	2.6402

MEASURED CONCENTRATION FOR SIZE: T
143.8+- 14.4

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 02/23/91 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .97 PERCENT MASS 95.8
CHI SQUARE 1.13 DF 11

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
01	TMAC	T	143.80000+-	14.38000	137.73120+-	9.11262	.96+-	.11	-.4
C204	NO3	*	.38821+-	.05490	.38821+-	.02542	1.00+-	.16	.0
C203	SO4	*	1.06926+-	.15122	1.06926+-	.10076	1.00+-	.17	.0
C206	NH		.21324+-	.03016	.06434+-	.03509	.30+-	.17	-3.2
C208	K	*	.17700+-	.02000	.17367+-	.06819	.98+-	.40	-.0
C201	OC	*	39.24666+-	4.41820	34.89208+-	2.25394	.89+-	.12	-.9
C202	EC	*	4.63548+-	.69123	6.93060+-	1.27010	1.50+-	.35	1.6
C13	AL	*	4.87910+-	1.09470	6.58193+-	1.19146	1.35+-	.39	1.1
C14	SI		.00000+-	.00000	19.31238+-	3.47756	.00+-	.00	5.6
C15	P		.00000<	.02738	.00026<	.00881	.00<	.00	.0
C16	S		.20923--	.04317	.10070+-	.03510	.48+-	.19	-2.0
C17	CL	*	.08931+-	.02186	.05473+-	.01862	.61+-	.26	-1.2
C19	K		1.90800+-	.29060	2.32002+-	.24573	1.22+-	.23	1.1
C20	CA	*	1.43803+-	.27385	1.16692+-	.13056	.81+-	.18	-.9
C22	TI	*	.32260+-	.03656	.35923+-	.03612	1.11+-	.17	.7
C23	V		.02447+-	.00501	.01233+-	.00449	.50+-	.21	-1.8
C24	CR		.00343+-	.00169	.00955+-	.00211	2.79+-	1.50	2.3
C25	MN	*	.05244+-	.00617	.04674+-	.00642	.89+-	.16	-.6
C26	FE	*	2.23633+-	.36346	2.52965+-	.35298	1.09+-	.16	.8
C28	NI		.00000<	.00138	.00314<	.00165	.00<	.00	1.5
C29	CU		.03266+-	.00395	.00784+-	.00165	.24+-	.06	-5.8
C30	ZN		.02977+-	.03716	.05534+-	.02781	.17+-	.09	-5.9
C31	GA		.00000<	.00101	.00100<	.00104	.00<	.00	.7
C33	AS		.00000<	.00402	.00383<	.00508	.00<	.00	.6
C34	SE		.00000<	.00121	.00036<	.00070	.00<	.00	.3
C35	BR		.00236--	.00149	.00052+-	.00066	.16+-	.22	-1.7
C37	RB	*	.01147+-	.00229	.01179+-	.00136	1.03+-	.24	.1
C38	SR	*	.02750+-	.00393	.01925+-	.00372	.69+-	.16	-1.8
C39	Y		.00000<	.00234	.00214<	.00195	.00<	.00	.7
C40	ZR	*	.01655+-	.00525	.00934+-	.00205	.56+-	.22	-1.2
C42	MO		.00336<	.00962	.00157	.00275	.51<	1.82	-.2
C46	PD		.01003+-	.00904	.00258+-	.00633	.25+-	.75	-.8
C47	AG		.01128+-	.01099	.00223+-	.00788	.21+-	.73	-.7
C48	CD		.01142	.01281	.00478<	.00966	.42<	.99	-.4
C49	IN		.00000	.01608	.00000<	.01777	.00<	.00	.0
C50	SN		.05251	.02009	.01497<	.02138	2.85<	11.82	.3
C51	SB		.00000<	.02571	.02998<	.01762	.00<	.00	1.0
C56	BA		.40182+-	.10512	.03359+-	.06721	.08+-	.17	-3.7
C57	LA		.00000<	.13266	.00372	.09630	.00<	.00	.0
C80	HG		.00000<	.00232	.00000<	.00160	.00<	.00	.0
C82	PB	*	.04956+-	.00742	.07029+-	.04242	1.42+-	.38	.3

SOURCE CONTRIBUTION ESTIMATES - SITE: SANDPOINT DATE: 02/04/92 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .98 PERCENT MASS 38.6
CHI SQUARE .59 DF 13

SOURCE *	TYPE	SCE(UG/M3)	STD ERR	TSTAT
2	ROAD	108.1078	6.7908	15.9198
3	FWCDOPT	66.3020	9.0275	7.3444
77	SO4	1.5307	.2861	5.3510
78	NO3	.7195	.1661	4.3313

MEASURED CONCENTRATION FOR SIZE: T
199.4+- 19.9

UNCERTAINTY/SIMILARITY CLUSTERS VERSION: 7.0 SUM OF CLUSTER SOURCES

SPECIES CONCENTRATIONS - SITE: SANDPOINT DATE: 02/04/92 VERSION: 7.0
SAMPLE DURATION 24 START HOUR 00 SIZE: T
R SQUARE .98 PERCENT MASS 38.6
CHI SQUARE .59 DF 13

SPECIES		I	MEAS		CALC		RATIO C/M		RATIO R/U
C1	TMAC	T	199.40000+-	19.94000	176.66000+-	10.75871	.89+-	.10	-1.0
C204	NO3	*	1.01706+-	.14383	1.01706+-	.07577	1.00+-	.16	.0
C203	SO4	*	1.62992+-	.23049	1.62982+-	.15860	1.00+-	.17	.0
C206	NH4		.12634+-	.01787	.06531+-	.05091	.52+-	.41	-1.1
C208	K		.27500+-	.03100	.17630+-	.07816	.64+-	.29	-1.2
C201	OC	*	42.07201--	4.73238	37.46582+-	2.32485	.89+-	.11	-.9
C202	EC	*	5.38850+-	.79905	7.20948+-	1.30286	1.34+-	.31	1.2
C13	AL	*	7.83323+-	1.69474	9.98096+-	1.80681	1.27+-	.26	.9
C14	SI		.00000+-	.00000	29.28609+-	5.27361	.00+-	.00	5.6
C15	P		.00000<	.03073	.00027<	.01315	.00<	.00	.0
C16	S		.26980+-	.05297	.12595+-	.05291	.47+-	.22	-1.9
C17	CL		.00159<	.01934	.05556<	.02167	34.94<	*****	1.9
C19	K	*	2.30300+-	.50090	2.43568+-	.36908	1.04+-	.19	.2
C20	CA	*	2.17877+-	.38444	1.76643+-	.19797	.81+-	.17	-1.0
C22	TI	*	.45720+-	.05152	.54476+-	.05462	1.19+-	.13	1.2
C23	V	*	.01934+-	.00592	.01870+-	.00659	.97+-	.45	-.1
C24	CR		.00726+-	.00301	.01449+-	.00316	2.00+-	.94	1.7
C25	MN	*	.07536+-	.00876	.07071+-	.00972	.94+-	.17	-.4
C26	FE	*	4.96526+-	.55859	5.35211+-	.53513	1.08+-	.16	.5
C28	NI		.00100<	.00210	.00476<	.00250	4.76<	10.22	1.2
C29	CU	*	.01375+-	.00201	.01189+-	.00250	.87+-	.22	-.9
C30	ZN	*	.07827+-	.00927	.08205+-	.04217	1.05+-	.55	.1
C31	GA		.00033<	.00100	.00151<	.00144	4.55<	14.22	.7
C32	AS		.00000<	.00367	.00567<	.00769	.00<	.00	.7
C34	SE		.00000<	.00128	.00054<	.00102	.00<	.00	.3
C35	BR		.00444+-	.00163	.00052+-	.00100	.12+-	.22	-2.1
C37	RB	*	.02095+-	.00313	.01761+-	.00207	.84+-	.15	-.7
C38	SR	*	.03617+-	.00473	.02919+-	.00563	.81+-	.19	-.7
C39		*	.03377+-	.00254	.03324+-	.00294	.98+-	.17	-.1
C40	ZR	*	.01419+-	.00535	.01416+-	.00307	1.00+-	.42	.1
C42	MO		.01287+-	.00557	.00223+-	.00408	.17+-	.32	-.4
C46	PD		.00000<	.00967	.00541	.00941	.00	.00	.2
C47	AG		.00815	.01190	.00346<	.01193	.42	.47	-.2
C48	CD		.00000<	.01465	.00724<	.01450	.00	.00	.4
C49	IN		.00000<	.01729	.00000<	.01615	.00<	.00	.1
C50	SN		.00000	.02121	.00771	.01223	.00	.00	.3
C51	SB		.00000	.02723	.02495<	.02648	.00<	.00	-.2
C56	BA		.02431	.03078	.04947	.03104	2.03<	1.48	.2
C57	LA		.00000<	.14258	.00378<	.14527	.00<	.00	.1
C80	HG		.00000<	.00244	.00000<	.00223	.00<	.00	.1
C82	PB		.03729--	.00662	.10655--	.06433	1.85--	1.79	1.1

APPENDIX D

RECEPTOR MODELING

SECTION D-2: MICROSCOPY ANALYSIS

RJ Lee Group, Inc.

350 Hochberg Road • Monroeville, PA 15146
412/325-1776 • FAX 412/733-1799

December 11, 1992

Ms. Beth K. Baird
Idaho Department of Health and Welfare
1410 North Hilton
Statehouse Mail
Boise, ID 83720-9000

RECEIVED
DEC 24 1992
Div. of Environmental Quality
Community Programs

RE: PLM and SEM Examination of As-Received and Ashed PM-10 Samples
RJ Lee Group Project No. ESH211388

Dear Beth:

On September 3, 1992, RJ Lee Group submitted a letter report to the Idaho Department of Health and Welfare which summarized PLM (polarized light microscopy) and CCSEM (computer-controlled scanning electron microscopy) results for three PM-10 quartz-fiber filters. The filters were identified as follows:

Idaho Department of Health and Welfare Sample ID	PM-10 Sample Description
6127772	Sandpoint, 2/21/88, 157 $\mu g/m^3$
8505282	Sandpoint, 2/26/92, 192 $\mu g/m^3$
9500541	Sandpoint, 10/4/90, 218 $\mu g/m^3$

PLM results obtained from that study indicated that charcoal-like particles were the major constituent of all three samples. The data suggested that particulate matter originating from wood-burning sources had a significant impact on these samples. This was in contrast to the results for the two samples that were also analyzed by CCSEM (i.e., 6127772 and 9500541) which showed that mix-clay and silicon-rich (quartz) types were the most abundant species. The CCSEM results indicated that soil was the most abundant source whereas carbon-rich particles accounted for only approximately 3 percent.

In the present study additional analyses were performed to provide greater insight into the differences between the PLM and CCSEM data sets. For these analyses, a one-centimeter circular disk was removed from each of the as-received samples and photographed using a stereo optical microscope. Each disk was then desiccated, weighed, and low temperature ashed (LTA) for a period of one hour. After ashing, the samples were desiccated and weighed again. The calculated weight loss which represents the combustible fraction is reported below. (For comparison purposes, the CCSEM carbon-rich data obtained from the September 1992 study are also included.)

Sample ID	LTA (Wt. %)	CCSEM Carbon-rich (Wt. %)
6127772	2.54	3.2
8505282	2.50	NA
9500541	1.00	3.4
Blank	0.40	NA

The LTA results are in fairly close agreement to the CCSEM carbon-rich particle type data. The LTA results, however, may be only semi-quantitative because of the small amount of sample used in the analysis. Also, the CCSEM results are based only on carbon-rich particles and not total carbon; that is, only particles which are comprised of a majority of carbon would be typed as carbon-rich. Particles which had minor to trace amounts of carbon would not be reported in the carbon-rich category. Thus, it is difficult to get a true measure of the total carbon component based on the CCSEM carbon-rich results.

In any event, the LTA data provide a means to assess the carbon fraction not only from a weight loss but from a visual perspective as well. For example, Figures 1 through 3 illustrate differences observed in color between the as-received and ashed filters. Note that for Samples 6127772 and 8505282 (Figures 1 and 2), the as-received samples appear dark brown whereas the ashed samples appear tan in color. Although dramatic to the eye, the LTA results indicate that the loss in sample weight was only about 2.5 percent. Sample 9500541 (Figure 3) showed less of a difference in color between the as-received and the ashed samples. This tends to correlate with the LTA results which reported less of a weight loss for this sample.

As mentioned above, the LTA results should be considered semi-quantitative. In an effort to provide a measure of accuracy of the LTA data, a one-centimeter disk was taken from the border of Sample 8505282 to be used as a "blank." (A blank filter was not provided with the samples.) As shown above, the LTA analysis reported only a small weight loss for this sample (0.4%). Referring to Figure 4, it is apparent that there was a small amount of particulate matter on the border of the as-received sample used as the "blank." (This was not totally unexpected since the filter was taken from the border of a heavily loaded sample.) Thus, using the "blank" as our measuring stick, it might be concluded that the LTA results are, in fact, representative of the carbon fraction. Yet, this does not explain the differences in color observed between the as-received and ashed samples suggesting a much larger weight loss.

To evaluate this further, the as-received and ashed samples were examined in the SEM. In Figures 5 and 6, secondary electron images of the as-received and ashed Sample No. 6127772 are presented. It appears from these images that a significant amount of particulate matter has been removed during the ashing process. This conclusion is based on the amount of filter fibers visible on the ashed sample.

Energy dispersive spectroscopy (EDS) was performed on individual particles on the as-received and ashed Sample No. 6127772 to further assess the carbon component. This analysis primarily concentrated on observing the similarities and differences in the as-received and ashed samples. The as-received samples consisted primarily of mix-clay particles (i.e., silicon-aluminum-rich composition). Very few carbon-rich particles were observed. Figures 7 through 9 present secondary electron images and elemental spectra of particles thought to be carbonaceous based on appearance. EDS analysis showed that these particles, although having a carbon component, are rich in silicon, with smaller amounts of aluminum, potassium, calcium and iron. Fine particles less than 2 µm also had elemental chemistry characteristics of a clay minerals (i.e., silicon/aluminum-rich). Examination of

particles on the ashed filter show an elemental composition similar to the as-received sample except for the lack of a carbon peak (see Figures 10 and 11). These results may indicate that the carbon is present primarily as a coating on the particles.

SEM/EDS analysis of the as-received and ashed Sample No. 6505282 are provided in Figures 12 and 13. Although there was a significant difference in color between the as-received and ashed sample (see Figure 2), the secondary electron images show little difference in particle loading between the as-received and ashed samples. EDS analysis indicates that the sample is comprised primarily of mix-clay particles with a silicon/aluminum/potassium/iron chemistry. Similar to Sample No. 6127772, comparison of the elemental chemistry associated with particles on the as-received and ashed filters showed little differences other than the ashed particles had less carbon (see Figures 14 through 17). Again, these results suggest that the particles may be coated with a carbon film.

Examination of Sample No. 9500541 was performed next. This sample was unique because there was only a minor difference in color between the as-received and ashed samples (see Figure 3). Also, this sample had the highest PM-10 concentration of the three samples. Interestingly, it appears, based on the color photographs (Figures 1 through 3), that this sample would have the lowest concentration. Thus, this illustrates how the eye can be "influenced" by color (i.e., dark color implies higher concentration).

Secondary electron images of the as-received and ashed samples show little differences in particle loading (see Figures 18 and 19). This appears to be consistent with the LTA results which reported the lowest weight loss. SEM/EDS examination of individual particles on the as-received and ashed samples showed little differences. Secondary electron images and elemental spectra of particles typical of this sample are presented in Figures 20 through 23. In summary, the SEM/EDS data indicate that this sample was composed mainly of earth-crustal particles with carbon present only at low levels.

Summary and Conclusions

The goal of this study was, through PLM and SEM examination of the samples, to provide insight on the carbonaceous component and to determine, if possible, the source(s) of the carbonaceous matter. PLM data reported in the original document (September 3, 1992) indicated that wood-burning sources had a significant impact on the samples. This was based on each sample having what appeared by PLM to be major amounts of charcoal-type particles with minor amounts of cellulose and trace amounts of charcoal wood. However, the CCSEM data reported that earth-crustal materials (i.e., soil) were the major constituents of each sample.

To resolve this discrepancy, SEM/EDS analysis of the samples before and after ashing was performed. The SEM/EDS data suggests that the majority of carbon present in the samples is in the form of a carbon film (presumably an organic coating on the clay particles). This conclusion was based on the observation that particles on the as-received sample typically exhibited a small carbon peak which was not detected on the ashed sample.

Further examination using PLM techniques support the SEM/EDS data in that the ashed sample consisted almost entirely of transparent anisotropic particles with the appearance of sericite. Based on PLM examination of the as-received and ashed samples, it now appears that the clay particles on the as-received samples were coated with an opaque substance which resulted in the misidentification of particles in the original study. PLM data obtained in this study supports the SEM/EDS results that the as-received samples were coated with a carbonaceous material.

As a final step in the evaluation process, the LTA and CCSEM carbon-rich results were compared to thermo-gravimetric (TG) data obtained from a previous analysis by another laboratory. For convenience, the results are summarized below.

	Thermo-Gravimetric (Wt. %)				
Sample ID	Organic Carbon	Elemental Carbon	Total Carbon	LTA (Wt. %)	CCSEM Carbon-rich (Wt. %)
6127772	23	3	25	2.54	3.2
8505282	18	2	20	2.50	NA
9500541	6	0	6	1.00	3.4

As can be seen, there are significant differences between the three data sets. (Note that the TG data appears to "support" the color change observed through LTA as presented in Figures 1 through 3.) It should be noted that, because CCSEM reported carbon-rich component rather than total carbon, the data are not directly comparable. Furthermore, based on the PLM and SEM/EDS data which indicates that particles were coated with a carbonaceous (organic) material, the CCSEM data would be biased due to the sample preparation techniques employed. For example, due to the requirement that particles must be separated from one another in a monolayer to assure accurate sizing, particles were liberated from the quartz filter and redeposited onto a smooth polycarbonate filter substrate. Acetone, which was used as the carrier liquid in this redeposition process, would, most likely, remove the organic coating from the particle. Thus, the CCSEM analysis would not be capable of measuring the organic fraction. However, assuming that the CCSEM carbon-rich particles are primarily composed of elemental carbon (based on the SEM/EDS analysis), then the CCSEM data may, in fact, be comparable to the TG elemental carbon results.

With respect to the LTA data, a discrepancy does exist when comparing to the TG data. The difference in results is significant and cannot be explained at this point. However, recalling that the LTA data may be only semi-quantitative due to the small area analyzed, it may not be possible to compare TG data directly. Interestingly, if one were to assume that the LTA data were relative rather than absolute, then the ratio obtained when comparing Samples 6127772 and 8505282 (higher carbon) to Sample 9500542 (lower carbon) is somewhat consistent to the TG data. Additional analyses using the TG and LTA methods would need to be performed to determine the nature of the differences in the two data sets.

In summary, although definitive conclusions cannot be made based on this limited data set, it was determined by PLM and SEM/EDS that a carbon "film" which coated the particles is the most significant form of carbon on these filters. These results appear to be supported by the TG data. Also a definitive conclusion cannot be made as to what source(s) is responsible for this carbon component because source samples were not available for use in this study. However, it is possible that the carbon which coated the particles was probably the by-product of a combustion source.

It is suggested that meteorological data be obtained and evaluated with respect to wind direction, speed and temperature. If, for example, the two samples (i.e., 6127772 and 8505282) with higher carbon content were collected on days of low temperature and the sample with low carbon (i.e., 9500541) was collected on a day of substantially higher temperature, then this may suggest that wood-burning stoves may be a significant source. This may be a likely scenario since the high carbon samples were collected in February whereas the sample with low carbon was collected in early October. Wind direction can be used to determine whether the lumber mills (tepee burner) would have an impact on the samples examined in this study.

In any event, definitive conclusions cannot be made without evaluation of additional samples collected under different meteorological conditions. Furthermore, samples from suspected sources should be obtained to assist in the apportionment process. Finally, if possible, samples should be collected on polycarbonate filters which would greatly assist the microscopic examination of the samples. The dichotomous sampler or a TEOM continuous PM-10 monitor equipped with the ACCU sample collection attachment would be ideal for this application.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.

Beth, I hope our examination has provided additional insight on your samples. Should you have any questions or feel that I may be of further assistance, please do not hesitate to call me. I look forward to working with you and the Idaho Department of Health and Welfare in the future.

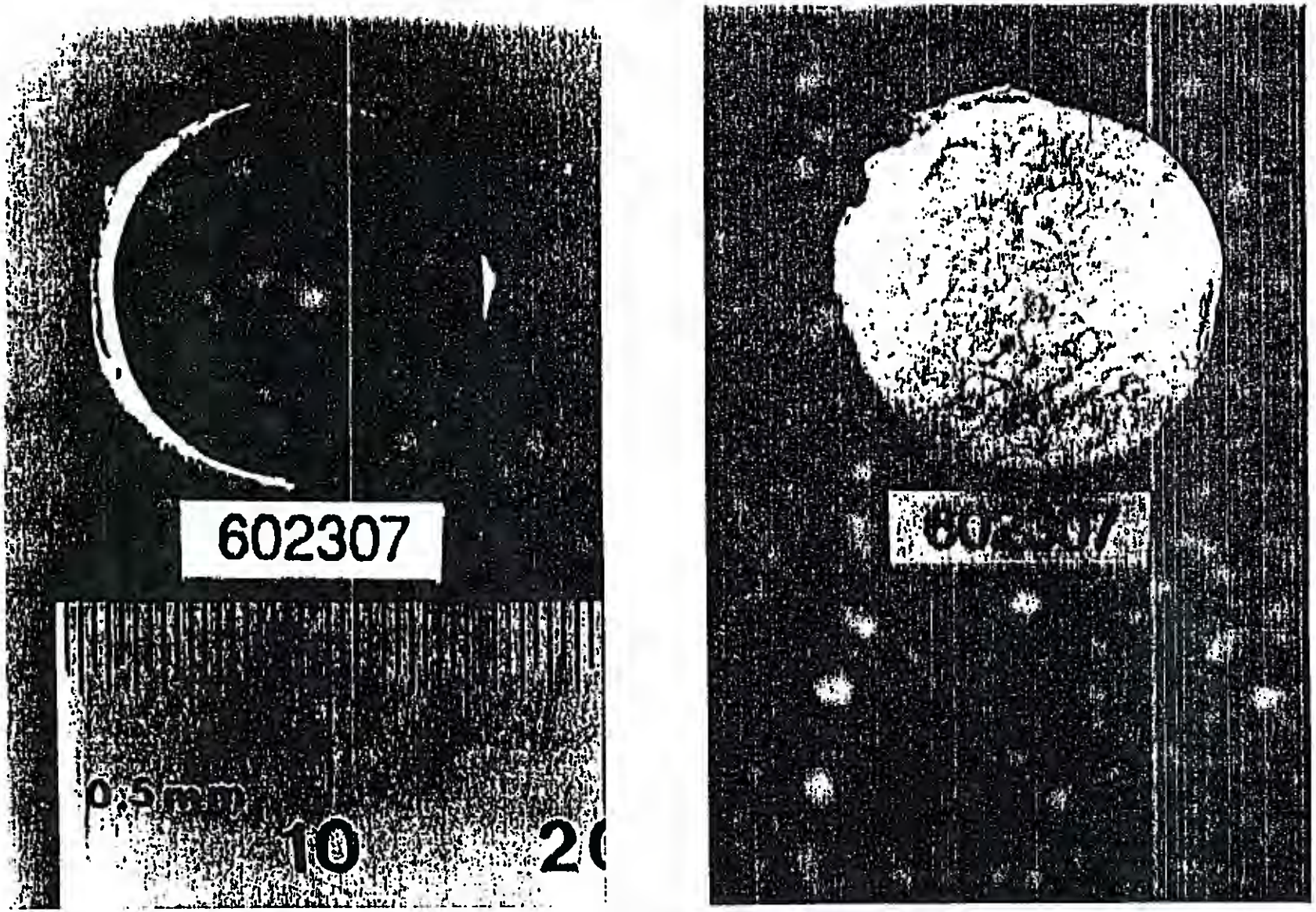
Sincerely,

Gary

Gary S. Casuccio
Vice President and Manager
Environmental Services

GSC:cll
Attachments

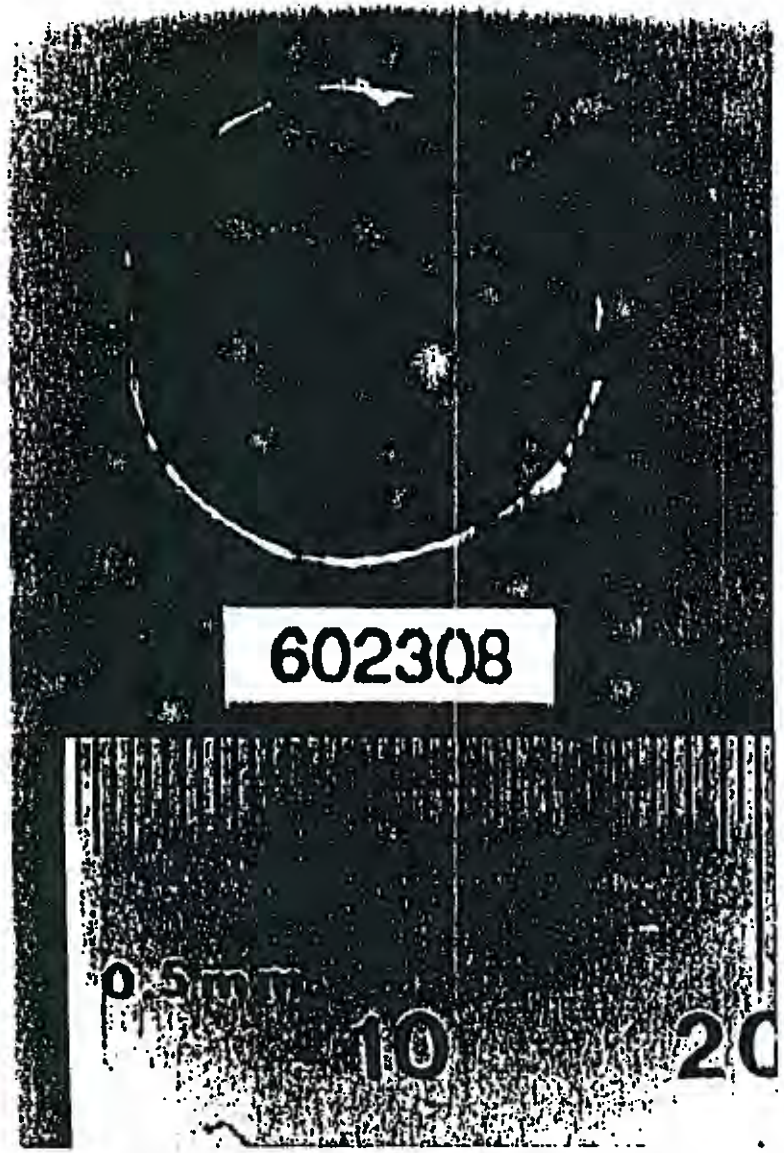
IDAHO DEPARTMENT OF HEALTH AND WELFARE
RJ Lee Group Project No. ESH211388



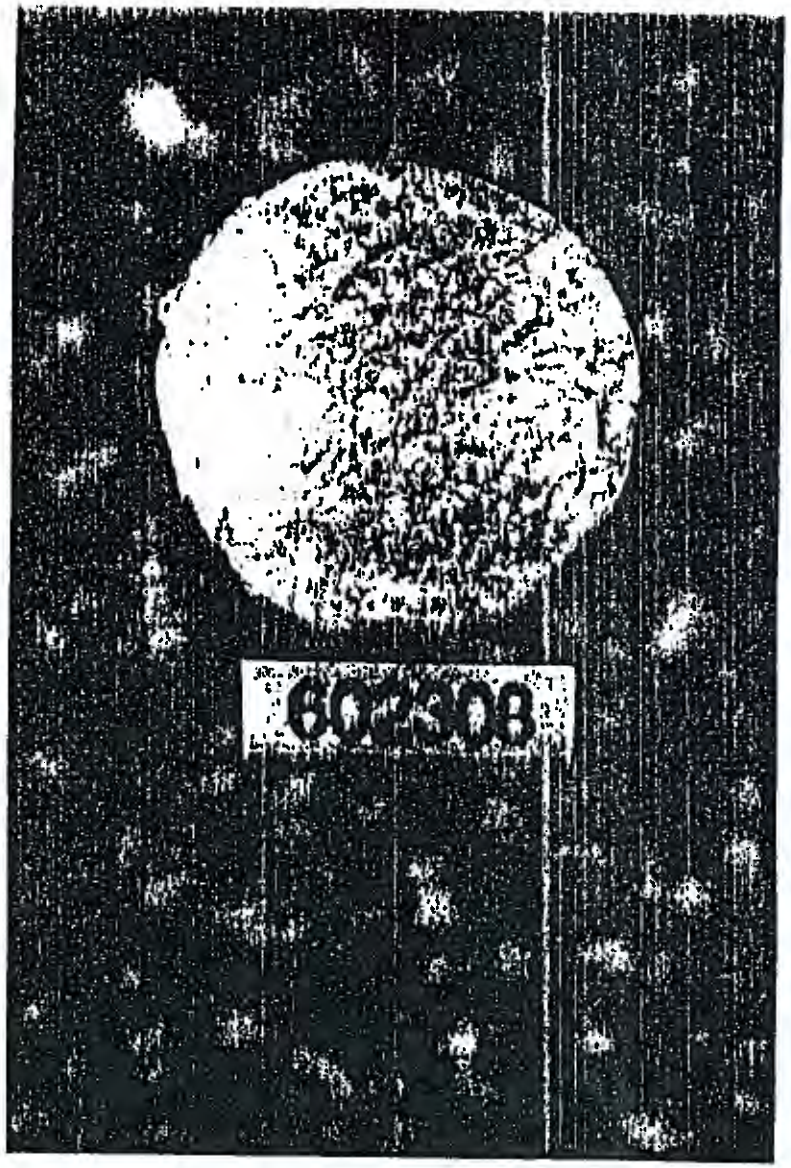
As-Received

Ashed

Figure 1. Photographs of As-Received and Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 6127772; Sandpoint, 2/21/88, 157 $\mu m/m^3$ (RJ Lee Group No. 602307)



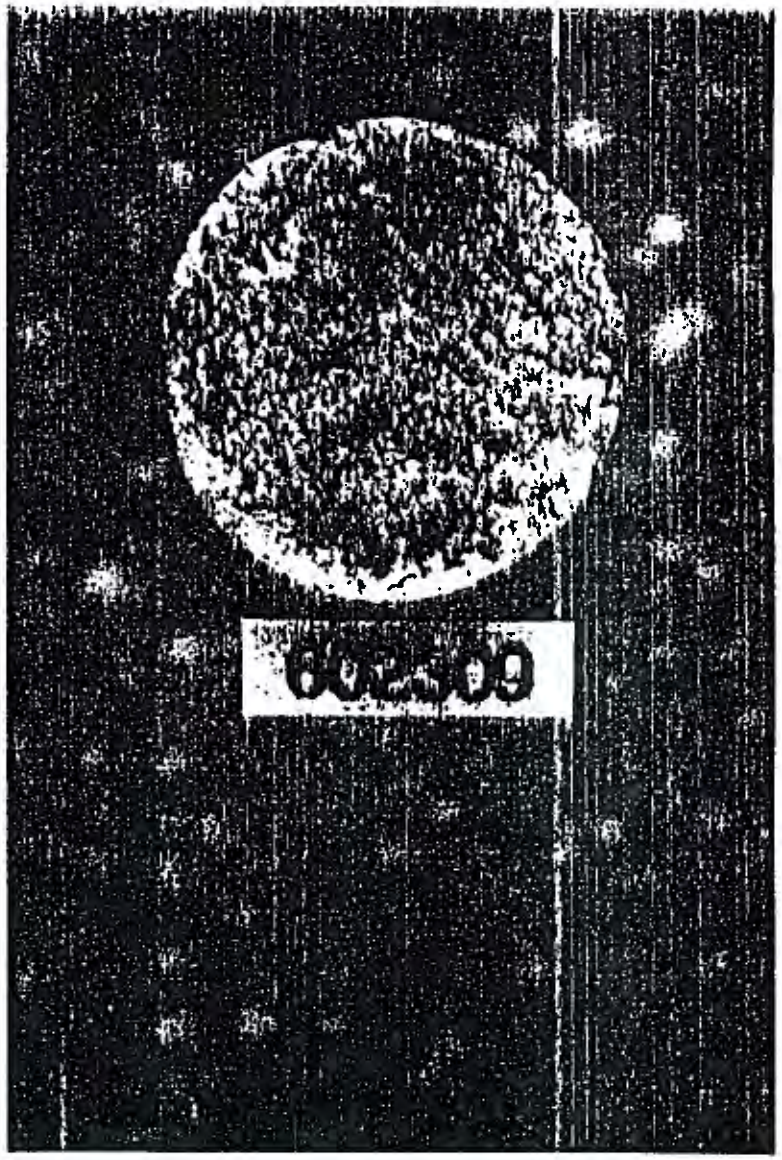
As-Received



Ashed

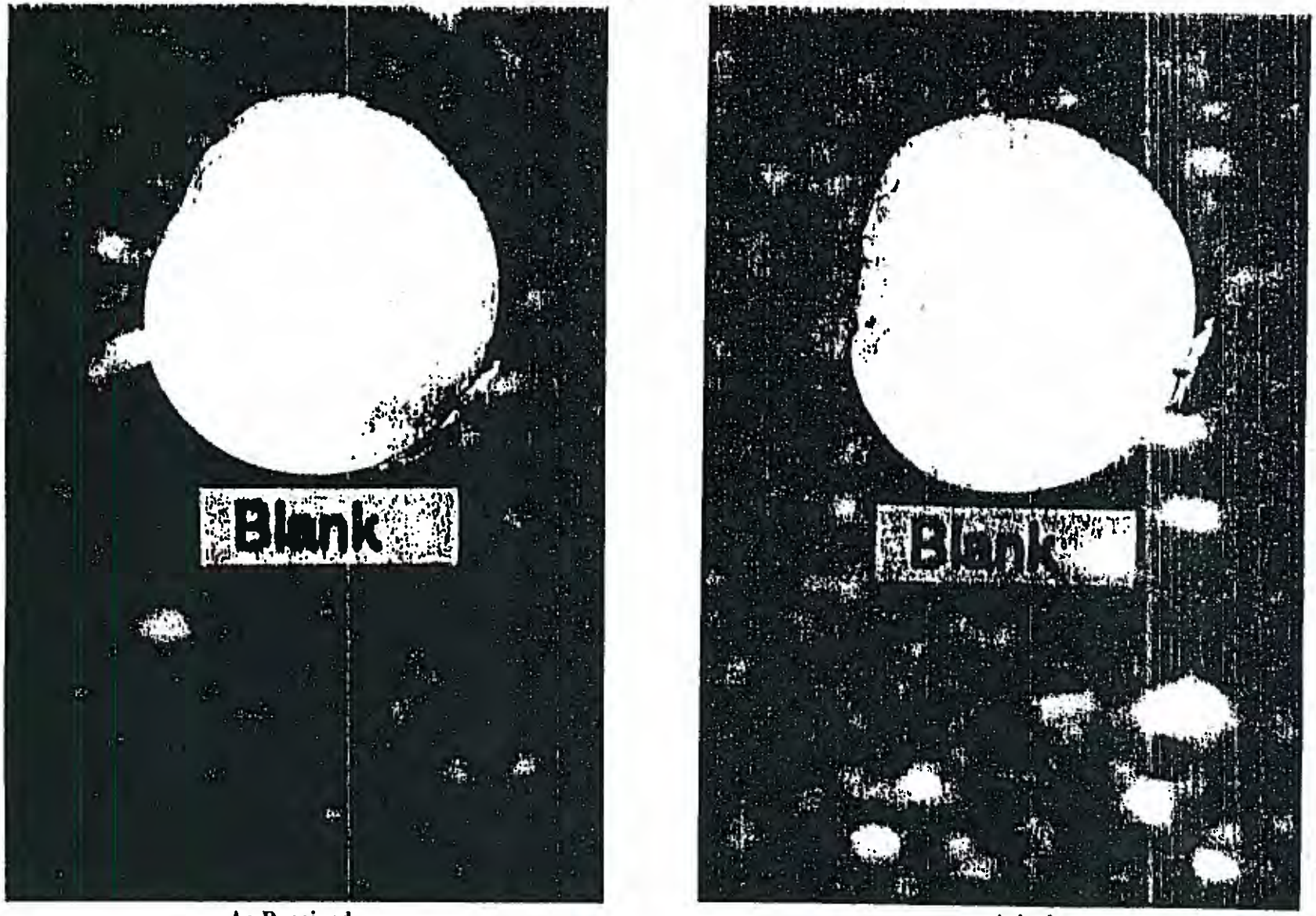
Figure 2. Photographs of As-Received and Ashed PM 10 Sample Identified as Idaho Department of Health and Welfare No. 850[illegible]82; Sandpoint, 2/26/90, 192 µm/m^3 (RJ Lee Group No. 6[illegible]3)

As-Received



Ashed

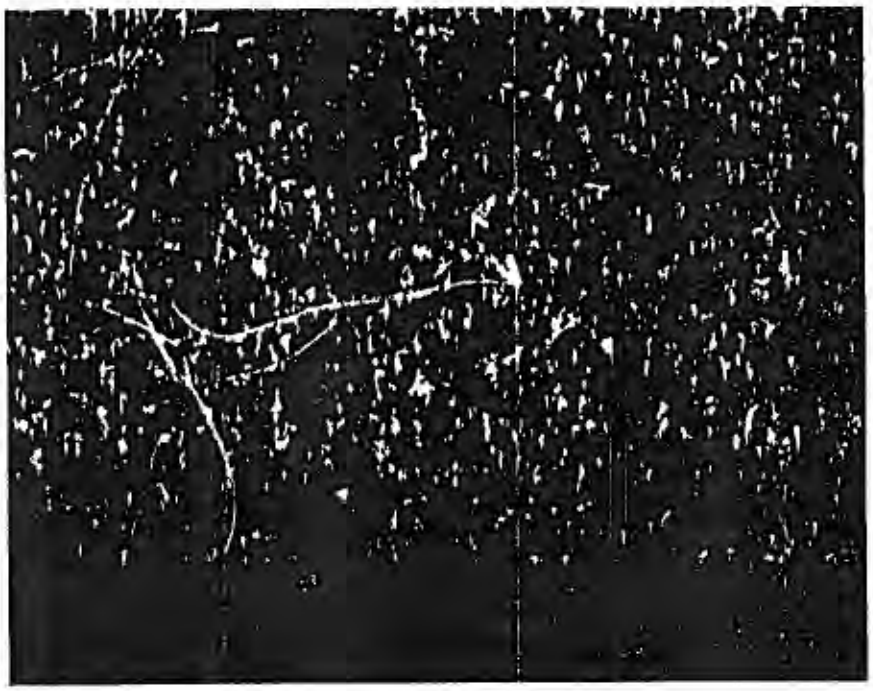
Figure 3. Photographs of As-Received and Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 9500541; Sandpoint, 10/4/90, 218 $\mu m/m^3$(RJ Lee Group No. 602309)



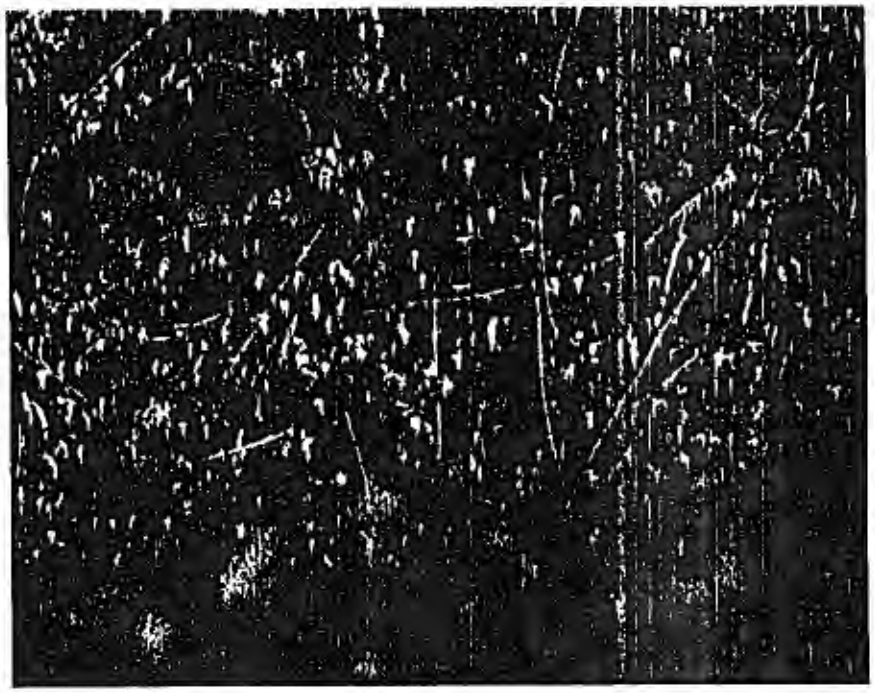
As-Received

Ashed

Figure 4. Photographs of As-Received and Ashed "Blank" Sample (Blank filter taken from border of Sample No. 8505282)



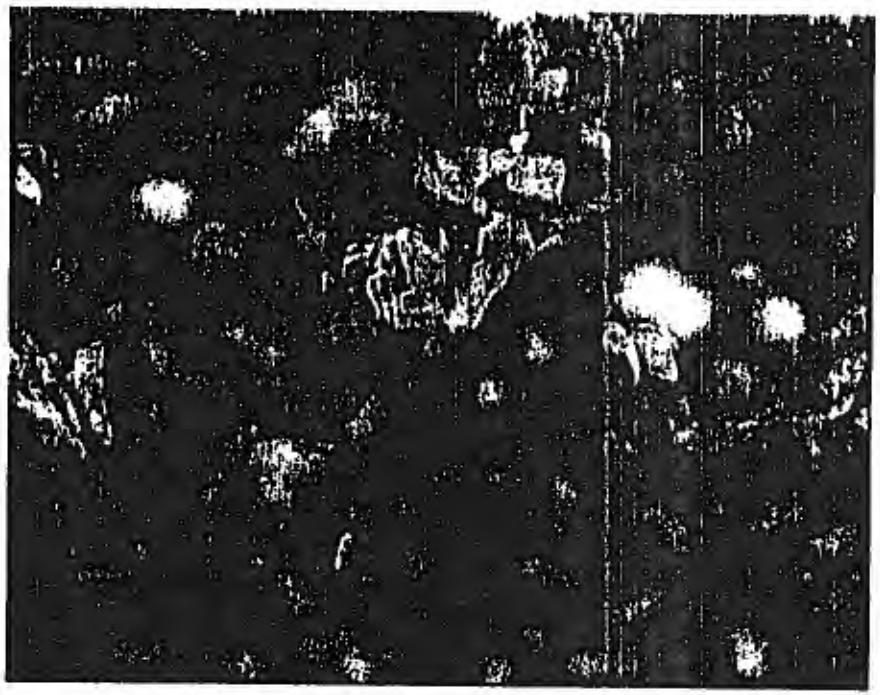
As-Received



Ashed

Figure 5. Secondary Electron Images of As Received and Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 6127772; Sandpoint, 2/21/88, 157 $\mu m/m^3$ (RJ Lee Group No. 602307)

As-Received



Ashed

Figure 6. Secondary Electron Images of As-Received and Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 6127772; Sandpoint, 2/21/88, 157 µm/m³ (RJ Lee Group No. 602307)

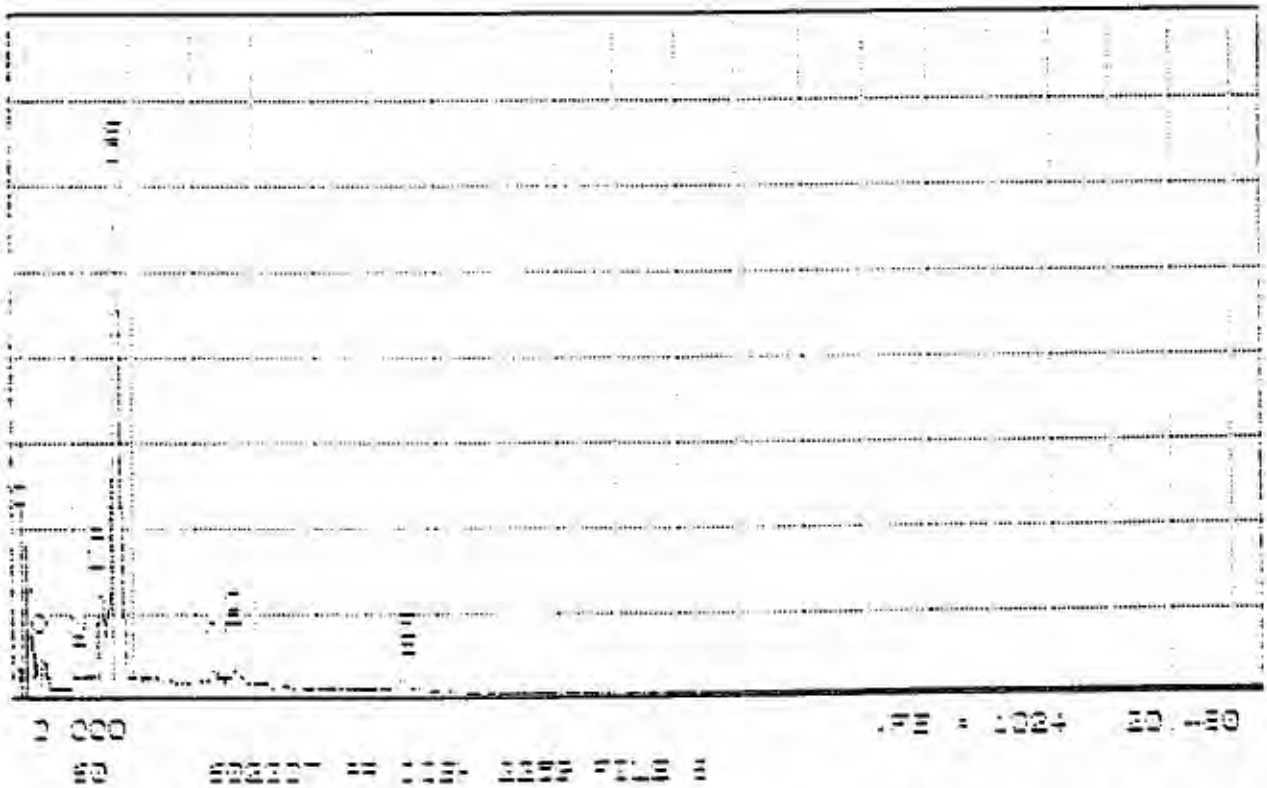


Figure 7. Secondary Electron Image and Elemental Spectrum of Particle Observed on As-Received PM-10 Sample Identified as Idaho Department of Health and Welfare No. 6127772; Sandpoint, 2/21/88, 157 µm/m³ (RJ Lee Group No. 602307)

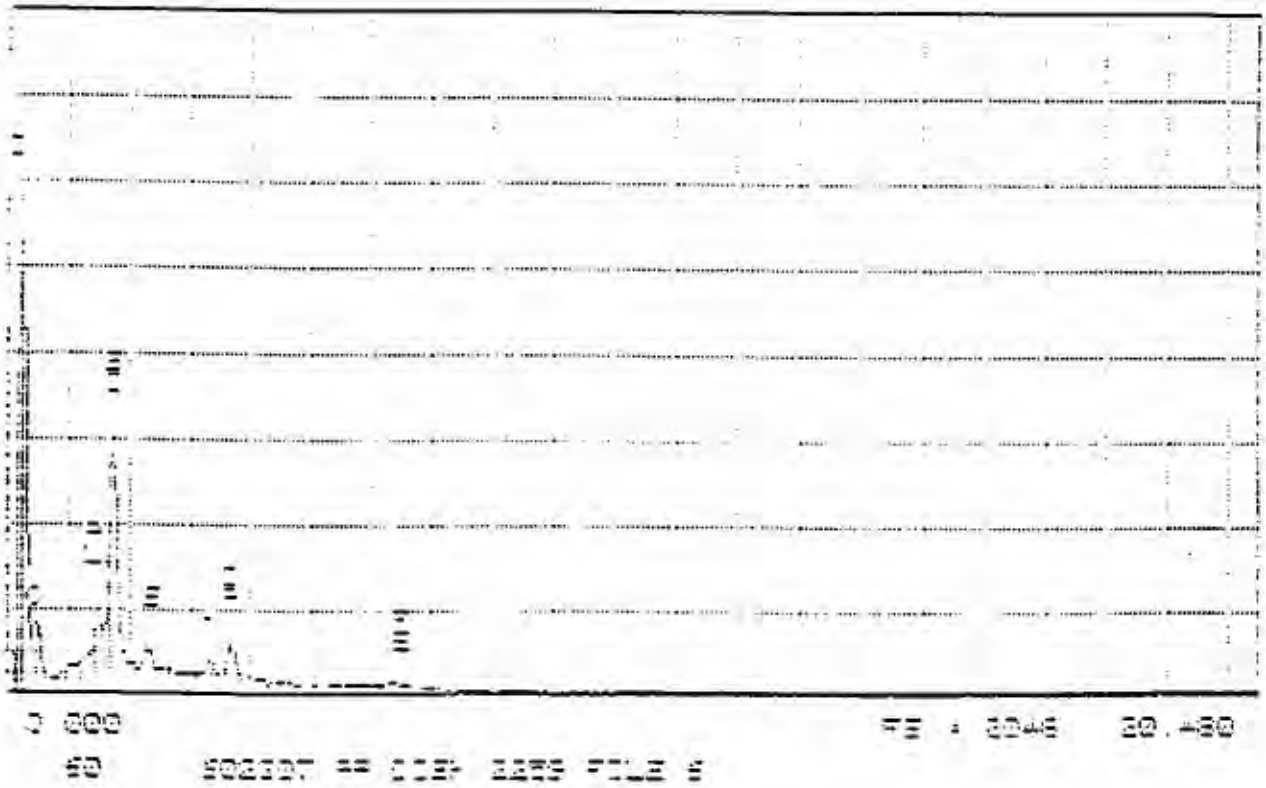
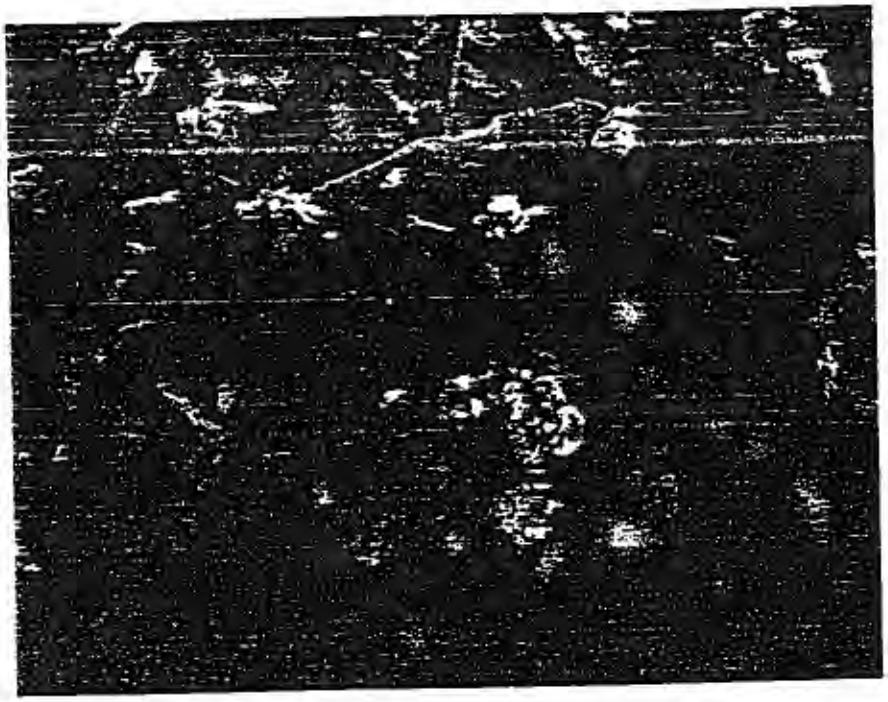


Figure 8. Secondary Electron Image and Elemental Spectrum of Particle Observed on As-Received PM-10 Sample Identified as Idaho Department of Health and Welfare No. 6127772: Sandpoint. 2/21/88. 157 μm/m^3 (RJ Lee Group No. 602307)



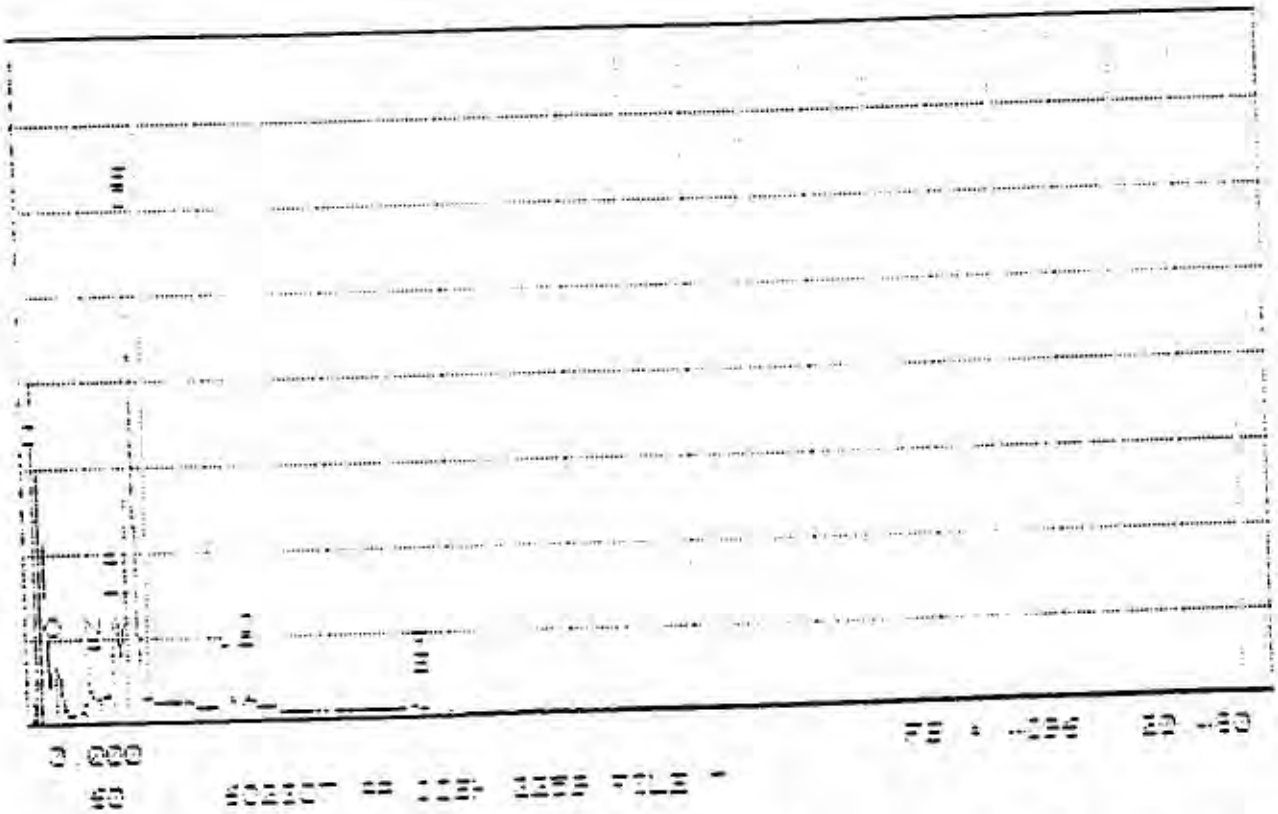
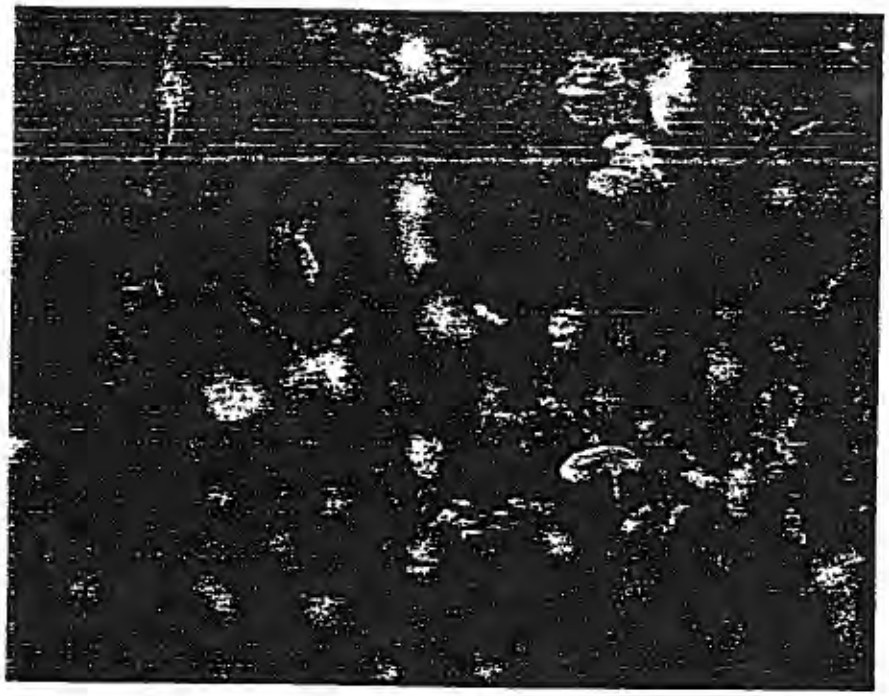


Figure 9. Secondary Electron Image and Elemental Spectrum of Particle Observed on As-Received PM-10 Sample Identified as Idaho Department of Health and Welfare No. 6127772; Sandpoint, 2/21/88, 157 um/m^3 (RJ Lee Group No. 602307)



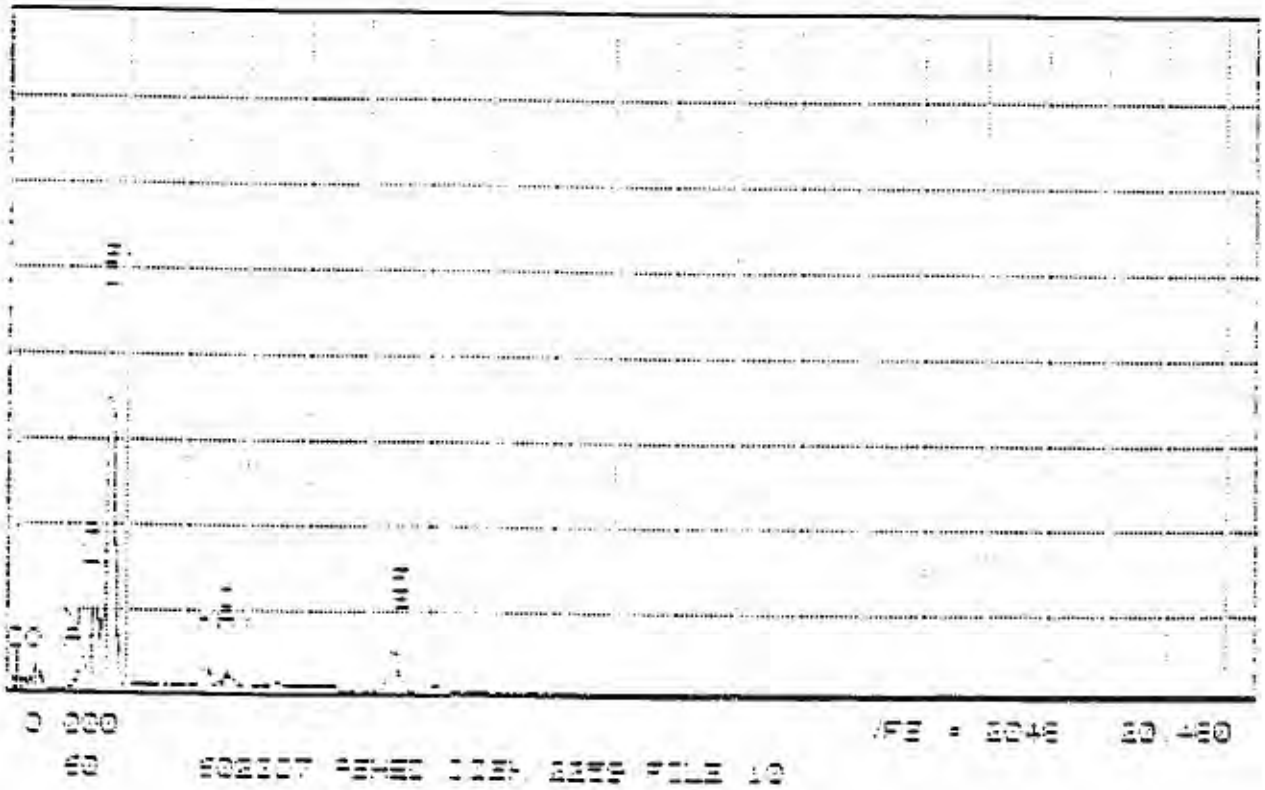
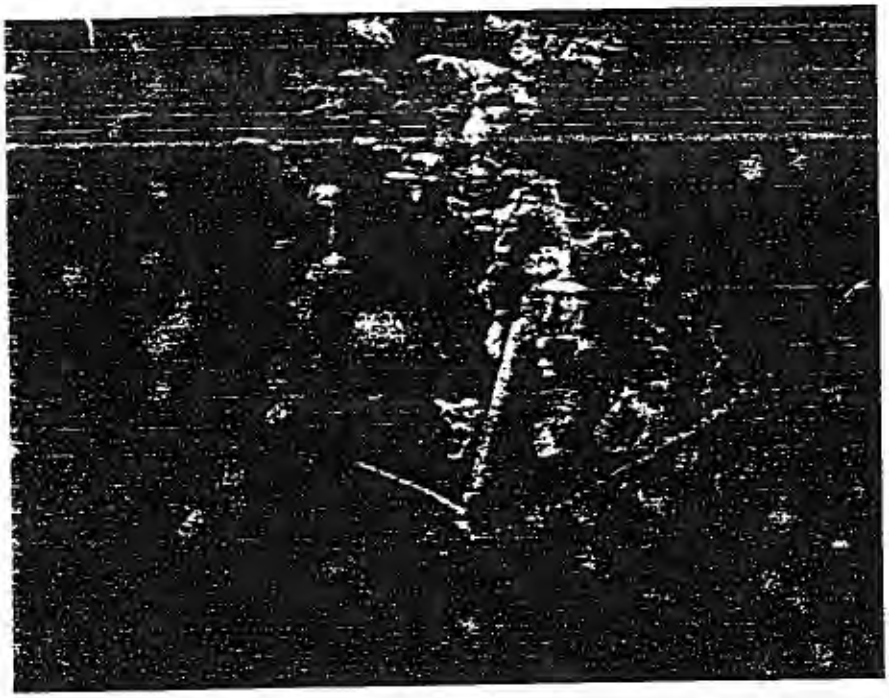


Figure 10. Secondary Electron Image and Elemental Spectrum of Particle Observed on Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 6127772: Sandpoint. 2/21/88. 157 um/m^3 (RJ Lee Group No. 602307)

IDAHO DEPARTMENT OF HEALTH AND WELFARE
RJ Lee Group Project No. ESH211388



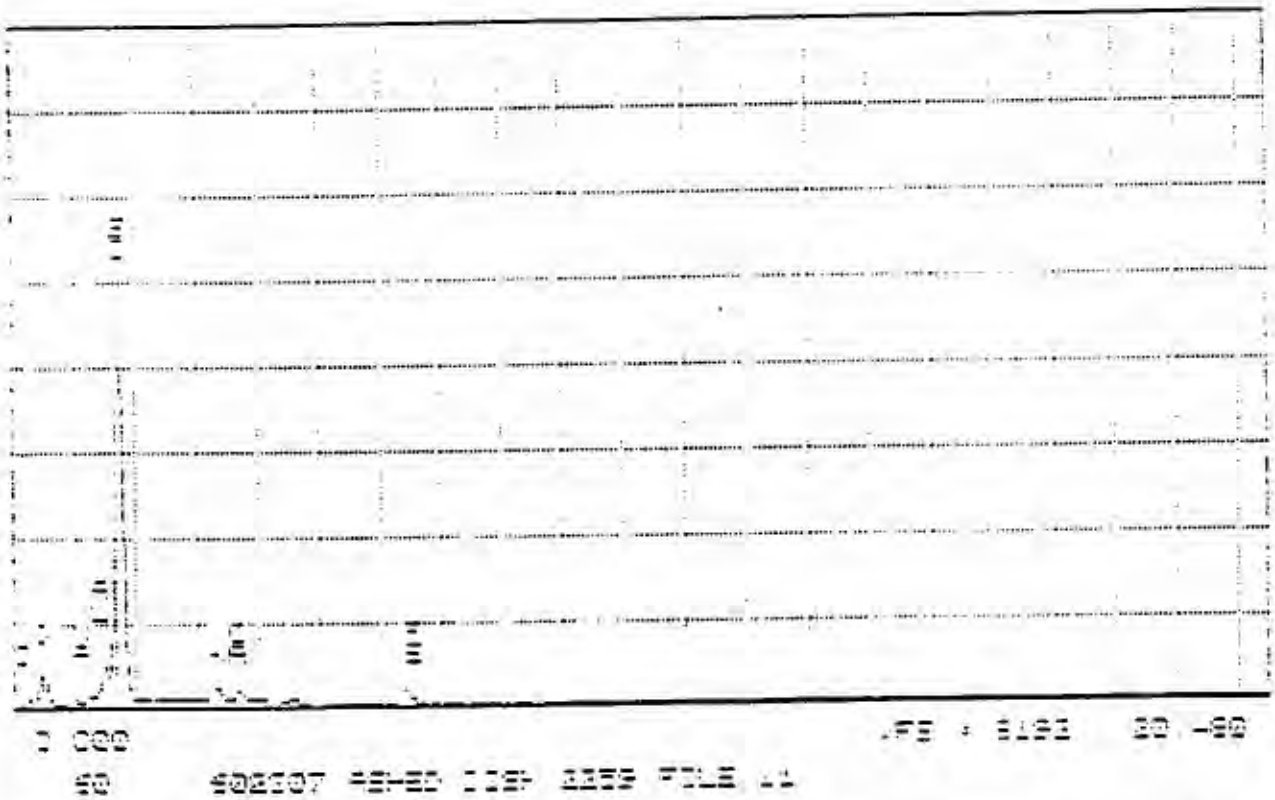
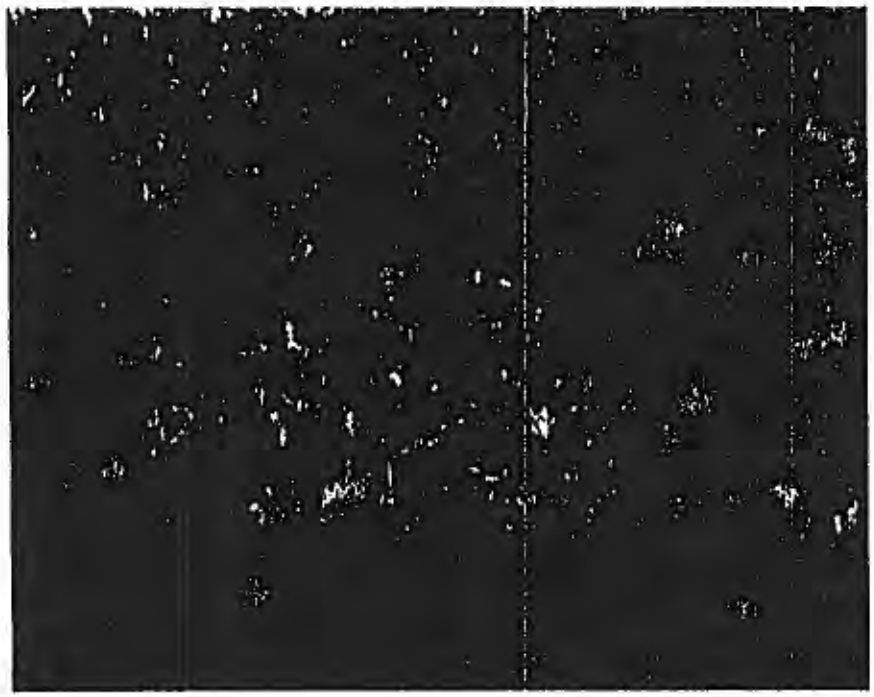
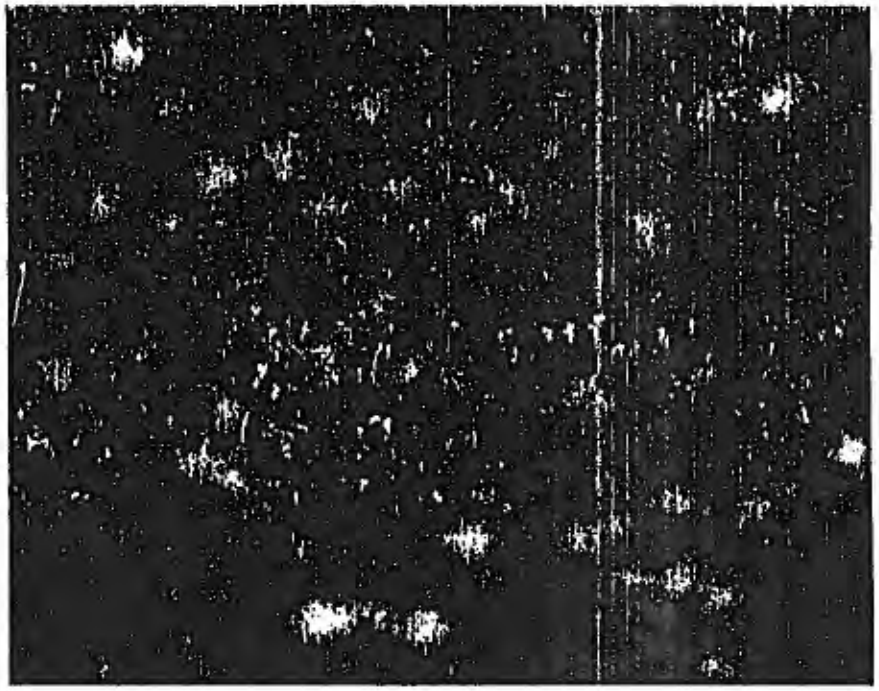


Figure 11. Secondary Electron Image and Elemental Spectrum of Particle Observed on Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 6127772: Sandpoint, 2/21/88, 157 um/m^3 (RJ Lee Group No. 602307)

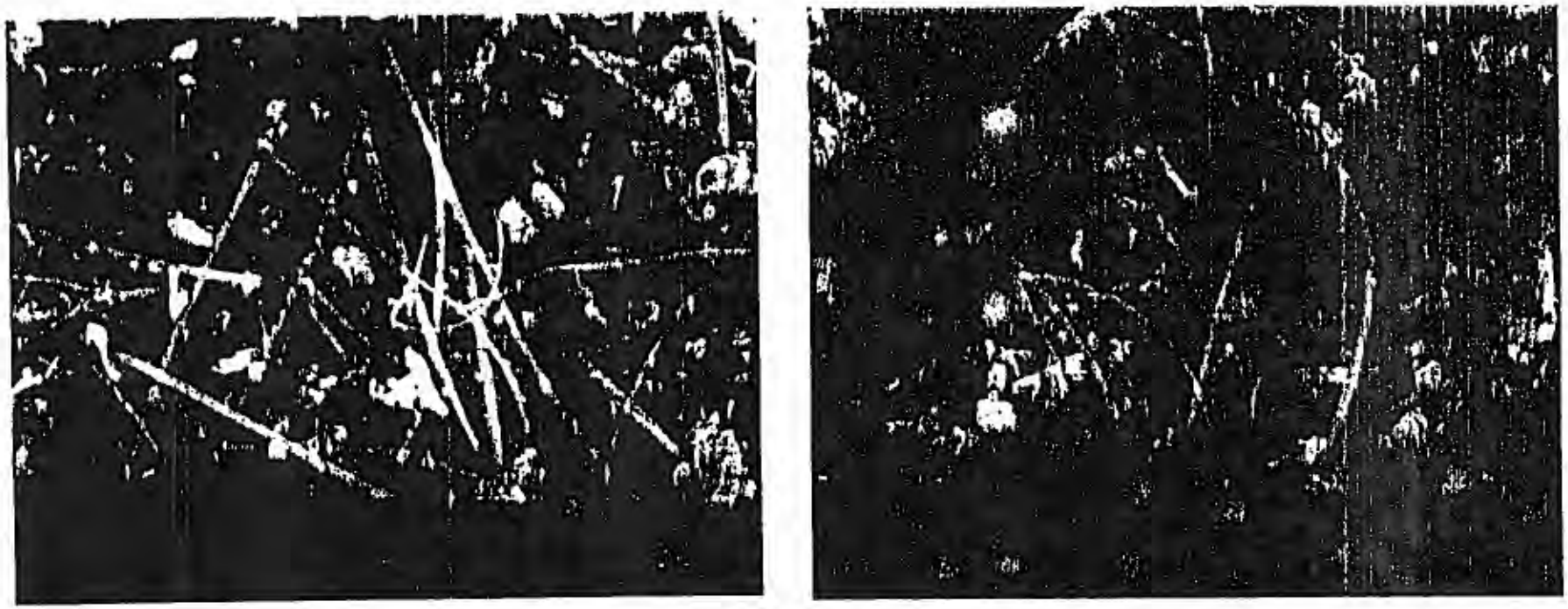


As-Received



Ashed

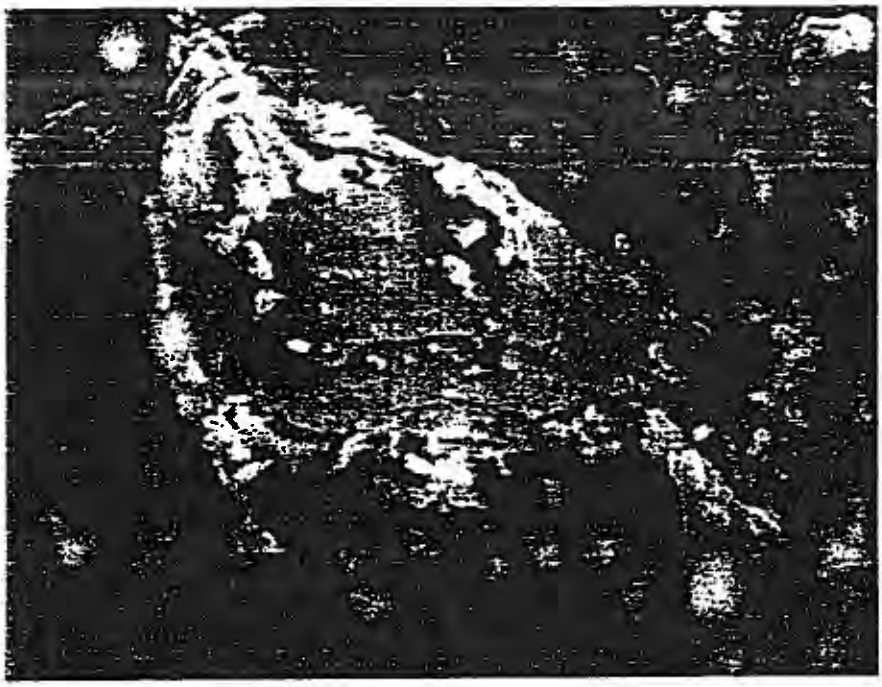
Figure 12. Secondary Electron Images of As-Received and Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 8505282; Sandpoint, 2/26/90, 192 µm/[illegible] RJ Lee Group No. 602308)



As-Received

Ashed

Figure 13. Secondary Electron Images of As Received and Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 8505282; Sandpoint, 2/26/90, 192 $\mu m/m^3$ (RJ Lee Group No. 602308)



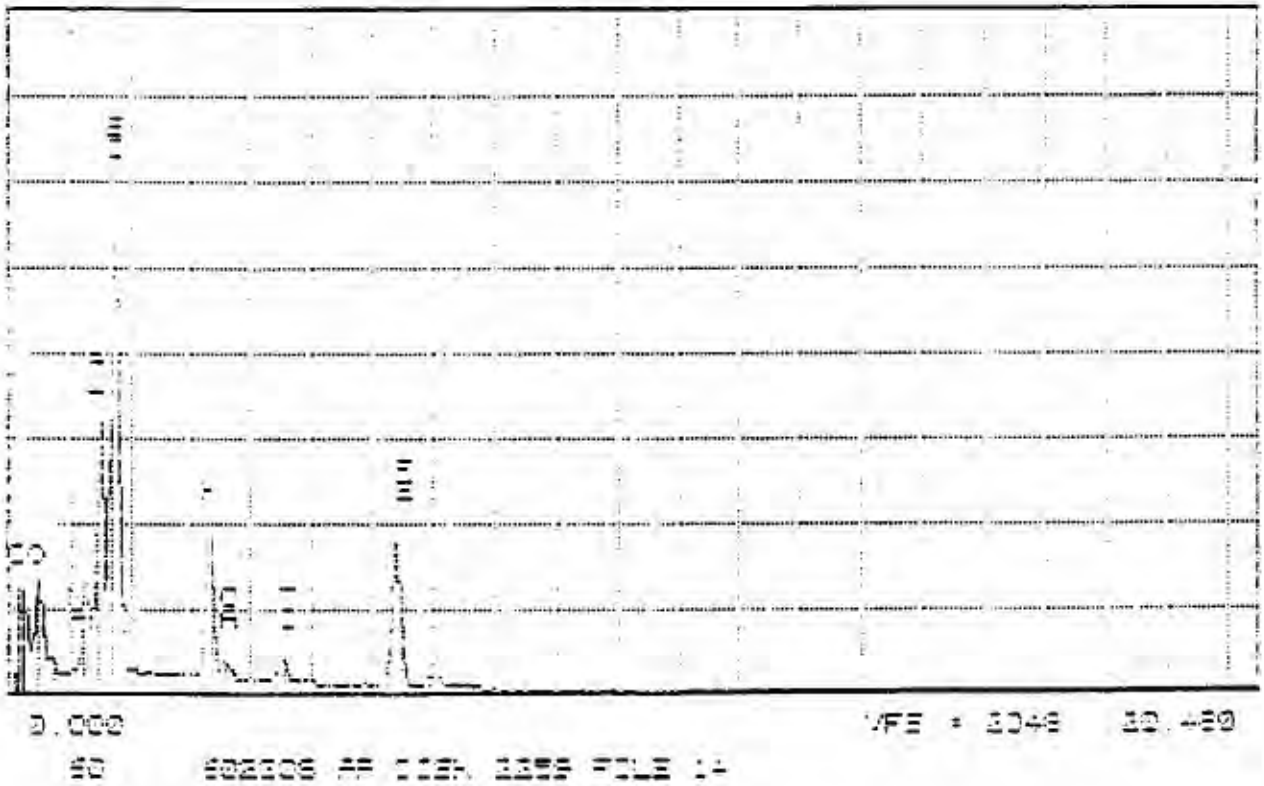
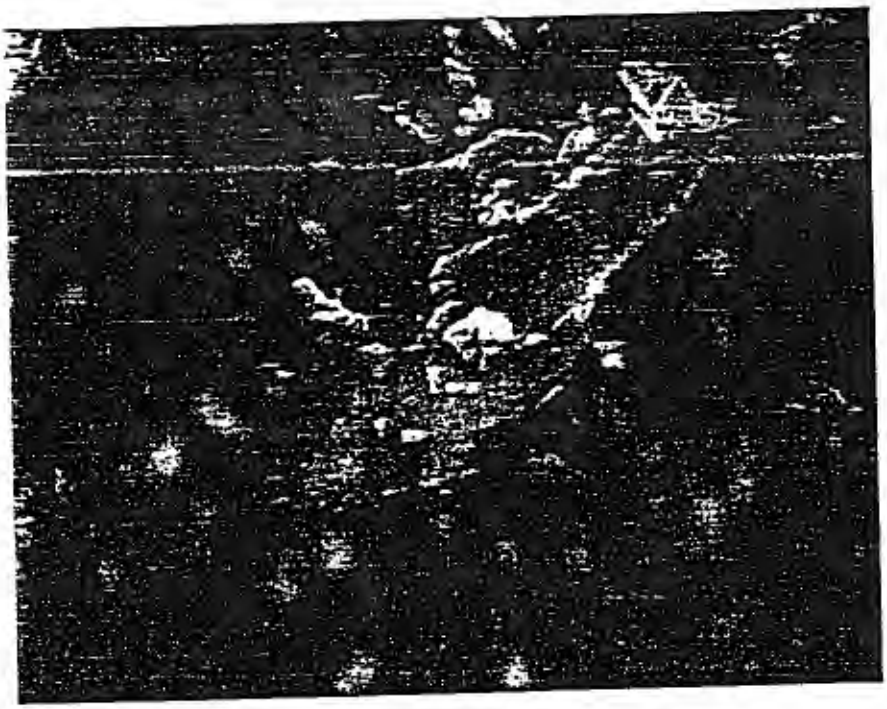


Figure 14. Secondary Electron Image and Elemental Spectrum of Particle Observed on As-Received PM-10 Sample Identified as Idaho Department of Health and Welfare No. 8505282: Sandpoint, 2/26/90, 192 $\mu m/m^3$ (RJ Lee Group No. 602308)



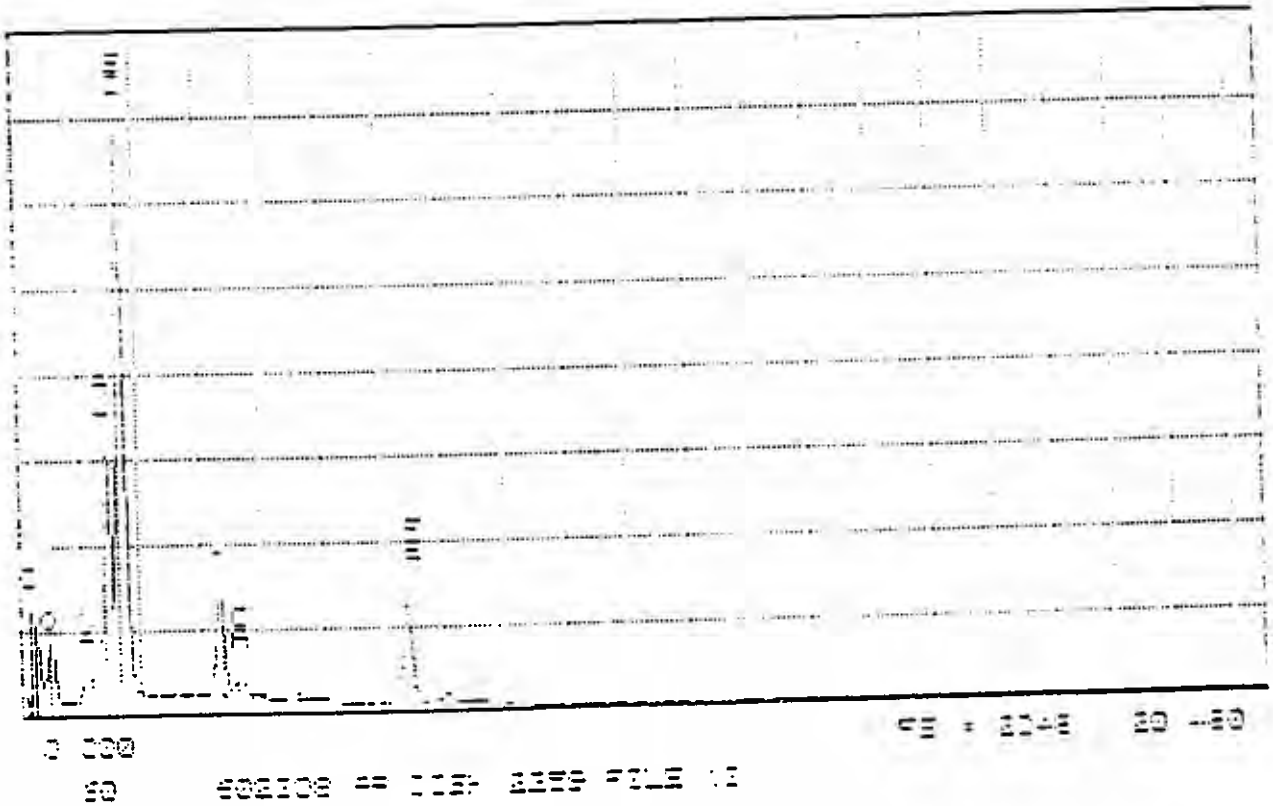
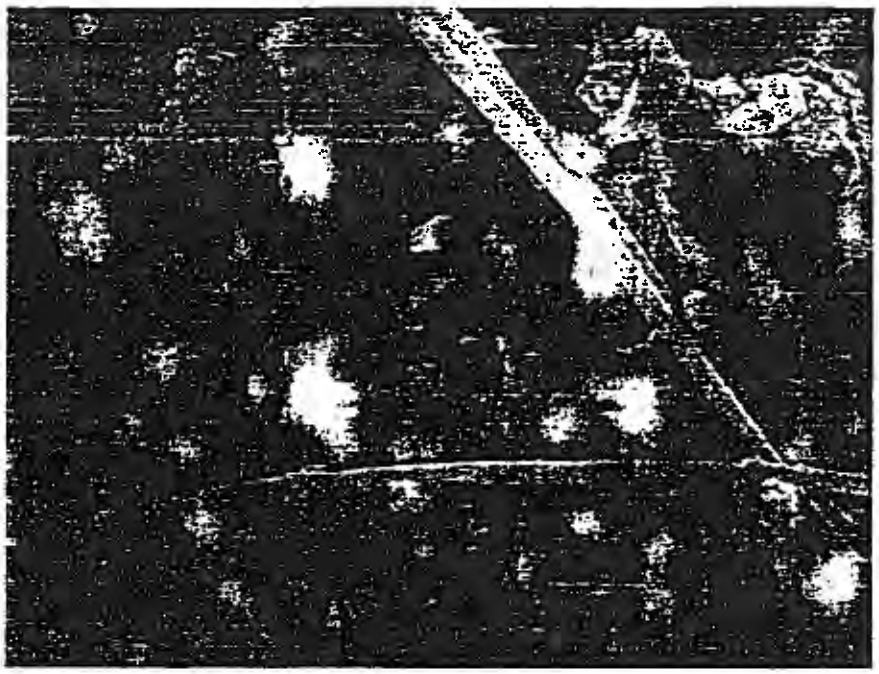


Figure 15. Secondary Electron Image and Elemental Spectrum of Particle Observed on As-Received PM-10 Sample Identified as Idaho Department of Health and Welfare No. 8505282: Sandpoint, 2/26/90, 192 $\mu m/m^3$ (RJ Lee Group No. 602308)



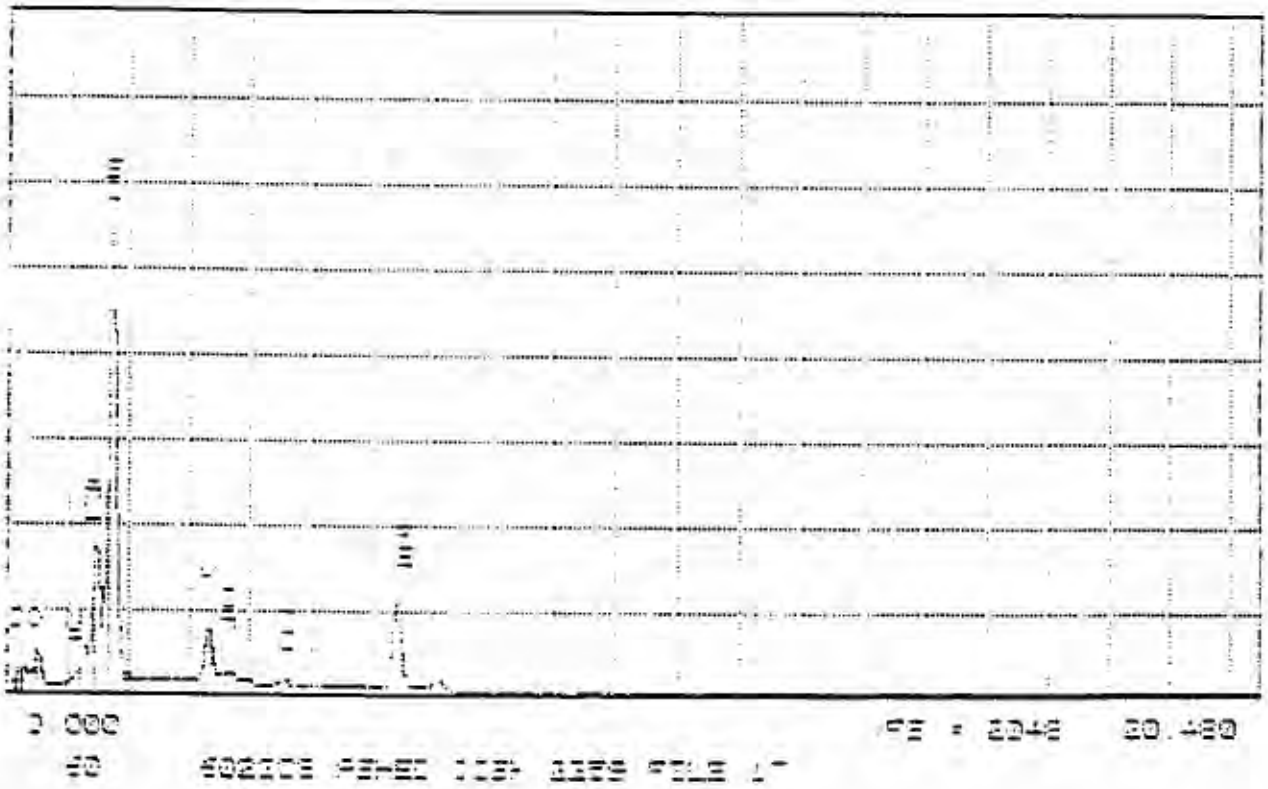
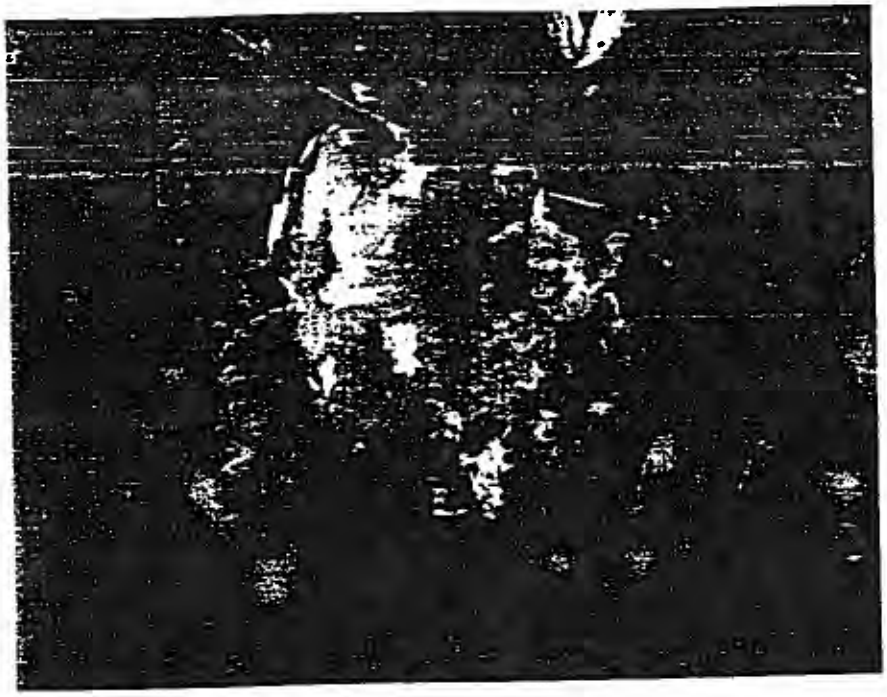


Figure 16. Secondary Electron Image and Elemental Spectrum of Particle Observed on Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 8505282: Sandpoint. 2/26/90. 192 $\mu m/m^3$ (RJ Lee Group No. 602308)

IDAHO DEPARTMENT OF HEALTH AND WELFARE
RJ Lee Group Project No. ESH211388



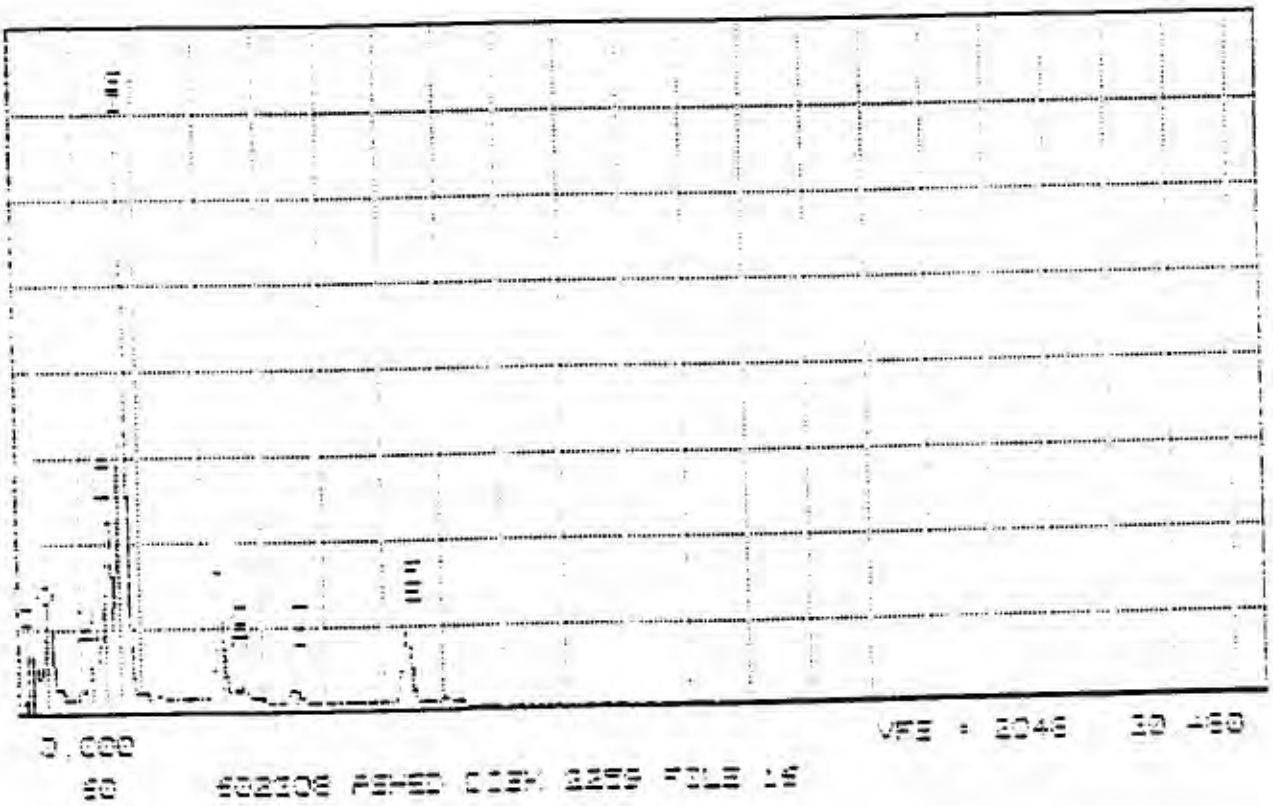
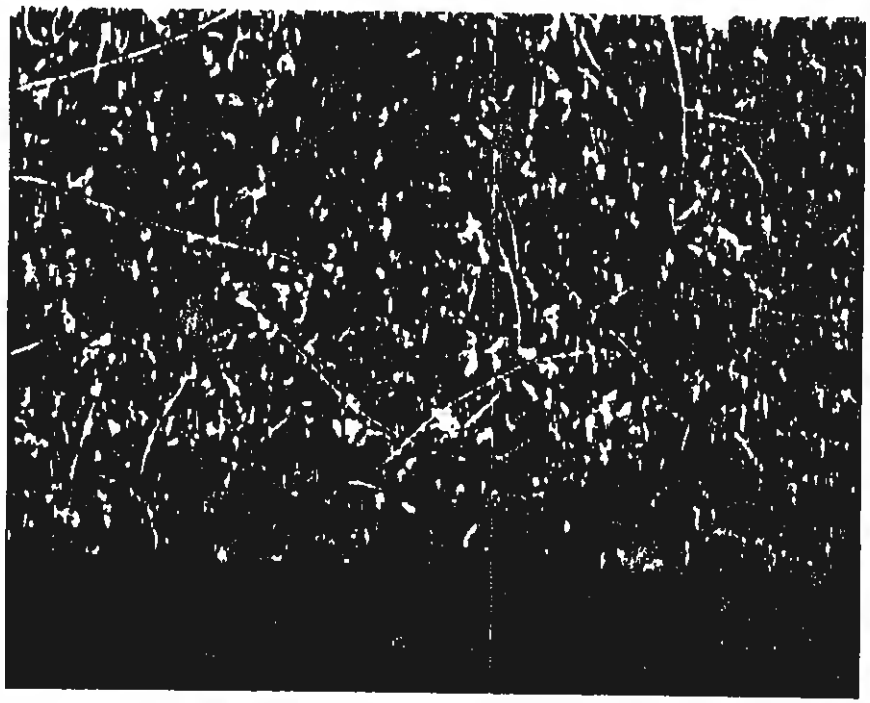
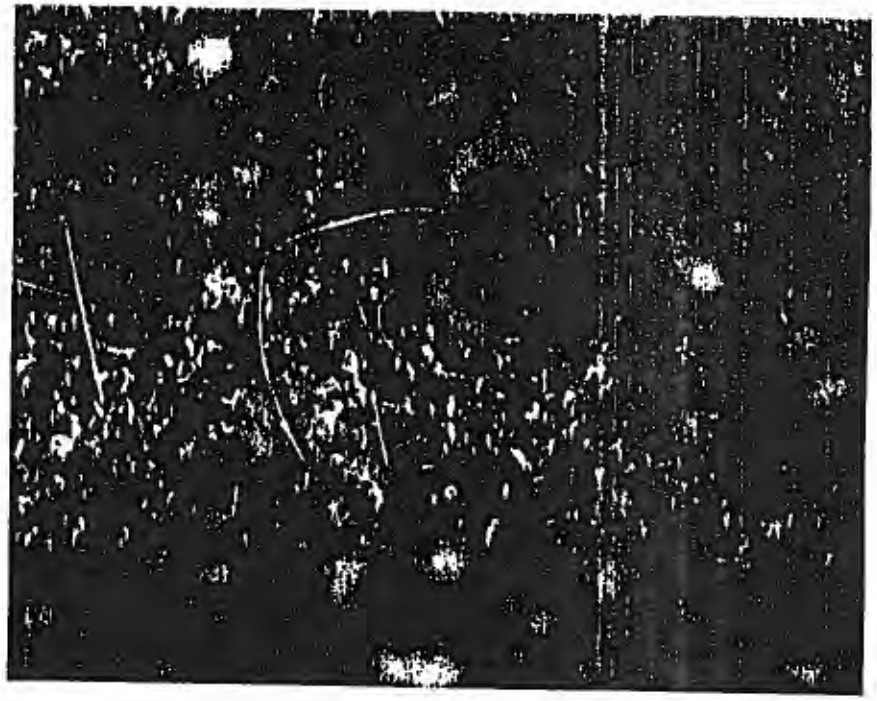


Figure 17. Secondary Electron Image and Elemental Spectrum of Particle Observed on Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 8505282: Sandpoint, 2/26/90, 192 $\mu m/m^3$ (RJ Lee Group No. 602308)

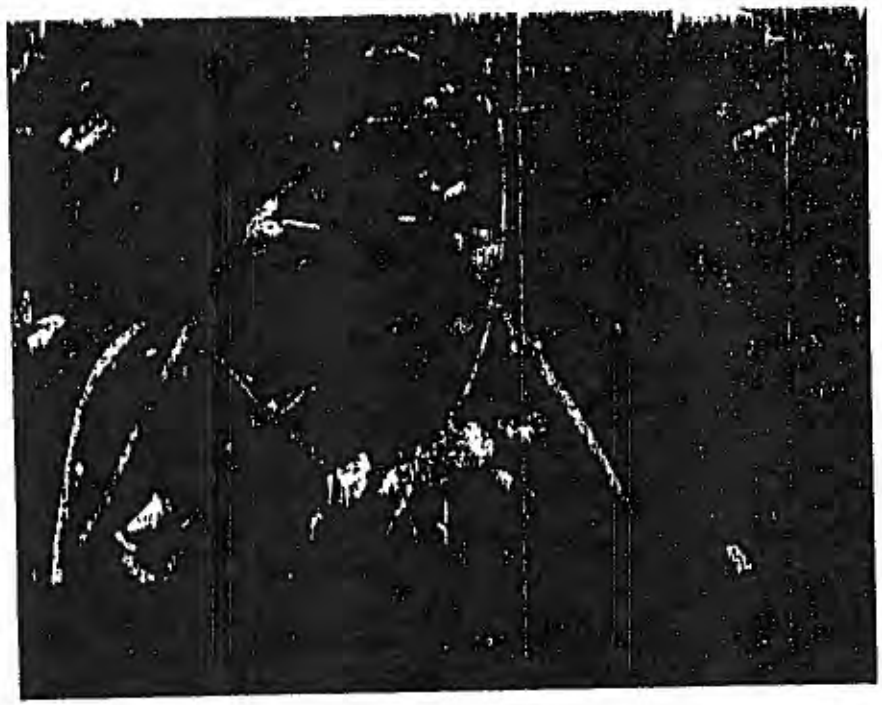


As-Received

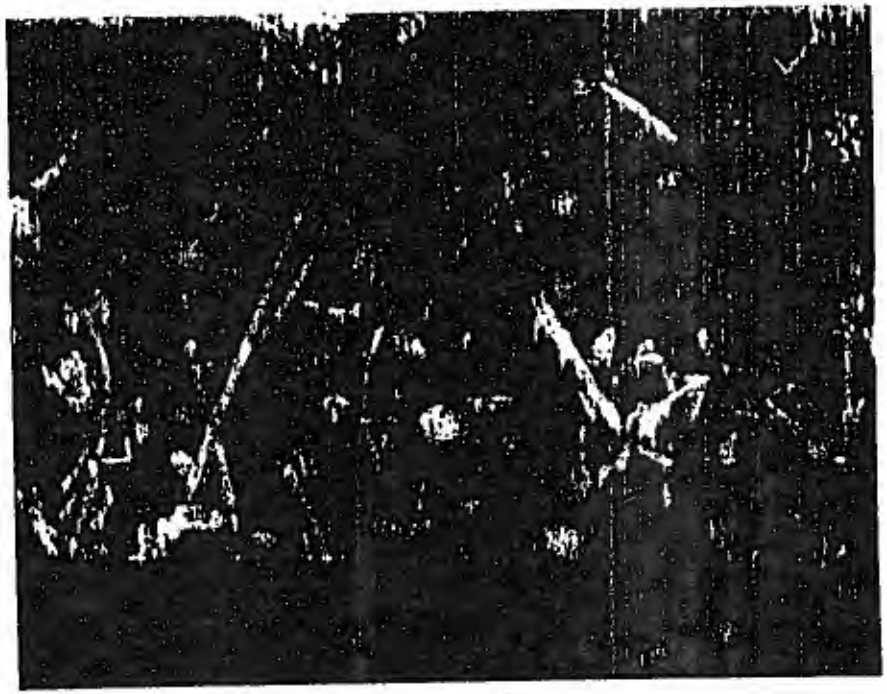


Ashed

Figure 18. Secondary Electron Images of As-Received and Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 9500541; Sandpoint, 10/4/90, 218 μm/m³ (RJ Lee Group No. 602309)

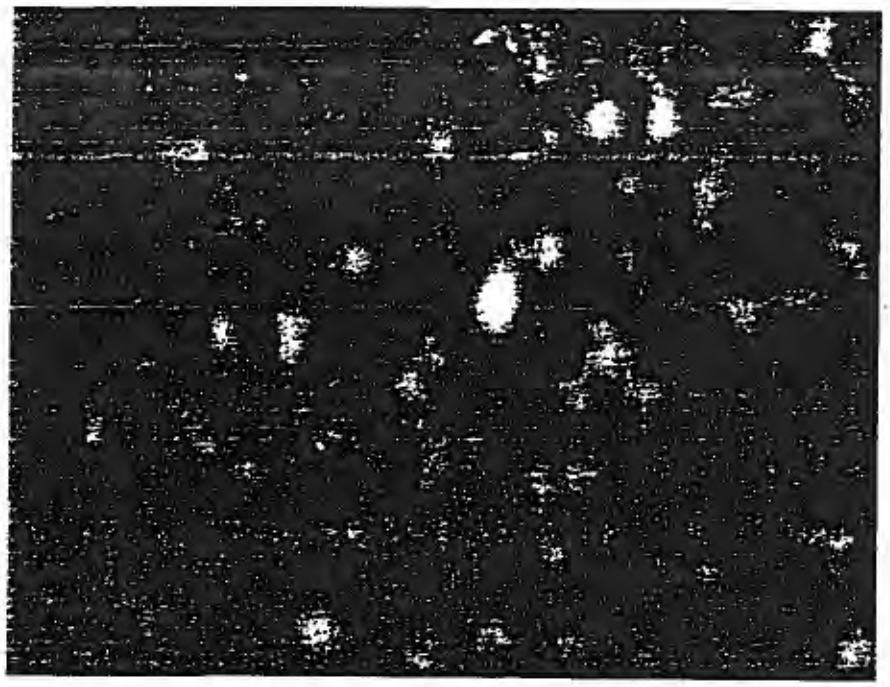


As-Received



Ashed

Figure 19. Secondary Electron Images of As Received and Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 9500541; Sandpoint, 10/4/90, 218 $\mu m/m^3$ (RJ Lee Group No. 602309)



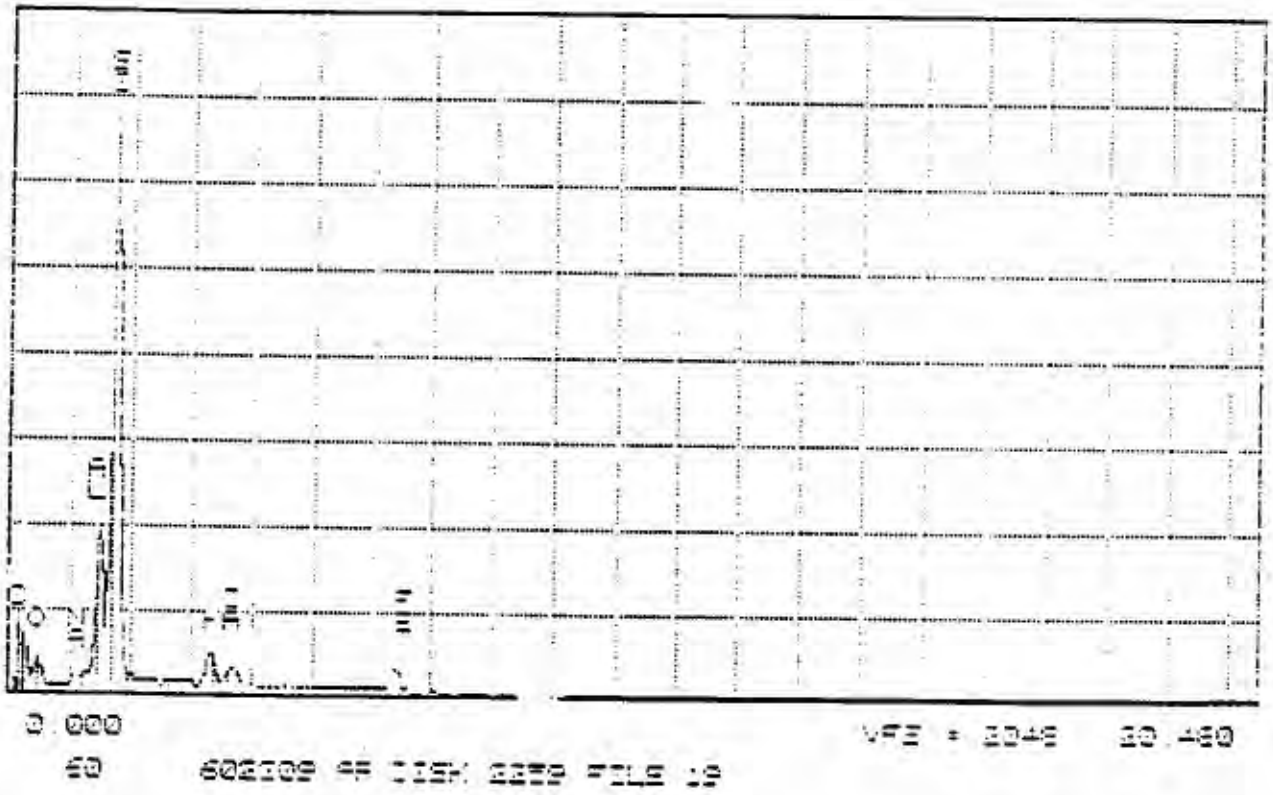
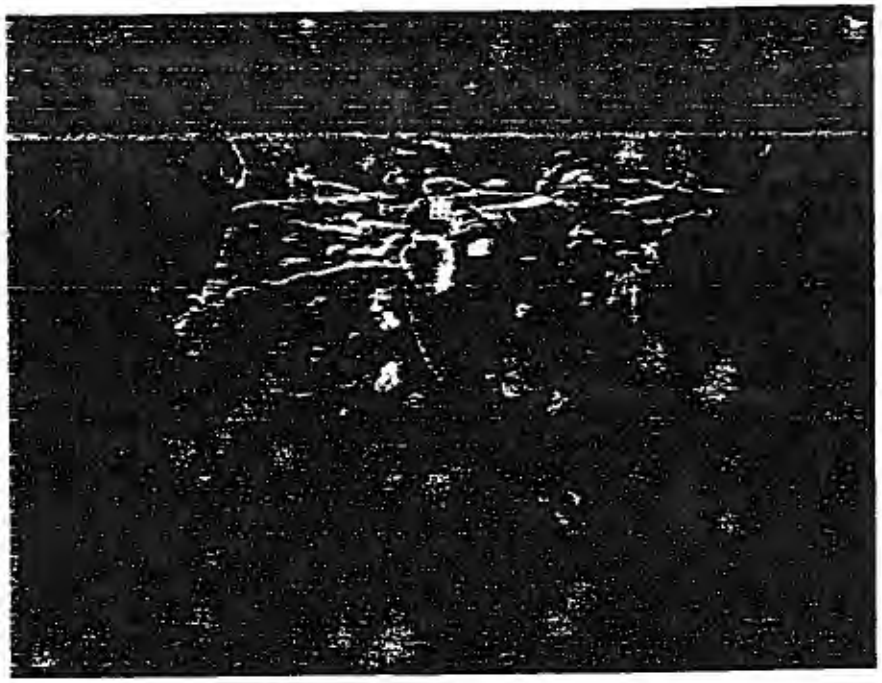


Figure 20. Secondary Electron Image and Elemental Spectrum of Particle Observed on As-Received PM-10 Sample Identified as Idaho Department of Health and Welfare No. 9500541: Sandpoint. 10/4/90. 218 $\mu m/m^3$ (RJ Lee Group No. 602309)



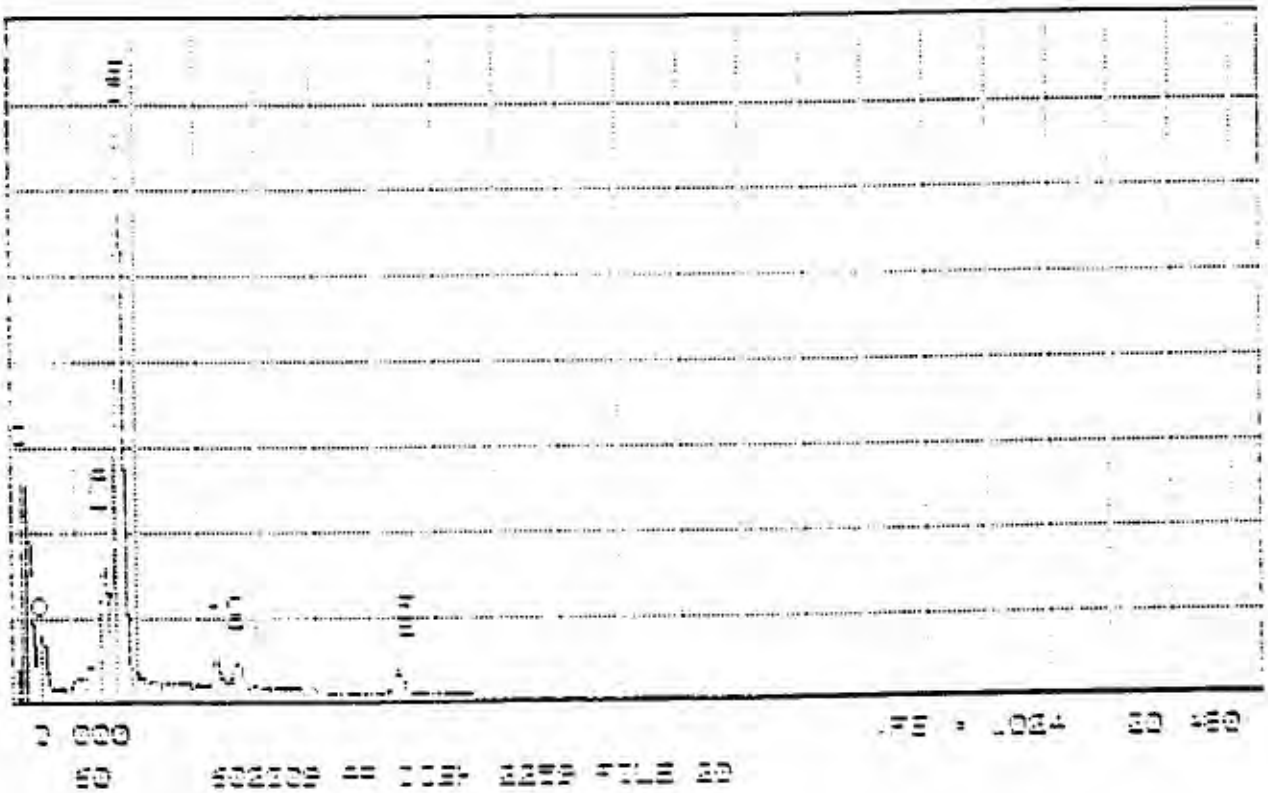
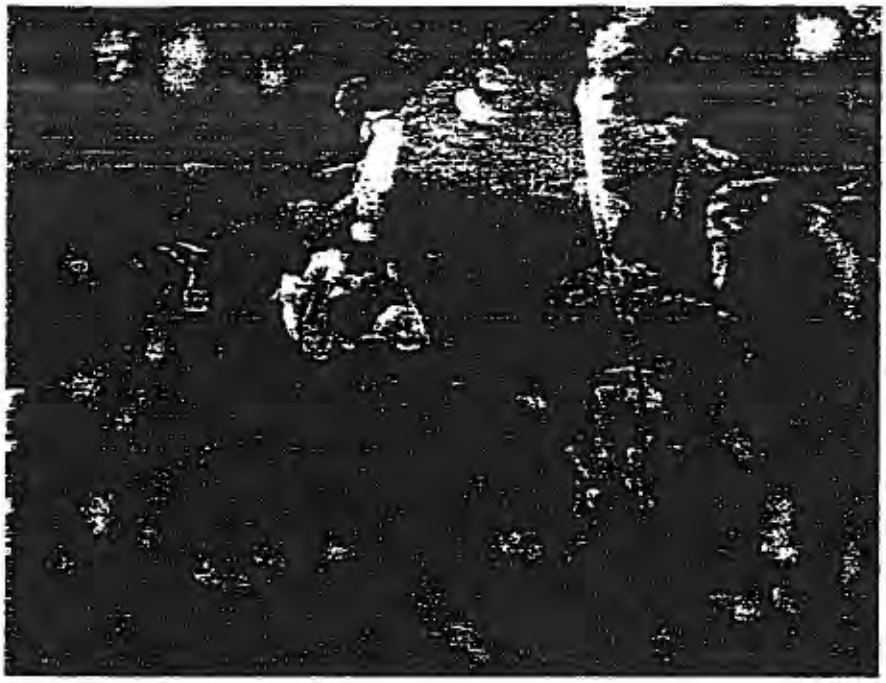


Figure 21. Secondary Electron Image and Elemental Spectrum of Particle Observed on As-Received PM-10 Sample Identified as Idaho Department of Health and Welfare No. 9500541; Sandpoint, 10/4/90, 218 µm/m^3 (RJ Lee Group No. 602309)



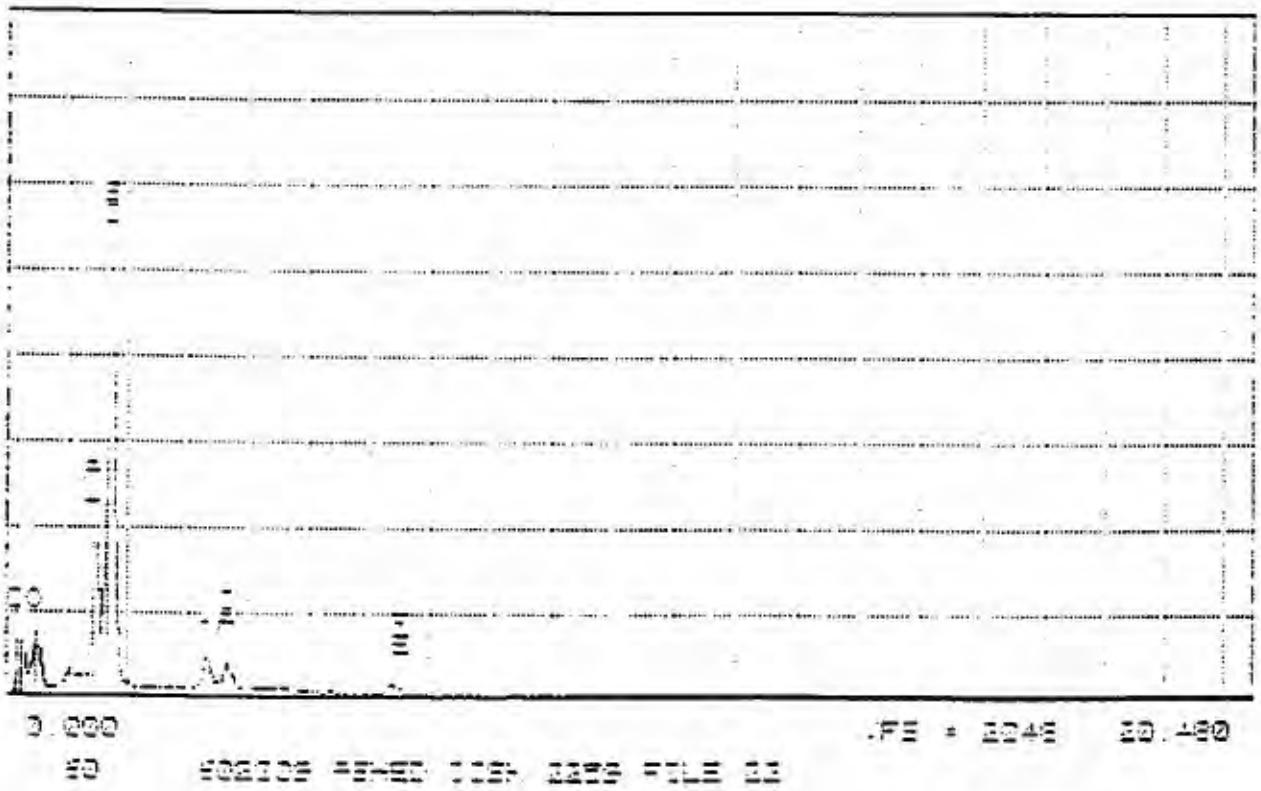
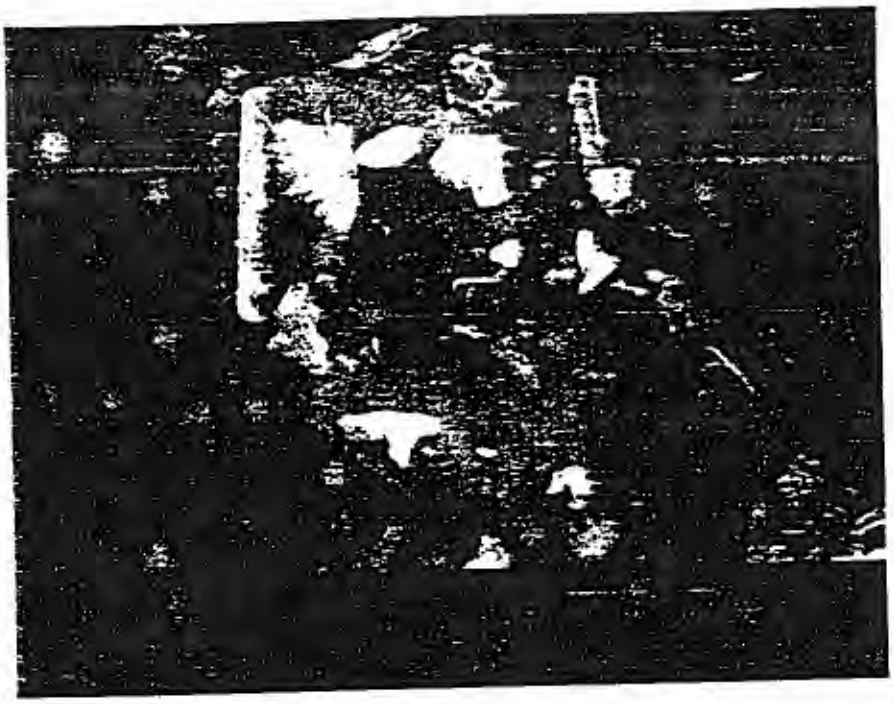


Figure 22. Secondary Electron Image and Elemental Spectrum of Particle Observed on Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 9500541: Sandpoint. 10/04/90. 218 $\mu m/m^3$ (RJ Lee Group No. 602309)



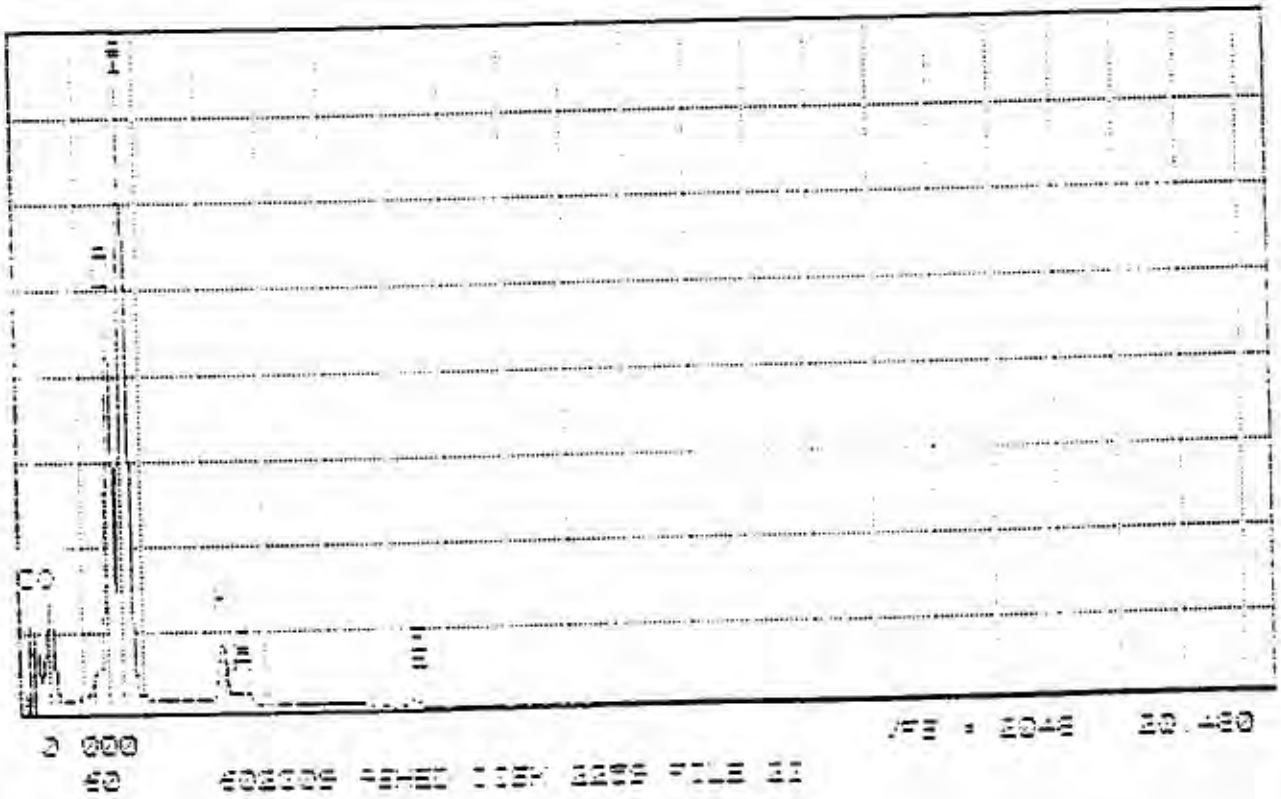


Figure 23. Secondary Electron Image and Elemental Spectrum of Particle Observed on Ashed PM-10 Sample Identified as Idaho Department of Health and Welfare No. 9500541: Sandpoint, 10/04/90, 218 $\mu m/m^3$ (RJ Lee Group No. 602309)

APPENDIX E: DISPERSION MODELING

DISPERSION MODELING FILES

Filename	Emissions	Additional Note
SDPT	Controlled	
DSGN	Uncontrolled	
REV	Controlled	Revised Industrial Emissions
CMB	Uncontrolled	Additional source groups for CMB comparison

Source Name	Description
LP_EFB	L.P. Woodwaste Boiler
LP_EFBBH	L.P. Boiler Baghouse
LP_TCY	L.P. Transfer Cyclone
LP_FUG	L.P. Fugitives excluding Unpaved Roads
IN_DRYER	Interstate Asphalt Drum Dryer
IN_VENT	Interstate Cement Bin Vent
IN_FUG	Interstate Fugitives excluding Unpaved Roads
LG_DRYER	Lignetics Sawdust Dryer Cyclone
LG_COOLR	Lignetics Pellet Cooler Cyclone
LG_FUG	Lignetics Fugitives
LD_CYC	LD McFarland Cyclone
LD_GAS	LD McFarland Natural Gas Boiler
LD_FUG	LD McFarland Fugitives excluding Unpaved Roads
1 to 199	Dispersed Sources: Residential Wood Combustion, Fugitive Road Dust, Building Construction, Railroads, Vehicle-Related, and Aircraft
RWC1 to 199	Residential Wood Combustion, Railroads, and Aircraft
RRD1 to 199	Fugitive Road Dust, Building Construction, and Vehicle-Related

DESCRIPTION OF MODEL OPTIONS

Simple Terrain: No receptor elevations above stack height were used. This decision was based on the equal elevation of most of the model domain and the dominance of area source impacts.

Depletion/Deposition: No depletion or deposition was assumed because of its secondary effect on concentrations and a lack of information to quantify the required parameters.

Rural Dispersion: Landuse within the model domain justifies this selection.

Regulatory Default: These model options are set to comply with guidance and to keep the approach a preferred model.

Area Source Release: Horizontal dimensions were based on the resolution of the emission inventory. Release height was chosen to account for surface mixing.

DISPERSION MODELING FILE

E-1: SDPT - CONTROLLED EMISSIONS

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** MODEL SETUP OPTIONS SUMMARY ***

. . . . . .

**S[illegible] Terrain Model is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates PERIOD Averages

**This Run Includes: 212 Source(s); 1 Source Group(s); and 294 Receptor(s)

**T[illegible]del Assumes A Pollutant Type of: PM10

**M[illegible] Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.10 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07
Output Units = (MICROGRAMS-PER-CUBIC-METER)

**Input Runstream File: SDPT5.INP ; **Output Print File: SDPT5.OUT
**This Run is Part of a Multi-year Run.
NOTE: PERIOD Results Are for Current Period Only.
Short Term Results Are Cumulative Across All Years Processed.
**File for Saving Result Arrays: SDPT5.SAV
**File for Initializing Result Arrays: SDPT4.SAV
**Detailed Error/Message File: SDPT5.ERR

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NCCMPL

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
LP_EFB	0	0.76900E+00	533133.0	5347684.0	0.0	24.38	428.70	16.37	1.42	YES	
LP_EFBBH	0	0.30000E-01	533145.0	5347681.0	0.0	7.62	344.74	30.98	0.31	YES	
LP_TCY	0	0.13000E+00	533036.0	5347601.0	0.0	13.72	0.00	33.87	0.42	YES	
IN_DRYER	0	0.15100E+00	532467.0	5348300.0	0.0	10.70	407.00	14.50	1.00	YES	
'N_VENT	0	0.10000E-01	532360.0	5348353.0	0.0	11.00	0.00	1.00	0.75	YES	
_G_DRYER	0	0.70600E+00	535544.0	5350438.0	0.0	18.30	388.00	27.74	0.71	YES	
LG_COOLR	0	0.33000E-01	535533.0	5350436.0	0.0	13.70	319.00	17.74	0.16	YES	
LD_CYC	0	0.10100E+00	532406.0	5347933.0	0.0	15.20	0.00	1.00	0.75	YES	
LD_GAS	0	0.10000E-01	532465.0	5348020.0	0.0	6.10	463.00	10.00	0.60	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
LP_FUG	0	0.59500E-05	532948.0	5347344.0	0.0	5.00	402.00	402.00	0.00	
IN_FUG	0	0.18700E-05	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
LG_FUG	0	0.78300E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
LD_FUG	0	0.99600E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
1	0	0.42000E-06	534155.0	5344125.0	0.0	5.00	402.00	402.00	0.00	
2	0	0.25500E-06	530535.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
3	0	0.42000E-06	534155.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
4	0	0.21500E-06	530535.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
5	0	0.33900E-06	530937.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
6	0	0.91500E-06	531339.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
7	0	0.42000E-06	534155.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
8	0	0.27900E-06	530535.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
9	0	0.14200E-06	530937.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
10	0	0.42900E-06	531339.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
11	0	0.29600E-05	531742.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
12	0	0.10500E-05	532144.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
13	0	0.86000E-07	532546.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
14	0	0.44100E-06	534155.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
15	0	0.26100E-06	530535.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
16	0	0.99100E-06	530937.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
17	0	0.23700E-05	531339.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
18	0	0.31500E-06	531742.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
19	0	0.93900E-06	532144.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
20	0	0.24100E-05	532546.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
21	0	0.27400E-05	532949.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
22	0	0.23900E-05	533351.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
23	0	0.16700E-06	533753.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
24	0	0.44100E-06	534155.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
25	0	0.11000E-06	530535.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
26	0	0.59900E-06	530937.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
27	0	0.58100E-06	531339.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
28	0	0.49100E-06	531742.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
29	0	0.17900E-05	532144.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
30	0	0.21100E-05	532546.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
31	0	0.31600E-05	532949.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
32	0	0.33700E-05	533351.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
33	0	0.44100E-06	533753.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
34	0	0.98300E-07	534155.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
35	0	0.15900E-06	530535.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
36	0	0.10500E-05	530937.0	5346539.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

:CCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
37	0	0.60200E-06	531339.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
38	0	0.89000E-06	531742.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
39	0	0.29400E-05	532144.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
40	0	0.28800E-05	532546.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
41	0	0.26900E-05	532949.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
42	0	0.17300E-05	533351.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
43	0	0.98300E-07	533753.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
44	0	0.38000E-06	530535.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
45	0	0.98300E-07	530937.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
46	0	0.56600E-06	531339.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
47	0	0.13900E-05	531742.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
48	0	0.26000E-05	532144.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
49	0	0.30700E-05	532546.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
50	0	0.24200E-05	532949.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
51	0	0.10400E-05	533351.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
52	0	0.98300E-07	533753.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
53	0	0.77100E-07	530535.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
54	0	0.77100E-07	530937.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
55	0	0.65800E-06	531339.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
56	0	0.18800E-05	531742.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
57	0	0.28000E-05	532144.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
58	0	0.16100E-05	532546.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
59	0	0.13600E-05	532949.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
60	0	0.98300E-07	533351.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
61	0	0.25000E-06	530535.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
62	0	0.21800E-06	530937.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
63	0	0.79400E-06	531339.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.23000E-05	531742.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.54100E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
66	0	0.52400E-06	532546.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
67	0	0.71200E-06	532949.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
68	0	0.98300E-07	533351.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
69	0	0.17000E-06	530535.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
70	0	0.17000E-06	530937.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
71	0	0.29800E-06	531339.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
72	0	0.21500E-06	531742.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
73	0	0.27100E-06	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
74	0	0.62200E-06	532546.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
75	0	0.70100E-06	532949.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
76	0	0.84400E-06	533351.0	5348148.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
77	0	0.98300E-07	533753.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
78	0	0.14200E-06	530535.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
79	0	0.14200E-06	530937.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
80	0	0.15000E-06	531339.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
81	0	0.18400E-06	531742.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
82	0	0.10600E-06	532144.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
83	0	0.13800E-06	532546.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
84	0	0.13800E-06	532949.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
85	0	0.60200E-06	533351.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
86	0	0.98300E-07	533753.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
87	0	0.14200E-06	530535.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
88	0	0.12600E-06	530937.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
89	0	0.11700E-06	531339.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
90	0	0.21500E-06	531742.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
91	0	0.84500E-07	532144.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
92	0	0.10000E-06	532546.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
93	0	0.10000E-06	532949.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
94	0	0.41300E-06	533351.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
95	0	0.34900E-06	533753.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
96	0	0.98300E-07	534155.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
97	0	0.14100E-06	530535.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
98	0	0.12500E-06	530937.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
99	0	0.12500E-06	531339.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
100	0	0.11400E-06	531742.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
101	0	0.15400E-06	532144.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
102	0	0.10200E-06	532546.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
103	0	0.10800E-06	532949.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
104	0	0.38600E-06	533351.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
105	0	0.27900E-06	533753.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
106	0	0.40000E-06	534155.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
107	0	0.14700E-06	534558.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
108	0	0.77100E-07	530535.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
109	0	0.93100E-07	530937.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
110	0	0.93100E-07	531339.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
111	0	0.77100E-07	531742.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
112	0	0.26000E-06	532144.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
113	0	0.13100E-06	532546.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
114	0	0.12000E-06	532949.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
115	0	0.27500E-06	533351.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
116	0	0.23900E-06	533753.0	5349757.0	0.0	5.00	402.00	402.00	0.00	

** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

CMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
117	0	0.28600E-06	534155.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
118	0	0.12200E-05	534558.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
119	0	0.98300E-07	534960.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
120	0	0.98300E-07	535362.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
121	0	0.20900E-06	535765.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
122	0	0.38400E-06	536167.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
123	0	0.77100E-07	536569.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
124	0	0.77100E-07	530535.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
125	0	0.77100E-07	530937.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
126	0	0.77100E-07	531339.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
127	0	0.77100E-07	531742.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
128	0	0.57100E-06	532144.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
129	0	0.11600E-06	532546.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
130	0	0.14200E-06	532949.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
131	0	0.27500E-06	533351.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
132	0	0.25300E-06	533753.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
133	0	0.13500E-06	534155.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
134	0	0.79200E-06	534558.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
135	0	0.28200E-06	534960.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
136	0	0.28200E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
137	0	0.60800E-06	535765.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
138	0	0.11200E-05	536167.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
139	0	0.11600E-05	536569.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
140	0	0.98300E-07	532144.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
141	0	0.77100E-07	532546.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
142	0	0.50000E-06	532949.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
14[illegible]	0	0.27200E-06	533351.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.26200E-06	533753.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.15800E-06	534155.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
146	0	0.16400E-06	534558.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
147	0	0.36100E-06	534960.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
148	0	0.62600E-06	535362.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
149	0	0.76600E-06	535765.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
150	0	0.11400E-05	536167.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
151	0	0.46400E-06	536569.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
152	0	0.36400E-06	532144.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
153	0	0.77100E-07	532546.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
154	0	0.53100E-06	532949.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
155	0	0.32500E-06	533351.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
156	0	0.26000E-06	533753.0	5350964.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
157	0	0.20600E-06	534155.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
158	0	0.20600E-06	534558.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
159	0	0.98300E-07	534960.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
160	0	0.18000E-06	535362.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
161	0	0.25700E-06	535765.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
162	0	0.27000E-06	536167.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
163	0	0.77100E-07	536569.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
164	0	0.37900E-06	532144.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
165	0	0.21300E-06	532546.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
166	0	0.12600E-06	532949.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
167	0	0.26000E-06	533351.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
168	0	0.21200E-06	533753.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
169	0	0.77100E-07	534155.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
170	0	0.77100E-07	534558.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
171	0	0.77100E-07	534960.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
172	0	0.13100E-06	535362.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
173	0	0.19500E-06	535765.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
174	0	0.12600E-06	536167.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
175	0	0.77100E-07	536569.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
176	0	0.25600E-06	532144.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
177	0	0.17600E-06	532546.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
178	0	0.12600E-06	532949.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
179	0	0.26000E-06	533351.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
180	0	0.59800E-06	533753.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
181	0	0.77100E-07	534155.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
182	0	0.77100E-07	534558.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
183	0	0.77100E-07	534960.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
184	0	0.12600E-06	535362.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
185	0	0.14700E-06	535765.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
186	0	0.14700E-06	536167.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
187	0	0.77100E-07	536569.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
188	0	0.27700E-06	532144.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
189	0	0.17300E-06	532546.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
190	0	0.12600E-06	532949.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
191	0	0.24400E-06	533351.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
192	0	0.21200E-06	533753.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
193	0	0.10900E-06	534155.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
194	0	0.77100E-07	534558.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
195	0	0.77100E-07	534960.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
196	0	0.77100E-07	535362.0	5352171.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
197	0	0.11000E-06	535765.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
198	0	0.13200E-06	536167.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
199	0	0.77100E-07	536569.0	5352171.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR
NOCMPL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs											
ALL	LP_EFB	, LP_EFBBH,	LP_TCY	, LP_FUG	, IN_DRYER,	IN_VENT	, IN_FUG	, LG_DRYER,	LG_COOLR,	LG_FUG	, LD_CYC	, LD_GAS ,
	LD_FUG	, 1	, 2	, 3	, 4	, 5	, 6	, 7	, 8	, 9	, 10	, 11 ,
	12	, 13	, 14	, 15	, 16	, 17	, 18	, 19	, 20	, 21	, 22	, 23 ,
	24	, 25	, 26	, 27	, 28	, 29	, 30	, 31	, 32	, 33	, 34	, 35 ,
	36	, 37	, 38	, 39	, 40	, 41	, 42	, 43	, 44	, 45	, 46	, 47 ,
	48	, 49	, 50	, 51	, 52	, 53	, 54	, 55	, 56	, 57	, 58	, 59 ,
	60	, 61	, 62	, 63	, 64	, 65	, 66	, 67	, 68	, 69	, 70	, 71 ,
	72	, 73	, 74	, 75	, 76	, 77	, 78	, 79	, 80	, 81	, 82	, 83 ,
	84	, 85	, 86	, 87	, 88	, 89	, 90	, 91	, 92	, 93	, 94	, 95 ,
	96	, 97	, 98	, 99	, 100	, 101	, 102	, 103	, 104	, 105	, 106	, 107 ,
	108	, 109	, 110	, 111	, 112	, 113	, 114	, 115	, 116	, 117	, 118	, 119 ,
	120	, 121	, 122	, 123	, 124	, 125	, 126	, 127	, 128	, 129	, 130	, 131 ,
	132	, 133	, 134	, 135	, 136	, 137	, 138	, 139	, 140	, 141	, 142	, 143 ,
	144	, 145	, 146	, 147	, 148	, 149	, 150	, 151	, 152	, 153	, 154	, 155 ,
	156	, 157	, 158	, 159	, 160	, 161	, 162	, 163	, 164	, 165	, 166	, 167
	168	, 169	, 170	, 171	, 172	, 173	, 174	, 175	, 176	, 177	, 178	, 179 ,
	180	, 181	, 182	, 183	, 184	, 185	, 186	, 187	, 188	, 189	, 190	, 191 ,
	192	, 193	, 194	, 195	, 196	, 197	, 198	, 199 ,				

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

IOCMPL

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: \DATA\MET\SPKN91.MET
SURFACE STATION NO.: 24157
NAME: UNKNOWN
YEAR: 1991

FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
UPPER AIR STATION NO.: 24157
NAME: UNKNOWN
YEAR: 1991

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-O (M)	IPCODE	PRATE (mm/HR)
91	1	1	1	31.0	5.14	273.7	4	450.4	450.4	0.0000	0.0	0.0000	0	0.00
91	1	1	2	28.0	5.66	273.1	4	417.0	417.0	0.0000	0.0	0.0000	0	0.00
91	1	1	3	34.0	6.17	273.1	4	383.6	383.6	0.0000	0.0	0.0000	0	0.00
91	1	1	4	33.0	5.66	273.1	4	350.2	350.2	0.0000	0.0	0.0000	0	0.00
91	1	1	5	23.0	5.14	273.1	4	316.8	316.8	0.0000	0.0	0.0000	0	0.00
91	1	1	6	32.0	5.66	272.6	4	283.3	283.3	0.0000	0.0	0.0000	0	0.00
91	1	1	7	35.0	5.66	272.6	4	249.9	249.9	0.0000	0.0	0.0000	0	0.00
91	1	1	8	23.0	4.63	272.6	4	216.5	216.5	0.0000	0.0	0.0000	0	0.00
91	1	1	9	27.0	5.66	272.6	4	183.1	183.1	0.0000	0.0	0.0000	0	0.00
91	1	1	10	21.0	6.17	272.6	4	149.7	149.7	0.0000	0.0	0.0000	0	0.00
91	1	1	11	54.0	4.12	273.1	4	116.3	116.3	0.0000	0.0	0.0000	0	0.00
91	1	1	12	66.0	3.60	273.1	4	82.8	82.8	0.0000	0.0	0.0000	0	0.00
91	1	1	13	133.0	3.09	269.8	4	49.4	49.4	0.0000	0.0	0.0000	0	0.00
91	1	1	14	129.0	2.06	269.8	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	15	142.0	4.12	269.8	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	16	144.0	0.00	269.3	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	17	141.0	0.00	268.7	4	20.7	20.7	0.0000	0.0	0.0000	0	0.00
91	1	1	18	207.0	2.06	269.3	4	25.5	25.5	0.0000	0.0	0.0000	0	0.00
91	1	1	19	214.0	0.00	269.3	4	30.3	30.3	0.0000	0.0	0.0000	0	0.00
91	1	1	20	207.0	0.00	269.3	4	35.1	35.1	0.0000	0.0	0.0000	0	0.00
91	1	1	21	220.0	2.57	269.3	4	40.0	40.0	0.0000	0.0	0.0000	0	0.00
91	1	1	22	242.0	2.57	269.3	4	44.8	44.8	0.0000	0.0	0.0000	0	0.00
91	1	1	23	230.0	2.57	269.8	4	49.6	49.6	0.0000	0.0	0.0000	0	0.00
91	1	1	24	220.0	2.57	269.8	4	54.4	54.4	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

DOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532144.00	5352574.00	18.78811c	(90122224)	532546.00	5352574.00	18.90434c	(88021924)
532949.00	5352574.00	16.79259c	(87021824)	533351.00	5352574.00	18.97564	(89021224)
533753.00	5352574.00	20.17183	(91113024)	534155.00	5352574.00	19.82861c	(87122724)
534558.00	5352574.00	17.55256c	(87011624)	534960.00	5352574.00	16.12224	(88041724)
535362.00	5352574.00	15.33057c	(90062024)	535765.00	5352574.00	15.31190c	(91101724)
536167.00	5352574.00	16.43021c	(87100424)	536569.00	5352574.00	18.02455	(88041724)
536972.00	5352574.00	17.04001c	(90100724)	532144.00	5352171.00	21.12947c	(88012124)
532546.00	5352171.00	20.20368c	(88021924)	532949.00	5352171.00	17.78287	(89021224)
533351.00	5352171.00	20.68034	(89021224)	533753.00	5352171.00	22.35236	(91113024)
534155.00	5352171.00	22.35471	(89010624)	534558.00	5352171.00	18.83714c	(89121124)
534960.00	5352171.00	17.50018c	(90062024)	535362.00	5352171.00	17.77135c	(87011624)
535765.00	5352171.00	16.92875c	(87100424)	536167.00	5352171.00	19.42284c	(87100424)
536569.00	5352171.00	19.61425	(88041724)	536972.00	5352171.00	18.02631c	(90100724)
532144.00	5351769.00	21.96459c	(88012124)	532546.00	5351769.00	21.44204c	(87021824)
532949.00	5351769.00	19.42439	(89021224)	533351.00	5351769.00	22.33060	(88041724)
533753.00	5351769.00	21.74900c	(87112524)	534155.00	5351769.00	20.92714c	(88010224)
534558.00	5351769.00	18.80015c	(88010224)	534960.00	5351769.00	17.51260c	(88010224)
535362.00	5351769.00	18.22808c	(91101724)	535765.00	5351769.00	19.60409c	(87100424)
536167.00	5351769.00	22.55454	(91092924)	536569.00	5351769.00	21.41231c	(90100724)
536972.00	5351769.00	20.36725c	(87011824)	532144.00	5351367.00	21.36955c	(88120824)
532546.00	5351367.00	21.17481c	(87021824)	532949.00	5351367.00	21.99505c	(88120824)
533351.00	5351367.00	24.62579c	(88031824)	533753.00	5351367.00	22.97949	(89010624)
534155.00	5351367.00	21.69884c	(88010224)	534558.00	5351367.00	21.05777	(89010624)
534960.00	5351367.00	19.57943c	(88010224)	535362.00	5351367.00	21.25737c	(91092324)
535765.00	5351367.00	24.16652c	(87121324)	536167.00	5351367.00	26.72471	(91092924)
536569.00	5351367.00	25.36321c	(87101824)	536972.00	5351367.00	21.85113c	(90032124)
532144.00	5350965.00	22.29908c	(89021424)	532546.00	5350965.00	21.72571	(88041724)
532949.00	5350965.00	22.28021c	(88120824)	533351.00	5350965.00	24.80859	(89021224)
533753.00	5350965.00	23.43615c	(87122724)	534155.00	5350965.00	22.50203c	(87122724)
534558.00	5350965.00	22.46949c	(87122724)	534960.00	5350965.00	21.81775	(88031724)
535362.00	5350965.00	25.03783	(91092924)	535765.00	5350965.00	30.35985c	(87100424)
536167.00	5350965.00	32.37236c	(90100724)	536569.00	5350965.00	31.99171c	(88010224)
536972.00	5350965.00	24.52336c	(87011824)	530535.00	5350562.00	20.01119c	(87121324)
530937.00	5350562.00	21.07764c	(89030324)	531339.00	5350562.00	21.59845c	(87021824)
531742.00	5350562.00	23.08193c	(90122224)	532144.00	5350562.00	26.16838c	(87021824)
532546.00	5350562.00	24.93958c	(90122224)	532949.00	5350562.00	22.62532c	(87011624)
533351.00	5350562.00	24.08957	(89021224)	533753.00	5350562.00	23.74009c	(89092724)
534155.00	5350562.00	24.29904c	(87122724)	534558.00	5350562.00	23.76954c	(87122724)
534960.00	5350562.00	27.02050c	(91101724)	535362.00	5350562.00	27.92596c	(88091224)
535765.00	5350562.00	28.19994c	(87011824)	536167.00	5350562.00	28.48361c	(87100524)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . .

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
536569.00	5350562.00	29.18829c	(87121324)	536972.00	5350562.00	26.54955c	(88010224)
530535.00	5350160.00	21.08681c	(87011624)	530937.00	5350160.00	22.60855	(91062324)
531339.00	5350160.00	23.80586c	(89121124)	531742.00	5350160.00	25.61815	(91092824)
532144.00	5350160.00	28.34766c	(87021824)	532546.00	5350160.00	26.38752c	(89021424)
532949.00	5350160.00	24.30746	(89021224)	533351.00	5350160.00	25.55615c	(87112524)
533753.00	5350160.00	26.40185c	(87081524)	534155.00	5350160.00	24.76533c	(87011624)
534558.00	5350160.00	25.85444c	(91092324)	534960.00	5350160.00	31.50282c	(90100724)
535362.00	5350160.00	26.69991c	(87101824)	535765.00	5350160.00	22.70089c	(88100824)
536167.00	5350160.00	25.77291c	(88100824)	536569.00	5350160.00	24.32608c	(91012524)
536972.00	5350160.00	21.39688c	(90100624)	530535.00	5349758.00	22.19558c	(89030324)
530937.00	5349758.00	24.81193	(91062324)	531339.00	5349758.00	27.18439c	(89102924)
531742.00	5349758.00	28.64685	(91092924)	532144.00	5349758.00	30.86648	(91092824)
532546.00	5349758.00	29.01068c	(90041424)	532949.00	5349758.00	26.74028c	(88031824)
533351.00	5349758.00	28.30507c	(87112524)	533753.00	5349758.00	29.51213c	(87122724)
534155.00	5349758.00	27.65926c	(87122724)	534558.00	5349758.00	29.58085c	(90122424)
534960.00	5349758.00	26.00106c	(88091224)	535362.00	5349758.00	21.03859c	(87122224)
535765.00	5349758.00	19.61598c	(90091824)	536167.00	5349758.00	19.33328c	(87122724)
536569.00	5349758.00	16.66764	(88082024)	536972.00	5349758.00	14.49435c	(87122724)
530535.00	5349355.00	23.07564c	(87011924)	530937.00	5349355.00	27.15912	(91062324)
531339.00	5349355.00	29.51981c	(89030324)	531742.00	5349355.00	33.74590c	(87011624)
532144.00	5349355.00	34.89624c	(87021824)	532546.00	5349355.00	33.38866c	(91092324)
532949.00	5349355.00	30.53208c	(88031824)	533351.00	5349355.00	32.35111c	(87112524)
533753.00	5349355.00	31.57131c	(87011824)	534155.00	5349355.00	28.64618c	(87100424)
534558.00	5349355.00	27.51811c	(87101824)	534960.00	5349355.00	22.94233c	(87122224)
535362.00	5349355.00	18.72499c	(90032124)	535765.00	5349355.00	17.82920c	(91062224)
536167.00	5349355.00	15.74496c	(91062224)	536569.00	5349355.00	14.11266c	(87020924)
536972.00	5349355.00	12.69162c	(91062224)	530535.00	5348953.00	23.20572c	(91033024)
530937.00	5348953.00	28.40818c	(87081324)	531339.00	5348953.00	34.60354c	(87121324)
531742.00	5348953.00	39.53469c	(90102024)	532144.00	5348953.00	42.90811	(91092924)
532546.00	5348953.00	42.12607c	(87011624)	532949.00	5348953.00	39.14245c	(87112524)
533351.00	5348953.00	39.47616	(89021224)	533753.00	5348953.00	36.77611c	(89020624)
534155.00	5348953.00	33.64717c	(87100424)	534558.00	5348953.00	26.41181c	(87011824)
534960.00	5348953.00	21.72749	(88123124)	535362.00	5348953.00	19.34955c	(87100424)
535765.00	5348953.00	16.07892c	(90100724)	536167.00	5348953.00	15.08997c	(89020624)
536569.00	5348953.00	13.60008c	(89101624)	536972.00	5348953.00	12.34764	(88082024)
530535.00	5348551.00	24.36542c	(87081724)	530937.00	5348551.00	29.60257c	(87011924)
531339.00	5348551.00	39.65018c	(91011024)	531742.00	5348551.00	47.17972c	(89121124)
532144.00	5348551.00	60.99240c	(89012424)	532546.00	5348551.00	59.29702	(91092924)
532949.00	5348551.00	52.48446c	(87100524)	533351.00	5348551.00	50.20522	(89010624)
533753.00	5348551.00	44.70288c	(91101724)	534155.00	5348551.00	35.57746c	(87011824)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
534558.00	5348551.00	28.00078c	(87100424)	534960.00	5348551.00	22.38882c	(87100424)
530535.00	5348148.00	25.67515c	(91101424)	530937.00	5348148.00	29.88915c	(87103024)
531339.00	5348148.00	42.47670c	(87102824)	531742.00	5348148.00	62.33712c	(87011924)
532144.00	5348148.00	67.50797c	(90102024)	532546.00	5348148.00	66.41595c	(87011824)
532949.00	5348148.00	66.09946c	(87021824)	533351.00	5348148.00	62.85615c	(87011824)
533753.00	5348148.00	53.80114c	(90100724)	534155.00	5348148.00	34.18006c	(91062224)
534558.00	5348148.00	27.62780c	(87100424)	534960.00	5348148.00	23.08054c	(91090424)
530535.00	5347746.00	27.43957	(87101624)	530937.00	5347746.00	33.12086c	(91052624)
531339.00	5347746.00	46.18309c	(89012524)	531742.00	5347746.00	66.43585c	(89110224)
532144.00	5347746.00	73.42986c	(89102924)	532546.00	5347746.00	78.29644c	(88031824)
532949.00	5347746.00	100.20996c	(90110224)	533351.00	5347746.00	106.91462c	(89020624)
533753.00	5347746.00	53.56841c	(90100624)	534155.00	5347746.00	38.75245	(90022624)
534558.00	5347746.00	29.84667	(90022624)	534960.00	5347746.00	24.15875c	(87112824)
530535.00	5347344.00	30.22812c	(90110624)	530937.00	5347344.00	37.89447c	(88012724)
531339.00	5347344.00	50.36198c	(88113024)	531742.00	5347344.00	68.23750c	(88022024)
532144.00	5347344.00	76.01786c	(88012424)	532546.00	5347344.00	79.78767c	(89121124)
532949.00	5347344.00	109.81203c	(87122824)	533351.00	5347344.00	85.26228c	(87112824)
533753.00	5347344.00	58.02605c	(87011824)	534155.00	5347344.00	38.20517c	(87100424)
534558.00	5347344.00	31.13140c	(87091024)	534960.00	5347344.00	25.88052	(90022824)
530535.00	5346942.00	37.58474c	(91122024)	530937.00	5346942.00	43.34510c	(88012724)
531339.00	5346942.00	57.14386c	(91013024)	531742.00	5346942.00	73.11233c	(89020724)
532144.00	5346942.00	87.82439c	(88120324)	532546.00	5346942.00	92.80306c	(89020724)
532949.00	5346942.00	91.88741c	(90122524)	533351.00	5346942.00	75.84007c	(87011824)
533753.00	5346942.00	60.65760c	(90110524)	534155.00	5346942.00	39.42181c	(90030524)
534558.00	5346942.00	30.50488c	(88121524)	534960.00	5346942.00	24.93301c	(88121524)
530535.00	5346539.00	39.49554c	(87021024)	530937.00	5346539.00	56.61053c	(91122024)
531339.00	5346539.00	58.27158c	(91121524)	531742.00	5346539.00	74.37704c	(88120324)
532144.00	5346539.00	97.79015c	(91121524)	532546.00	5346539.00	96.38445c	(88120324)
532949.00	5346539.00	88.28400c	(87122524)	533351.00	5346539.00	77.92846c	(87101824)
533753.00	5346539.00	68.67187c	(90110524)	534155.00	5346539.00	44.62341	(89121024)
534558.00	5346539.00	31.95916c	(90110524)	534960.00	5346539.00	26.76304c	(87112824)
530535.00	5346137.00	43.86905c	(87011124)	530937.00	5346137.00	54.46679c	(90102324)
531339.00	5346137.00	59.54099	(91121424)	531742.00	5346137.00	70.69206c	(88120324)
532144.00	5346137.00	88.70285c	(91121524)	532546.00	5346137.00	89.80296c	(87011124)
532949.00	5346137.00	88.62756c	(90120724)	533351.00	5346137.00	80.81644c	(89103124)
533753.00	5346137.00	66.95258c	(87112824)	534155.00	5346137.00	43.44523	(91100324)
534558.00	5346137.00	33.29595	(89121024)	534960.00	5346137.00	26.40330c	(87112824)
530535.00	5345735.00	48.85792c	(87011124)	530937.00	5345735.00	63.20699c	(90102324)
531339.00	5345735.00	79.39411c	(88120324)	531742.00	5345735.00	65.36961c	(91013024)
532144.00	5345735.00	78.08071c	(88121724)	532546.00	5345735.00	90.57944c	(88121724)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . .

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532949.00	5345735.00	87.36148	(88102724)	533351.00	5345735.00	71.38022	(88102724)
533753.00	5345735.00	52.14448c	(87112824)	534155.00	5345735.00	40.69843	(91100324)
534558.00	5345735.00	33.11096	(91100324)	534960.00	5345735.00	25.94100c	(87123124)
530535.00	5345332.00	47.54913	(87111724)	530937.00	5345332.00	56.08090	(89112224)
531339.00	5345332.00	67.43938c	(91121524)	531742.00	5345332.00	91.32163c	(87122524)
532144.00	5345332.00	75.00313c	(88121724)	532546.00	5345332.00	65.68546c	(88121724)
532949.00	5345332.00	57.14382c	(88121724)	533351.00	5345332.00	43.64235c	(88062024)
533753.00	5345332.00	31.55126	(89121024)	534155.00	5345332.00	29.60146c	(90021624)
534558.00	5345332.00	26.57643	(89101424)	534960.00	5345332.00	22.88908	(89121024)
530535.00	5344930.00	49.55775	(91121424)	530937.00	5344930.00	57.22799c	(88120324)
531339.00	5344930.00	65.09761c	(87011124)	531742.00	5344930.00	64.01909	(88121624)
532144.00	5344930.00	54.87740c	(88121724)	532546.00	5344930.00	46.51034c	(88121724)
532949.00	5344930.00	39.36639	(88121624)	533351.00	5344930.00	31.29709	(88102724)
533753.00	5344930.00	25.01504c	(87112724)	534155.00	5344930.00	22.79845c	(89112124)
534558.00	5344930.00	24.82695c	(90110524)	534960.00	5344930.00	18.65259	(89101424)
530535.00	5344528.00	43.83115c	(87011124)	530937.00	5344528.00	44.46577c	(87112724)
531339.00	5344528.00	50.64365	(88010424)	531742.00	5344528.00	47.40761c	(88121724)
532144.00	5344528.00	40.70301c	(88121724)	532546.00	5344528.00	35.89121	(88102724)
532949.00	5344528.00	29.72374c	(88121724)	533351.00	5344528.00	23.84944	(88102724)
533753.00	5344528.00	20.03705c	(88121524)	534155.00	5344528.00	18.72108	(87100824)
534558.00	5344528.00	21.55097c	(89112124)	534960.00	5344528.00	16.92632	(91100324)
530535.00	5344125.00	36.87122c	(91013024)	530937.00	5344125.00	40.41676	(91121424)
531339.00	5344125.00	39.12549c	(90120724)	531742.00	5344125.00	38.02047c	(87122824)
532144.00	5344125.00	33.53878c	(87122824)	532546.00	5344125.00	30.22518	(88102724)
532949.00	5344125.00	24.34359	(88102724)	533351.00	5344125.00	20.21017	(87100824)
533753.00	5344125.00	16.68746c	(90090424)	534155.00	5344125.00	16.28716	(88121424)
534558.00	5344125.00	17.42238	(89121024)	534960.00	5344125.00	15.97289c	(89112124)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR
NOCMPL

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 6TH HIGH VALUE IS	109.81203c	ON 87122824:	AT (532949.00, 5347344.00, 0.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

```
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT                                    MULTYR

NOCMPL

*** Message Summary : ISCSTDFT Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            2 Warning Message(s)
A Total of          537 Informational Message(s)

A Total of          537 Calm Hours Identified


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
CO W205    4 MODOPT: No Option Parameter Setting.  Forced by Default to     CONC
CO W205    4 MODOPT: No Option Parameter Setting.  Forced by Default to    RURAL

   ***************************************
   *** ISCSTDFT Finishes Successfully ***
   ***************************************
```

DISPERSION MODELING FILE

E-2: DSGN UNCONTROLLED EMISSIONS

```
..ODELING OPTIONS USED:  CONC    RURAL   FLAT         DFAULT                                    MULTYR

NOCMPL
                                        ***      MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Simple Terrain Model is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

  --  SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION.  DDPLETE =  F
**Model Uses NO WET DEPLETION.  WDPLETE =  F
**NO WET SCAVENGING Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
          1. Final Plume Rise.
          2. Stack-tip Downwash.
          3. Buoyancy-induced Dispersion.
          4. Use Calms Processing Routine.
          5. Not Use Missing Data Processing Routine.
          6. Default Wind Profile Exponents.
          7. Default Vertical Potential Temperature Gradients.
          8. "Upper Bound" Values for Supersquat Buildings.
          9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**M--'-l Assumes No FLAGPOLE Receptor Heights.

    . Calculates  1 Short Term Average(s) of:  24-HR
    and Calculates PERIOD Averages

**This Run Includes:  212 Source(s);      2 Source Group(s); and    191 Receptor(s)

**The Model Assumes A Pollutant Type of:  PM10

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Anem. Hgt. (m) =     6.10 ;    Decay Coef. =   0.0000     ;   Rot. Angle =     0.0
                 Emission Units = (GRAMS/SEC)                              ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = (MICROGRAMS-PER-CUBIC-METER)

**Input Runstream File: sdpt5.inp                                ;  **Output Print File: sdpt5.out
**This Run is Part of a Multi-year Run.
  NOTE:  PERIOD Results Are for Current Period Only.
         Short Term Results Are Cumulative Across All Years Processed.
**File for Saving Result Arrays: SDPT5.SAV
**File for Initializing Result Arrays: SDPT4.SAV
**Detailed Error/Message File:   SDPT5.ERR
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
LP_EFB	0	0.76900E+00	533133.0	5347684.0	0.0	24.38	428.70	16.37	1.42	YES	
LP_EFBBH	0	0.30000E-01	533145.0	5347681.0	0.0	7.62	344.74	30.98	0.31	YES	
LP_TCY	0	0.13000E+00	533036.0	5347601.0	0.0	13.72	0.00	33.87	0.42	YES	
IN_DRYER	0	0.15100E+00	532467.0	5348300.0	0.0	10.70	407.00	14.50	1.00	YES	
IN_VENT	0	0.10000E-01	532360.0	5348353.0	0.0	11.00	0.00	1.00	0.75	YES	
LG_DRYER	0	0.70600E+00	535544.0	5350438.0	0.0	18.30	388.00	27.74	0.71	YES	
LG_COOLR	0	0.33000E-01	535533.0	5350436.0	0.0	13.70	319.00	17.74	0.16	YES	
LD_CYC	0	0.10100E+00	532406.0	5347933.0	0.0	15.20	0.00	1.00	0.75	YES	
LD_GAS	0	0.10000E-01	532465.0	5348020.0	0.0	6.10	463.00	10.00	0.60	YES	

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
LP_FUG	0	0.59500E-05	532948.0	5347344.0	0.0	5.00	402.00	402.00	0.00	
IN_FUG	0	0.18700E-05	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
LG_FUG	0	0.78300E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
LD_FUG	0	0.99600E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
1	0	0.12400E-05	534155.0	5344125.0	0.0	5.00	402.00	402.00	0.00	
2	0	0.52400E-06	530535.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
3	0	0.12400E-05	534155.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
4	0	0.33400E-06	530535.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
5	0	0.75400E-06	530937.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
6	0	0.16900E-05	531339.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
7	0	0.12400E-05	534155.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
8	0	0.41100E-06	530535.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
9	0	0.19000E-06	530937.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
10	0	0.90300E-06	531339.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
11	0	0.37600E-05	531742.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
12	0	0.18000E-05	532144.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
13	0	0.10000E-06	532546.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
14	0	0.12700E-05	534155.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
15	0	0.37800E-06	530535.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
16	0	0.23900E-06	530937.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.19300E-05	531339.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.72100E-06	531742.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
19	0	0.20100E-05	532144.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
20	0	0.43400E-05	532546.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
21	0	0.49800E-05	532949.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
22	0	0.41300E-05	533351.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
23	0	0.33200E-06	533753.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
24	0	0.12700E-05	534155.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
25	0	0.13300E-06	530535.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
26	0	0.20500E-06	530937.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
27	0	0.11500E-05	531339.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
28	0	0.90000E-06	531742.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
29	0	0.33100E-05	532144.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
30	0	0.43500E-05	532546.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
31	0	0.59900E-05	532949.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
32	0	0.66600E-05	533351.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
33	0	0.12700E-05	533753.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
34	0	0.98300E-07	534155.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
35	0	0.21800E-06	530535.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
36	0	0.31700E-06	530937.0	5346539.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
37	0	0.11700E-05	531339.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
38	0	0.15900E-05	531742.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
39	0	0.52900E-05	532144.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
40	0	0.52500E-05	532546.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
41	0	0.60600E-05	532949.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
42	0	0.46800E-05	533351.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
43	0	0.98300E-07	533753.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
44	0	0.60200E-06	530535.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
45	0	0.98300E-07	530937.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
46	0	0.10000E-05	531339.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
47	0	0.24900E-05	531742.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
48	0	0.46800E-05	532144.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
49	0	0.56300E-05	532546.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
50	0	0.52500E-05	532949.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
51	0	0.17300E-05	533351.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
52	0	0.98300E-07	533753.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
53	0	0.77100E-07	530535.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
54	0	0.77100E-07	530937.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
55	0	0.38700E-06	531339.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
56	0	0.17300E-05	531742.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
57	0	0.49900E-05	532144.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
58	0	0.29100E-05	532546.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
59	0	0.33400E-05	532949.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
60	0	0.98300E-07	533351.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
61	0	0.39300E-06	530535.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
62	0	0.34200E-06	530937.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
63	0	0.28900E-06	531339.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
64	0	0.24200E-05	531742.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
65	0	0.95400E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
66	0	0.97500E-06	532546.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
67	0	0.21100E-05	532949.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
68	0	0.98300E-07	533351.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
69	0	0.25900E-06	530535.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
70	0	0.25900E-06	530937.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
71	0	0.54900E-06	531339.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
72	0	0.35800E-06	531742.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
73	0	0.44400E-06	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
74	0	0.19900E-05	532546.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
75	0	0.20400E-05	532949.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
76	0	0.26700E-05	533351.0	5348148.0	0.0	5.00	402.00	402.00	0.00	

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
77	0	0.98300E-07	533753.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
78	0	0.14200E-06	530535.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
79	0	0.19000E-06	530937.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
80	0	0.19000E-06	531339.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
81	0	0.19700E-06	531742.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
82	0	0.26800E-06	532144.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
83	0	0.10600E-06	532546.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
84	0	0.22500E-06	532949.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
85	0	0.16300E-05	533351.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
86	0	0.98300E-07	533753.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
87	0	0.18900E-06	530535.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
88	0	0.16200E-06	530937.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
89	0	0.14100E-06	531339.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
90	0	0.30600E-06	531742.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
91	0	0.84500E-07	532144.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
92	0	0.12600E-06	532546.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
93	0	0.12600E-06	532949.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
94	0	0.10200E-05	533351.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
95	0	0.80000E-06	533753.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
96	0	0.98300E-07	534155.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.18800E-06	530535.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.16000E-06	530937.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
99	0	0.16000E-06	531339.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
100	0	0.12800E-06	531742.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
101	0	0.18900E-06	532144.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
102	0	0.13100E-06	532546.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
103	0	0.14700E-06	532949.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
104	0	0.97400E-06	533351.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
105	0	0.63200E-06	533753.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
106	0	0.77900E-06	534155.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
107	0	0.18300E-06	534558.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
108	0	0.77100E-07	530535.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
109	0	0.10500E-06	530937.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
110	0	0.10500E-06	531339.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
111	0	0.77100E-07	531742.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
112	0	0.46700E-06	532144.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
113	0	0.20700E-06	532546.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
114	0	0.17800E-06	532949.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
115	0	0.59800E-06	533351.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
116	0	0.54200E-06	533753.0	5349757.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
117	0	0.69200E-06	534155.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
118	0	0.20900E-05	534558.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
119	0	0.98300E-07	534960.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
120	0	0.98300E-07	535362.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
121	0	0.30500E-06	535765.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
122	0	0.61100E-06	536167.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
123	0	0.77100E-07	536569.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
124	0	0.77100E-07	530535.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
125	0	0.77100E-07	530937.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
126	0	0.77100E-07	531339.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
127	0	0.77100E-07	531742.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
128	0	0.12300E-05	532144.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
129	0	0.16700E-06	532546.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
130	0	0.23500E-06	532949.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
131	0	0.59800E-06	533351.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
132	0	0.56600E-06	533753.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
133	0	0.18000E-06	534155.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
134	0	0.16900E-05	534558.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
135	0	0.73700E-06	534960.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
136	0	0.73700E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
137	0	0.13000E-05	535765.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
138	0	0.18800E-05	536167.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
139	0	0.95400E-06	536569.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
140	0	0.98300E-07	532144.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
141	0	0.77100E-07	532546.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
142	0	0.82100E-06	532949.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
143	0	0.59700E-06	533351.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
144	0	0.56800E-06	533753.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
145	0	0.21600E-06	534155.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
146	0	0.21100E-06	534558.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
147	0	0.71400E-06	534960.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
148	0	0.11700E-05	535362.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
149	0	0.14200E-05	535765.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
150	0	0.21900E-05	536167.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
151	0	0.97500E-06	536569.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
152	0	0.55900E-06	532144.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
153	0	0.77100E-07	532546.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
154	0	0.87000E-06	532949.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
155	0	0.66700E-06	533351.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
156	0	0.56600E-06	533753.0	5350964.0	0.0	5.00	402.00	402.00	0.00	

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
157	0	0.29800E-06	534155.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
158	0	0.29800E-06	534558.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
159	0	0.98300E-07	534960.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
160	0	0.23900E-06	535362.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
161	0	0.38700E-06	535765.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
162	0	0.40800E-06	536167.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
163	0	0.77100E-07	536569.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
164	0	0.58400E-06	532144.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
165	0	0.29500E-06	532546.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
166	0	0.16200E-06	532949.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
167	0	0.56600E-06	533351.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
168	0	0.48300E-06	533753.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
169	0	0.77100E-07	534155.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
170	0	0.77100E-07	534558.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
171	0	0.77100E-07	534960.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
172	0	0.15500E-06	535362.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
173	0	0.26400E-06	535765.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
174	0	0.16200E-06	536167.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
175	0	0.77100E-07	536569.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.38500E-06	532144.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.23400E-06	532546.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.16100E-06	532949.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.56600E-06	533351.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
180	0	0.11500E-05	533753.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
181	0	0.77100E-07	534155.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
182	0	0.77100E-07	534558.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
183	0	0.77100E-07	534960.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
184	0	0.16200E-06	535362.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
185	0	0.18300E-06	535765.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
186	0	0.18300E-06	536167.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
187	0	0.77100E-07	536569.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
188	0	0.40600E-06	532144.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
189	0	0.24300E-06	532546.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
190	0	0.16100E-06	532949.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
191	0	0.53800E-06	533351.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
192	0	0.48300E-06	533753.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
193	0	0.13200E-06	534155.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
194	0	0.77100E-07	534558.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
195	0	0.77100E-07	534960.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
196	0	0.77100E-07	535362.0	5352171.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
197	0	0.13400E-06	535765.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
198	0	0.15700E-06	536167.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
199	0	0.77100E-07	536569.0	5352171.0	0.0	5.00	402.00	402.00	0.00	

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs											
ALL	LP_EFB ,	LP_EFBBH,	LP_TCY ,	LP_FUG ,	IN_DRYER,	IN_VENT ,	IN_FUG ,	LG_DRYER,	LG_COOLR,	LG_FUG ,	LD_CYC ,	LD_GAS ,
	LD_FUG ,	1 ,	2 ,	3 ,	4 ,	5 ,	6 ,	7 ,	8 ,	9 ,	10 ,	11 ,
	12 ,	13 ,	14 ,	15 ,	16 ,	17 ,	18 ,	19 ,	20 ,	21 ,	22 ,	23 ,
	24 ,	25 ,	26 ,	27 ,	28 ,	29 ,	30 ,	31 ,	32 ,	33 ,	34 ,	35 ,
	36 ,	37 ,	38 ,	39 ,	40 ,	41 ,	42 ,	43 ,	44 ,	45 ,	46 ,	47 ,
	48 ,	49 ,	50 ,	51 ,	52 ,	53 ,	54 ,	55 ,	56 ,	57 ,	58 ,	59 ,
	60 ,	61 ,	62 ,	63 ,	64 ,	65 ,	66 ,	67 ,	68 ,	69 ,	70 ,	71 ,
	72 ,	73 ,	74 ,	75 ,	76 ,	77 ,	78 ,	79 ,	80 ,	81 ,	82 ,	83 ,
	84 ,	85 ,	86 ,	87 ,	88 ,	89 ,	90 ,	91 ,	92 ,	93 ,	94 ,	95 ,
	96 ,	97 ,	98 ,	99 ,	100 ,	101 ,	102 ,	103 ,	104 ,	105 ,	106 ,	107 ,
	108 ,	109 ,	110 ,	111 ,	112 ,	113 ,	114 ,	115 ,	116 ,	117 ,	118 ,	119 ,
	120 ,	121 ,	122 ,	123 ,	124 ,	125 ,	126 ,	127 ,	128 ,	129 ,	130 ,	131 ,
	132 ,	133 ,	134 ,	135 ,	136 ,	137 ,	138 ,	139 ,	140 ,	141 ,	142 ,	143 ,
	144 ,	145 ,	146 ,	147 ,	148 ,	149 ,	150 ,	151 ,	152 ,	153 ,	154 ,	155 ,
	156 ,	157 ,	158 ,	159 ,	160 ,	161 ,	162 ,	163 ,	164 ,	165 ,	166 ,	167 ,
	168 ,	169 ,	170 ,	171 ,	172 ,	173 ,	174 ,	175 ,	176 ,	177 ,	178 ,	179 ,
	180 ,	181 ,	182 ,	183 ,	184 ,	185 ,	186 ,	187 ,	188 ,	189 ,	190 ,	191 ,
	192 ,	193 ,	194 ,	195 ,	196 ,	197 ,	198 ,	199 ,				
LP	LP_EFB ,	LP_EFBBH,	LP_TCY ,	LP_FUG ,								

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: SPKN91.MET FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE STATION NO.: 24157 UPPER AIR STATION NO.: 24157
NAME: UNKNOWN NAME: UNKNOWN
YEAR: 1991 YEAR: 1991

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-O (M)	IPCODE	PRATE (mm/HR)
91	1	1	1	31.0	5.14	273.7	4	450.4	450.4	0.0000	0.0	0.0000	0	0.00
91	1	1	2	28.0	5.66	273.1	4	417.0	417.0	0.0000	0.0	0.0000	0	0.00
91	1	1	3	34.0	6.17	273.1	4	383.6	383.6	0.0000	0.0	0.0000	0	0.00
91	1	1	4	33.0	5.66	273.1	4	350.2	350.2	0.0000	0.0	0.0000	0	0.00
91	1	1	5	23.0	5.14	273.1	4	316.8	316.8	0.0000	0.0	0.0000	0	0.00
91	1	1	6	32.0	5.66	272.6	4	283.3	283.3	0.0000	0.0	0.0000	0	0.00
91	1	1	7	35.0	5.66	272.6	4	249.9	249.9	0.0000	0.0	0.0000	0	0.00
91	1	1	8	23.0	4.63	272.6	4	216.5	216.5	0.0000	0.0	0.0000	0	0.00
91	1	1	9	27.0	5.66	272.6	4	183.1	183.1	0.0000	0.0	0.0000	0	0.00
91	1	1	10	21.0	6.17	272.6	4	149.7	149.7	0.0000	0.0	0.0000	0	0.00
91	1	1	11	54.0	4.12	273.1	4	116.3	116.3	0.0000	0.0	0.0000	0	0.00
91	1	1	12	66.0	3.60	273.1	4	82.8	82.8	0.0000	0.0	0.0000	0	0.00
91	1	1	13	133.0	3.09	269.8	4	49.4	49.4	0.0000	0.0	0.0000	0	0.00
91	1	1	14	129.0	2.06	269.8	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	15	142.0	4.12	269.8	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	16	144.0	0.00	269.3	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	17	141.0	0.00	268.7	4	20.7	20.7	0.0000	0.0	0.0000	0	0.00
91	1	1	18	207.0	2.06	269.3	4	25.5	25.5	0.0000	0.0	0.0000	0	0.00
91	1	1	19	214.0	0.00	269.3	4	30.3	30.3	0.0000	0.0	0.0000	0	0.00
91	1	1	20	207.0	0.00	269.3	4	35.1	35.1	0.0000	0.0	0.0000	0	0.00
91	1	1	21	220.0	2.57	269.3	4	40.0	40.0	0.0000	0.0	0.0000	0	0.00
91	1	1	22	242.0	2.57	269.3	4	44.8	44.8	0.0000	0.0	0.0000	0	0.00
91	1	1	23	230.0	2.57	269.8	4	49.6	49.6	0.0000	0.0	0.0000	0	0.00
91	1	1	24	220.0	2.57	269.8	4	54.4	54.4	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
532144.00	5346539.00	56.74289	532546.00	5346539.00	66.67397
532949.00	5346539.00	71.09026	533351.00	5346539.00	65.29536
533753.00	5346539.00	39.35047	531742.00	5346137.00	38.42380
532144.00	5346137.00	47.70116	532546.00	5346137.00	56.09431
532948.00	5346137.00	62.62183	533351.00	5346137.00	56.91883
530937.00	5345735.00	20.22201	531339.00	5345735.00	29.48907
531742.00	5345735.00	36.50832	532144.00	5345735.00	44.85897
532546.00	5345735.00	44.08625	532949.00	5345735.00	38.65872
530937.00	5345332.00	20.18243	531339.00	5345332.00	27.88150
531742.00	5345332.00	35.99577	532144.00	5345332.00	28.85818
530937.00	5344930.00	19.89599	531339.00	5344930.00	23.20548
532546.00	5348148.00	45.44051	532646.00	5348148.00	45.25668
532746.00	5348148.00	45.83258	532846.00	5348148.00	46.89323
532946.00	5348148.00	48.23726	533046.00	5348148.00	49.10214
533146.00	5348148.00	48.61570	533246.00	5348148.00	46.84522
533346.00	5348148.00	43.52057	533446.00	5348148.00	38.71083
533546.00	5348148.00	34.10028	533646.00	5348148.00	29.23815
533746.00	5348148.00	24.28042	532546.00	5348048.00	47.37255
532646.00	5348048.00	46.92609	532746.00	5348048.00	47.69326
532846.00	5348048.00	49.37606	532946.00	5348048.00	51.56817
533046.00	5348048.00	52.72877	533146.00	5348048.00	52.11320
533246.00	5348048.00	49.47602	533346.00	5348048.00	44.20104
533446.00	5348048.00	38.44760	533546.00	5348048.00	33.25518
533646.00	5348048.00	28.33303	533746.00	5348048.00	24.17028
532546.00	5347948.00	49.24261	532646.00	5347948.00	49.08499
532746.00	5347948.00	50.01639	532846.00	5347948.00	52.42817
532946.00	5347948.00	55.75193	533046.00	5347948.00	57.54172
533146.00	5347948.00	56.88246	533246.00	5347948.00	53.27293
533346.00	5347948.00	45.92631	533446.00	5347948.00	38.93483
533546.00	5347948.00	33.11937	533646.00	5347948.00	28.21491
533746.00	5347948.00	24.32058	532546.00	5347848.00	52.54617
532646.00	5347848.00	52.35059	532746.00	5347848.00	53.28890
532846.00	5347848.00	56.15256	532946.00	5347848.00	61.09150
533046.00	5347848.00	64.49529	533146.00	5347848.00	64.42558
533246.00	5347848.00	60.51894	533346.00	5347848.00	50.26174
533446.00	5347848.00	40.92270	533546.00	5347848.00	33.87913
533646.00	5347848.00	28.73102	533746.00	5347848.00	24.74058
532546.00	5347748.00	56.34818	532646.00	5347748.00	55.87438
532746.00	5347748.00	56.70092	532846.00	5347748.00	59.49341
532946.00	5347748.00	65.35025	533046.00	5347748.00	70.65364

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
533146.00	5347748.00	72.30748	533246.00	5347748.00	66.85509
533346.00	5347748.00	55.00351	533446.00	5347748.00	42.89538
533546.00	5347748.00	34.75051	533646.00	5347748.00	29.23269
533746.00	5347748.00	25.13429	532546.00	5347648.00	59.69632
532646.00	5347648.00	59.41618	532746.00	5347648.00	60.44642
532846.00	5347648.00	64.01610	532946.00	5347648.00	71.71503
533046.00	5347648.00	77.12736	533146.00	5347648.00	76.29536
533246.00	5347648.00	70.30914	533346.00	5347648.00	55.82380
533446.00	5347648.00	43.58976	533546.00	5347648.00	35.30023
533646.00	5347648.00	29.79487	533746.00	5347648.00	25.67908
532546.00	5347548.00	63.12650	532646.00	5347548.00	63.55426
532746.00	5347548.00	65.55211	532846.00	5347548.00	70.54678
532946.00	5347548.00	78.81553	533046.00	5347548.00	82.51408
533146.00	5347548.00	79.88967	533246.00	5347548.00	71.14770
533346.00	5347548.00	55.56133	533446.00	5347548.00	43.84874
533546.00	5347548.00	36.03247	533646.00	5347548.00	30.75261
533746.00	5347548.00	26.56350	532546.00	5347448.00	66.42623
532646.00	5347448.00	68.28726	532746.00	5347448.00	71.58553
532846.00	5347448.00	76.87010	532946.00	5347448.00	82.69269
533046.00	5347448.00	82.99566	533146.00	5347448.00	78.66855
533246.00	5347448.00	68.81145	533346.00	5347448.00	54.21253
533446.00	5347448.00	44.16750	533546.00	5347448.00	37.45710
533646.00	5347448.00	32.48163	533746.00	5347448.00	27.97178
532546.00	5347348.00	69.11381	532646.00	5347348.00	72.60783
532746.00	5347348.00	76.59721	532846.00	5347348.00	81.38024
532946.00	5347348.00	84.92263	533046.00	5347348.00	81.89976
533146.00	5347348.00	75.99447	533246.00	5347348.00	65.74779
533346.00	5347348.00	52.42535	533446.00	5347348.00	44.87703
533546.00	5347348.00	39.22031	533646.00	5347348.00	34.53173
533746.00	5347348.00	29.75076	532546.00	5347248.00	72.47456
532646.00	5347248.00	76.22490	532746.00	5347248.00	79.84531
532846.00	5347248.00	82.89134	532946.00	5347248.00	83.00710
533046.00	5347248.00	79.41075	533146.00	5347248.00	73.24706
533246.00	5347248.00	64.06468	533346.00	5347248.00	53.55758
533446.00	5347248.00	46.68688	533546.00	5347248.00	41.44032
533646.00	5347248.00	36.58141	533746.00	5347248.00	30.96288
532546.00	5347148.00	75.37550	532646.00	5347148.00	78.57671
532746.00	5347148.00	80.83723	532846.00	5347148.00	81.49898
532946.00	5347148.00	79.98803	533046.00	5347148.00	76.48251
533146.00	5347148.00	71.24773	533246.00	5347148.00	64.20359

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
533346.00	5347148.00	55.61913	533446.00	5347148.00	49.32394
533546.00	5347148.00	44.18151	533646.00	5347148.00	38.83131
533746.00	5347148.00	32.47979	532546.00	5347048.00	76.59140
532646.00	5347048.00	78.76550	532746.00	5347048.00	79.72284
532846.00	5347048.00	79.36273	532946.00	5347048.00	77.81927
533046.00	5347048.00	75.04152	533146.00	5347048.00	71.02409
533246.00	5347048.00	65.26478	533346.00	5347048.00	57.93109
533446.00	5347048.00	52.42737	533546.00	5347048.00	47.55245
533646.00	5347048.00	41.92220	533746.00	5347048.00	34.67063
532546.00	5346948.00	76.60965	532646.00	5346948.00	77.65542
532746.00	5346948.00	77.86565	532846.00	5346948.00	77.25861
532946.00	5346948.00	76.13960	533046.00	5346948.00	74.25764
533146.00	5346948.00	71.11425	533246.00	5346948.00	66.09904
533346.00	5346948.00	59.82544	533446.00	5346948.00	55.35782
533546.00	5346948.00	50.80928	533646.00	5346948.00	45.10243
533746.00	5346948.00	37.13833			

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR NOCMPL

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
532144.00	5346539.00	2.16194	532546.00	5346539.00	2.04255
532949.00	5346539.00	1.21479	533351.00	5346539.00	0.44651
533753.00	5346539.00	0.25890	531742.00	5346137.00	1.32317
532144.00	5346137.00	1.35144	532546.00	5346137.00	0.99800
532948.00	5346137.00	0.64376	533351.00	5346137.00	0.29674
530937.00	5345735.00	0.78547	531339.00	5345735.00	0.92130
531742.00	5345735.00	0.96645	532144.00	5345735.00	0.82098
532546.00	5345735.00	0.60908	532949.00	5345735.00	0.40148
530937.00	5345332.00	0.69160	531339.00	5345332.00	0.74296
531742.00	5345332.00	0.67321	532144.00	5345332.00	0.49737
530937.00	5344930.00	0.59027	531339.00	5344930.00	0.54370
532546.00	5348148.00	1.67737	532646.00	5348148.00	2.29777
532746.00	5348148.00	3.20091	532846.00	5348148.00	4.16476
532946.00	5348148.00	4.93875	533046.00	5348148.00	5.40169
533146.00	5348148.00	5.44802	533246.00	5348148.00	5.19231
533346.00	5348148.00	4.91250	533446.00	5348148.00	4.48253
533546.00	5348148.00	3.96119	533646.00	5348148.00	3.48304
533746.00	5348148.00	2.97907	532546.00	5348048.00	1.62502
532646.00	5348048.00	2.29273	532746.00	5348048.00	3.36792
532846.00	5348048.00	4.84238	532946.00	5348048.00	6.14842
533046.00	5348048.00	7.08432	533146.00	5348048.00	7.34157
533246.00	5348048.00	7.08716	533346.00	5348048.00	6.52531
533446.00	5348048.00	5.59661	533546.00	5348048.00	4.75077
533646.00	5348048.00	3.93850	533746.00	5348048.00	3.12193
532546.00	5347948.00	1.55503	532646.00	5347948.00	2.22471
532746.00	5347948.00	3.41677	532846.00	5347948.00	5.44465
532946.00	5347948.00	7.87135	533046.00	5347948.00	9.75553
533146.00	5347948.00	10.60567	533246.00	5347948.00	10.56137
533346.00	5347948.00	8.93771	533446.00	5347948.00	7.06886
533546.00	5347948.00	5.53376	533646.00	5347948.00	4.16013
533746.00	5347948.00	3.12702	532546.00	5347848.00	1.42917
532646.00	5347848.00	2.08127	532746.00	5347848.00	3.28471
532846.00	5347848.00	5.79149	532946.00	5347848.00	10.13079
533046.00	5347848.00	14.14279	533146.00	5347848.00	16.23028
533246.00	5347848.00	16.54532	533346.00	5347848.00	12.62949
533446.00	5347848.00	8.77022	533546.00	5347848.00	6.04042
533646.00	5347848.00	4.27521	533746.00	5347848.00	3.09884
532546.00	5347748.00	1.44894	532646.00	5347748.00	2.04793
532746.00	5347748.00	3.18206	532846.00	5347748.00	5.71912
532946.00	5347748.00	11.26688	533046.00	5347748.00	17.72252

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
533146.00	5347748.00	21.92387	533246.00	5347748.00	20.98359
533346.00	5347748.00	15.87431	533446.00	5347748.00	9.76661
533546.00	5347748.00	6.08179	533646.00	5347748.00	4.02233
533746.00	5347748.00	2.83269	532546.00	5347648.00	1.59616
532646.00	5347648.00	2.23083	532746.00	5347648.00	3.52841
532846.00	5347648.00	6.96870	532946.00	5347648.00	14.78434
533046.00	5347648.00	21.49421	533146.00	5347648.00	23.42451
533246.00	5347648.00	22.31712	533346.00	5347648.00	15.22687
533446.00	5347648.00	9.10381	533546.00	5347648.00	5.39159
533646.00	5347648.00	3.49547	533746.00	5347648.00	2.46554
532546.00	5347548.00	1.97921	532646.00	5347548.00	2.96373
532746.00	5347548.00	5.04593	532846.00	5347548.00	10.03189
532946.00	5347548.00	18.63607	533046.00	5347548.00	23.81213
533146.00	5347548.00	24.20470	533246.00	5347548.00	20.81141
533346.00	5347548.00	12.98817	533446.00	5347548.00	7.45468
533546.00	5347548.00	4.33102	533646.00	5347548.00	2.85785
533746.00	5347548.00	2.07047	532546.00	5347448.00	2.86159
532646.00	5347448.00	4.40610	532746.00	5347448.00	7.30186
532846.00	5347448.00	12.52384	532946.00	5347448.00	18.90847
533046.00	5347448.00	20.96486	533146.00	5347448.00	19.87694
533246.00	5347448.00	15.54809	533346.00	5347448.00	8.82169
533446.00	5347448.00	5.03083	533546.00	5347448.00	3.14019
533646.00	5347448.00	2.19389	533746.00	5347448.00	1.62871
532546.00	5347348.00	3.92345	532646.00	5347348.00	5.88220
532746.00	5347348.00	9.01765	532846.00	5347348.00	13.62812
532946.00	5347348.00	17.84589	533046.00	5347348.00	16.94536
533146.00	5347348.00	14.38975	533246.00	5347348.00	9.62488
533346.00	5347348.00	4.10151	533446.00	5347348.00	2.88274
533546.00	5347348.00	2.11198	533646.00	5347348.00	1.62573
533746.00	5347348.00	1.29744	532546.00	5347248.00	4.81876
532646.00	5347248.00	6.81303	532746.00	5347248.00	9.47412
532846.00	5347248.00	12.44334	532946.00	5347248.00	13.61456
533046.00	5347248.00	12.03784	533146.00	5347248.00	9.12821
533246.00	5347248.00	5.26759	533346.00	5347248.00	2.50420
533446.00	5347248.00	1.79658	533546.00	5347248.00	1.46508
533646.00	5347248.00	1.21741	533746.00	5347248.00	1.02362
532546.00	5347148.00	5.31638	532646.00	5347148.00	6.85059
532746.00	5347148.00	8.31768	532846.00	5347148.00	9.12056
532946.00	5347148.00	8.69020	533046.00	5347148.00	7.03316
533146.00	5347148.00	4.82817	533246.00	5347148.00	2.84122

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
533346.00	5347148.00	1.62995	533446.00	5347148.00	1.21118
533546.00	5347148.00	1.02852	533646.00	5347148.00	0.90385
533746.00	5347148.00	0.80647	532546.00	5347048.00	5.16860
532646.00	5347048.00	6.03066	532746.00	5347048.00	6.49219
532846.00	5347048.00	6.35927	532946.00	5347048.00	5.61062
533046.00	5347048.00	4.28822	533146.00	5347048.00	2.93984
533246.00	5347048.00	1.86982	533346.00	5347048.00	1.18028
533446.00	5347048.00	0.89092	533546.00	5347048.00	0.75922
533646.00	5347048.00	0.67773	533746.00	5347048.00	0.61884
532546.00	5346948.00	4.60539	532646.00	5346948.00	4.89252
532746.00	5346948.00	4.83815	532846.00	5346948.00	4.46777
532946.00	5346948.00	3.75596	533046.00	5346948.00	2.83861
533146.00	5346948.00	2.02935	533246.00	5346948.00	1.34933
533346.00	5346948.00	0.91361	533446.00	5346948.00	0.71190
533546.00	5346948.00	0.59409	533646.00	5346948.00	0.53050
533746.00	5346948.00	0.48902			

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532144.00	5346539.00	221.05005c	(90120724)	532546.00	5346539.00	190.23140c	(90120724)
532949.00	5346539.00	177.48911c	(87112724)	533351.00	5346539.00	178.24831c	(87122724)
533753.00	5346539.00	200.38937c	(87122724)	531742.00	5346137.00	176.50438c	(90120724)
532144.00	5346137.00	197.81343c	(90120724)	532546.00	5346137.00	197.15125c	(87112724)
532948.00	5346137.00	190.07817c	(87112724)	533351.00	5346137.00	180.44525c	(88121524)
530937.00	5345735.00	134.34399c	(90120724)	531339.00	5345735.00	166.79921c	(90120724)
531742.00	5345735.00	167.54652c	(90120724)	532144.00	5345735.00	176.11055c	(90120724)
532546.00	5345735.00	205.69727c	(90120724)	532949.00	5345735.00	195.82855c	(87112724)
530937.00	5345332.00	138.64670c	(90120724)	531339.00	5345332.00	162.50124c	(90120724)
531742.00	5345332.00	192.80206c	(90120724)	532144.00	5345332.00	164.03854c	(90120724)
530937.00	5344930.00	148.70444c	(90120724)	531339.00	5344930.00	163.31424c	(90120724)
532546.00	5348148.00	129.69569c	(89121124)	532646.00	5348148.00	128.75615c	(89121124)
532746.00	5348148.00	132.45486c	(89121124)	532846.00	5348148.00	134.34920c	(89121124)
532946.00	5348148.00	141.31647	(89010624)	533046.00	5348148.00	147.26128c	(89121124)
533146.00	5348148.00	146.56670c	(89121124)	533246.00	5348148.00	139.89784c	(91092324)
533346.00	5348148.00	131.62022c	(87122724)	533446.00	5348148.00	131.55042c	(87122724)
533546.00	5348148.00	124.78830c	(87122724)	533646.00	5348148.00	120.72482c	(87122724)
533746.00	5348148.00	112.86108c	(87122724)	532546.00	5348048.00	135.21942c	(89121124)
532646.00	5348048.00	135.16988c	(89121124)	532746.00	5348048.00	139.22472c	(89121124)
532846.00	5348048.00	143.34999c	(89121124)	532946.00	5348048.00	152.08694c	(89121124)
533046.00	5348048.00	159.51866c	(89121124)	533146.00	5348048.00	159.09145c	(89121124)
533246.00	5348048.00	149.53212c	(91092324)	533346.00	5348048.00	147.63368c	(87122724)
533446.00	5348048.00	144.09192c	(87122724)	533546.00	5348048.00	135.39084c	(87122724)
533646.00	5348048.00	127.52591c	(87122724)	533746.00	5348048.00	119.48828c	(87122724)
532546.00	5347948.00	141.37425c	(89121124)	532646.00	5347948.00	141.60083c	(89121124)
532746.00	5347948.00	146.34901c	(89121124)	532846.00	5347948.00	154.03896c	(89121124)
532946.00	5347948.00	164.20387c	(89121124)	533046.00	5347948.00	176.62938c	(89121124)
533146.00	5347948.00	175.44977c	(89121124)	533246.00	5347948.00	160.93459c	(89121124)
533346.00	5347948.00	167.21962c	(87122724)	533446.00	5347948.00	158.72525c	(87122724)
533546.00	5347948.00	150.58237c	(87122724)	533646.00	5347948.00	142.48820c	(87122724)
533746.00	5347948.00	135.39655c	(87122724)	532546.00	5347848.00	148.90266c	(89121124)
532646.00	5347848.00	148.12740c	(89121124)	532746.00	5347848.00	152.09369c	(89121124)
532846.00	5347848.00	159.87625c	(89121124)	532946.00	5347848.00	176.52837c	(89121124)
533046.00	5347848.00	194.52232c	(89121124)	533146.00	5347848.00	194.30443c	(89121124)
533246.00	5347848.00	187.77594c	(87122724)	533346.00	5347848.00	200.11644c	(87122724)
533446.00	5347848.00	192.25238c	(87122724)	533546.00	5347848.00	179.74484c	(87122724)
533646.00	5347848.00	165.60136c	(87122724)	533746.00	5347848.00	151.56888c	(87122724)
532546.00	5347748.00	150.60919c	(89121124)	532646.00	5347748.00	150.53831c	(87122724)
532746.00	5347748.00	153.22523c	(89121124)	532846.00	5347748.00	163.10982c	(87011624)
532946.00	5347748.00	177.93585c	(89121124)	533046.00	5347748.00	193.54945c	(89121124)

** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , ... ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
533146.00	5347748.00	221.31000c	(87122724)	533246.00	5347748.00	243.35883c	(87122724)
533346.00	5347748.00	257.39651c	(87122724)	533446.00	5347748.00	236.70972c	(87122724)
533546.00	5347748.00	204.27606c	(87122724)	533646.00	5347748.00	179.83852c	(87122724)
533746.00	5347748.00	163.32439c	(87122724)	532546.00	5347648.00	153.35539c	(87011624)
532646.00	5347648.00	152.91010c	(87122724)	532746.00	5347648.00	154.40834c	(87011624)
532846.00	5347648.00	164.68044c	(87011624)	532946.00	5347648.00	176.50420c	(87011624)
533046.00	5347648.00	188.82085c	(87122724)	533146.00	5347648.00	220.15207c	(87122724)
533246.00	5347648.00	239.51926c	(87122724)	533346.00	5347648.00	251.22318c	(87122724)
533446.00	5347648.00	234.78792c	(87122724)	533546.00	5347648.00	202.93315c	(87122724)
533646.00	5347648.00	181.04236c	(87122724)	533746.00	5347648.00	164.11639c	(87122724)
532546.00	5347548.00	158.06329c	(87011624)	532646.00	5347548.00	158.38223c	(87011624)
532746.00	5347548.00	159.20615c	(87011624)	532846.00	5347548.00	163.38031c	(87011624)
532946.00	5347548.00	173.12073c	(87011624)	533046.00	5347548.00	189.14908c	(87122724)
533146.00	5347548.00	218.27063c	(87122724)	533246.00	5347548.00	237.32356c	(87122724)
533346.00	5347548.00	249.43538c	(87122724)	533446.00	5347548.00	232.85278c	(87122724)
533546.00	5347548.00	200.75053c	(87122724)	533646.00	5347548.00	177.95638c	(87122724)
533746.00	5347548.00	159.30792c	(87122724)	532546.00	5347448.00	162.05624c	(87011624)
532646.00	5347448.00	165.15594c	(87011624)	532746.00	5347448.00	165.71472c	(87011624)
532846.00	5347448.00	169.97041c	(87122724)	532946.00	5347448.00	176.76263c	(87122724)
533046.00	5347448.00	194.42044c	(87122724)	533146.00	5347448.00	217.61378c	(87122724)
533246.00	5347448.00	231.74641c	(87122724)	533346.00	5347448.00	238.91197c	(87122724)
533446.00	5347448.00	221.11694c	(87122724)	533546.00	5347448.00	192.68138c	(87122724)
533646.00	5347448.00	172.73334c	(87122724)	533746.00	5347448.00	159.14230c	(87122724)
532546.00	5347348.00	162.17412c	(87011624)	532646.00	5347348.00	165.40109c	(87011624)
532746.00	5347348.00	173.69104c	(87122724)	532846.00	5347348.00	185.57127c	(87122724)
532946.00	5347348.00	194.26398c	(87122724)	533046.00	5347348.00	199.90820c	(87122724)
533146.00	5347348.00	205.79105c	(87122724)	533246.00	5347348.00	208.99277c	(87122724)
533346.00	5347348.00	212.79892c	(87122724)	533446.00	5347348.00	202.64282c	(87122724)
533546.00	5347348.00	187.73651c	(87122724)	533646.00	5347348.00	176.04489c	(87122724)
533746.00	5347348.00	167.58559c	(87122724)	532546.00	5347248.00	158.29144c	(87011624)
532646.00	5347248.00	163.32280c	(87011624)	532746.00	5347248.00	170.77643c	(87122724)
532846.00	5347248.00	182.20790c	(87122724)	532946.00	5347248.00	190.92880c	(87122724)
533046.00	5347248.00	198.41364c	(87122724)	533146.00	5347248.00	204.88766c	(87122724)
533246.00	5347248.00	208.78496c	(87122724)	533346.00	5347248.00	211.15997c	(87122724)
533446.00	5347248.00	202.15303c	(87122724)	533546.00	5347248.00	187.54950c	(87122724)
533646.00	5347248.00	177.00485c	(87122724)	533746.00	5347248.00	169.01842c	(87122724)
532546.00	5347148.00	173.27034c	(90120724)	532646.00	5347148.00	173.85197c	(90120724)
532746.00	5347148.00	172.36523c	(90120724)	532846.00	5347148.00	178.33171c	(87122724)
532946.00	5347148.00	188.36070c	(87122724)	533046.00	5347148.00	196.94156c	(87122724)
533146.00	5347148.00	203.74274c	(87122724)	533246.00	5347148.00	208.12482c	(87122724)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
533346.00	5347148.00	209.73126c	(87122724)	533446.00	5347148.00	201.65166c	(87122724)
533546.00	5347148.00	189.31989c	(87122724)	533646.00	5347148.00	179.81488c	(87122724)
533746.00	5347148.00	171.99188c	(87122724)	532546.00	5347048.00	186.89919c	(90120724)
532646.00	5347048.00	180.63284c	(90120724)	532746.00	5347048.00	169.31828c	(90120724)
532846.00	5347048.00	175.51332c	(89020724)	532946.00	5347048.00	184.18446c	(87122724)
533046.00	5347048.00	193.81133c	(87122724)	533146.00	5347048.00	201.11931c	(87122724)
533246.00	5347048.00	205.65605c	(87122724)	533346.00	5347048.00	208.96695c	(87122724)
533446.00	5347048.00	203.55719c	(87122724)	533546.00	5347048.00	194.26764c	(87122724)
533646.00	5347048.00	186.51607c	(87122724)	533746.00	5347048.00	180.25114c	(87122724)
532546.00	5346948.00	193.02718c	(90120724)	532646.00	5346948.00	181.22467c	(90120724)
532746.00	5346948.00	172.61542c	(87122524)	532846.00	5346948.00	177.94402c	(89020724)
532946.00	5346948.00	177.72458c	(87122724)	533046.00	5346948.00	189.09105c	(87122724)
533146.00	5346948.00	198.86700c	(87122724)	533246.00	5346948.00	204.46124c	(87122724)
533346.00	5346948.00	210.09637c	(87122724)	533446.00	5346948.00	209.73399c	(87122724)
533546.00	5346948.00	206.51390c	(87122724)	533646.00	5346948.00	202.58305c	(87122724)
533746.00	5346948.00	200.01111c	(87122724)				

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532144.00	5346539.00	18.58642c	(90120724)	532546.00	5346539.00	17.62321c	(88120224)
532949.00	5346539.00	19.25192c	(88120324)	533351.00	5346539.00	11.02624c	(87112824)
533753.00	5346539.00	12.46573c	(88062024)	531742.00	5346137.00	12.06953c	(90120724)
532144.00	5346137.00	11.33017	(91121424)	532546.00	5346137.00	14.14456c	(87112724)
532948.00	5346137.00	11.72952c	(88102824)	533351.00	5346137.00	8.28334c	(87112724)
530937.00	5345735.00	8.73557c	(90120724)	531339.00	5345735.00	8.92599c	(90120724)
531742.00	5345735.00	9.45260	(91121424)	532144.00	5345735.00	9.45550c	(88120224)
532546.00	5345735.00	12.51843c	(87112724)	532949.00	5345735.00	8.61103c	(88102824)
530937.00	5345332.00	7.09408c	(90120724)	531339.00	5345332.00	8.58187	(91121424)
531742.00	5345332.00	6.81340c	(88113024)	532144.00	5345332.00	8.19089c	(87112724)
530937.00	5344930.00	7.36932	(91121424)	531339.00	5344930.00	5.77258c	(89101524)
532546.00	5348148.00	18.06629c	(87081724)	532646.00	5348148.00	19.74772c	(87081724)
532746.00	5348148.00	20.84948c	(90110224)	532846.00	5348148.00	22.23880c	(89102924)
532946.00	5348148.00	23.34023	(89010624)	533046.00	5348148.00	27.34302c	(89121124)
533146.00	5348148.00	29.43428c	(89121124)	533246.00	5348148.00	27.02471c	(89121124)
533346.00	5348148.00	21.24763c	(91092324)	533446.00	5348148.00	24.99763c	(90032124)
533546.00	5348148.00	25.11844c	(90032124)	533646.00	5348148.00	21.28860c	(90100724)
533746.00	5348148.00	22.10057c	(89020624)	532546.00	5348048.00	17.19786c	(87081324)
532646.00	5348048.00	21.54954c	(87081724)	532746.00	5348048.00	24.45524c	(90102024)
532846.00	5348048.00	27.42659c	(90102024)	532946.00	5348048.00	29.13279c	(89102924)
533046.00	5348048.00	34.02222c	(89121124)	533146.00	5348048.00	36.78568c	(89121124)
533246.00	5348048.00	32.88093c	(89121124)	533346.00	5348048.00	25.89751c	(90032124)
533446.00	5348048.00	29.43545c	(90032124)	533546.00	5348048.00	27.52398c	(90032124)
533646.00	5348048.00	25.98184c	(89020624)	533746.00	5348048.00	24.45277c	(89020624)
532546.00	5347948.00	15.53030c	(91071124)	532646.00	5347948.00	21.48291c	(87081324)
532746.00	5347948.00	27.64389c	(87081324)	532846.00	5347948.00	35.86673c	(90102024)
532946.00	5347948.00	36.60648c	(90102024)	533046.00	5347948.00	44.47991c	(89121124)
533146.00	5347948.00	46.66475c	(89121124)	533246.00	5347948.00	40.96786c	(89121124)
533346.00	5347948.00	34.07580c	(87011824)	533446.00	5347948.00	35.65554c	(89020624)
533546.00	5347948.00	32.81927c	(89020624)	533646.00	5347948.00	30.22909c	(87101824)
533746.00	5347948.00	27.88496c	(87101824)	532546.00	5347848.00	16.42579c	(87102824)
532646.00	5347848.00	21.11988c	(91011024)	532746.00	5347848.00	30.00682c	(91011024)
532846.00	5347848.00	41.25090c	(91011024)	532946.00	5347848.00	50.74330c	(90102024)
533046.00	5347848.00	55.05319c	(89121124)	533146.00	5347848.00	58.49387c	(89121124)
533246.00	5347848.00	51.34237c	(89121124)	533346.00	5347848.00	50.06304c	(87122724)
533446.00	5347848.00	50.06245c	(87122724)	533546.00	5347848.00	48.46614c	(87122724)
533646.00	5347848.00	41.50909c	(87122724)	533746.00	5347848.00	34.08848c	(87122724)
532546.00	5347748.00	18.77109c	(91052724)	532646.00	5347748.00	21.11064c	(91052724)
532746.00	5347748.00	31.55386c	(91011024)	532846.00	5347748.00	50.26120c	(91011024)
532946.00	5347748.00	69.39731c	(91011024)	533046.00	5347748.00	62.88463c	(91011024)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
533146.00	5347748.00	69.41883c	(88120824)	533246.00	5347748.00	78.76751c	(87122724)
533346.00	5347748.00	91.84203c	(87122724)	533446.00	5347748.00	81.73080c	(87122724)
533546.00	5347748.00	63.44775c	(87122724)	533646.00	5347748.00	47.66879c	(87122724)
533746.00	5347748.00	38.88146c	(87122724)	532546.00	5347648.00	19.12786c	(88012724)
532646.00	5347648.00	24.55877c	(88102424)	532746.00	5347648.00	30.57258c	(88102424)
532846.00	5347648.00	48.52262c	(91011024)	532946.00	5347648.00	67.81019c	(91011024)
533046.00	5347648.00	60.76900c	(91011024)	533146.00	5347648.00	54.83863c	(88010224)
533246.00	5347648.00	70.18216c	(87122724)	533346.00	5347648.00	80.81381c	(87122724)
533446.00	5347648.00	73.84409c	(87122724)	533546.00	5347648.00	55.08325c	(87122724)
533646.00	5347648.00	41.97137c	(87122724)	533746.00	5347648.00	33.40378c	(87122724)
532546.00	5347548.00	24.95706c	(88012724)	532646.00	5347548.00	31.47668c	(88012724)
532746.00	5347548.00	40.50740c	(88012724)	532846.00	5347548.00	51.27090c	(90102324)
532946.00	5347548.00	59.93716c	(89110124)	533046.00	5347548.00	53.08081c	(89112824)
533146.00	5347548.00	48.24569c	(88010624)	533246.00	5347548.00	60.02519c	(87122724)
533346.00	5347548.00	69.87511c	(87122724)	533446.00	5347548.00	62.66426c	(87122724)
533546.00	5347548.00	43.24569c	(87122724)	533646.00	5347548.00	30.66470c	(87122724)
533746.00	5347548.00	21.29426c	(87112824)	532546.00	5347448.00	28.24870c	(91122024)
532646.00	5347448.00	35.41819c	(90102324)	532746.00	5347448.00	46.30300c	(90102324)
532846.00	5347448.00	60.64843c	(91122024)	532946.00	5347448.00	73.61503c	(91013024)
533046.00	5347448.00	64.36700c	(87122524)	533146.00	5347448.00	61.77121c	(87122524)
533246.00	5347448.00	48.13978c	(88121524)	533346.00	5347448.00	54.86635c	(90110524)
533446.00	5347448.00	49.31635c	(90110524)	533546.00	5347448.00	36.17388c	(90110524)
533646.00	5347448.00	28.87582c	(87122624)	533746.00	5347448.00	22.24514c	(87122624)
532546.00	5347348.00	33.06896c	(90102324)	532646.00	5347348.00	41.09561c	(90102324)
532746.00	5347348.00	50.71062c	(90102324)	532846.00	5347348.00	72.43120c	(91013024)
532946.00	5347348.00	83.90119c	(91013024)	533046.00	5347348.00	79.59950c	(87122524)
533146.00	5347348.00	73.32314c	(87122524)	533246.00	5347348.00	53.17538c	(87122524)
533346.00	5347348.00	50.06480c	(90110524)	533446.00	5347348.00	46.00378c	(90110524)
533546.00	5347348.00	37.00732c	(87122624)	533646.00	5347348.00	32.71565c	(87122624)
533746.00	5347348.00	27.42788c	(87122624)	532546.00	5347248.00	34.80522c	(90102324)
532646.00	5347248.00	43.11157c	(90120724)	532746.00	5347248.00	58.35636c	(90120724)
532846.00	5347248.00	73.17598c	(90120724)	532946.00	5347248.00	75.20679c	(87122524)
533046.00	5347248.00	78.45485c	(87122524)	533146.00	5347248.00	67.90781c	(87112724)
533246.00	5347248.00	47.39559c	(87112724)	533346.00	5347248.00	38.40861c	(88121524)
533446.00	5347248.00	38.67229c	(88121524)	533546.00	5347248.00	32.23687c	(88121524)
533646.00	5347248.00	27.64633c	(87122624)	533746.00	5347248.00	25.34191c	(87122624)
532546.00	5347148.00	37.17631c	(90120724)	532646.00	5347148.00	47.04656c	(90120724)
532746.00	5347148.00	53.63616c	(90120724)	532846.00	5347148.00	55.50101c	(91121524)
532946.00	5347148.00	59.48730c	(87122524)	533046.00	5347148.00	64.90796c	(87112724)
533146.00	5347148.00	57.54587c	(87112724)	533246.00	5347148.00	37.86827c	(87112824)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
533346.00	5347148.00	26.51406	(87100824)	533446.00	5347148.00	27.55341c	(88121524)
533546.00	5347148.00	26.15131c	(88121524)	533646.00	5347148.00	21.29593c	(88121524)
533746.00	5347148.00	19.03056	(91100324)	532546.00	5347048.00	37.84519c	(90120724)
532646.00	5347048.00	41.59843c	(90120724)	532746.00	5347048.00	43.67284c	(91121524)
532846.00	5347048.00	44.03937c	(87122524)	532946.00	5347048.00	46.95233c	(87112724)
533046.00	5347048.00	53.60429c	(87112724)	533146.00	5347048.00	45.43349c	(87112724)
533246.00	5347048.00	32.97795c	(87112824)	533346.00	5347048.00	21.37794	(87100824)
533446.00	5347048.00	20.08039c	(88121524)	533546.00	5347048.00	19.99902c	(88121524)
533646.00	5347048.00	19.42745c	(88121524)	533746.00	5347048.00	16.01422	(90101024)
532546.00	5346948.00	34.16679	(91121424)	532646.00	5346948.00	35.52617	(91121424)
532746.00	5346948.00	33.57044c	(91121524)	532846.00	5346948.00	38.07966c	(87122524)
532946.00	5346948.00	39.63344c	(87112724)	533046.00	5346948.00	43.21095c	(87112724)
533146.00	5346948.00	35.44546c	(87112724)	533246.00	5346948.00	27.94442c	(87112824)
533346.00	5346948.00	18.64435c	(87112824)	533446.00	5346948.00	15.25265c	(88062024)
533546.00	5346948.00	15.79080	(89101424)	533646.00	5346948.00	17.00428c	(88121524)
533746.00	5346948.00	16.16618c	(88121524)				

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532144.00	5346539.00	171.70354c	(89020724)	532546.00	5346539.00	173.22539c	(87011124)
532949.00	5346539.00	166.61467c	(90122524)	533351.00	5346539.00	145.16457c	(91031324)
533753.00	5346539.00	137.53517c	(88121524)	531742.00	5346137.00	119.50332c	(89110124)
532144.00	5346137.00	159.70303c	(87122524)	532546.00	5346137.00	173.42439c	(87011124)
532948.00	5346137.00	170.81506c	(87122824)	533351.00	5346137.00	155.22777c	(89101624)
530937.00	5345735.00	86.76035	(91121424)	531339.00	5345735.00	109.70950	(89112224)
531742.00	5345735.00	121.89521c	(88120324)	532144.00	5345735.00	147.43057c	(91121524)
532546.00	5345735.00	169.99727c	(88121724)	532949.00	5345735.00	159.92175	(88102724)
530937.00	5345332.00	87.26218	(89112224)	531339.00	5345332.00	110.93516c	(88120324)
531742.00	5345332.00	141.77057	(91121424)	532144.00	5345332.00	135.41472c	(88121724)
530937.00	5344930.00	91.40717	(89112224)	531339.00	5344930.00	113.17478c	(87011124)
532546.00	5348148.00	105.90849c	(87122724)	532646.00	5348148.00	107.36259c	(87122724)
532746.00	5348148.00	109.63700c	(87122724)	532846.00	5348148.00	110.30535c	(87121324)
532946.00	5348148.00	114.73450c	(90122224)	533046.00	5348148.00	117.61388c	(87021824)
533146.00	5348148.00	121.24111c	(87112524)	533246.00	5348148.00	119.70010c	(88010224)
533346.00	5348148.00	111.44589c	(87112524)	533446.00	5348148.00	100.83281c	(87101824)
533546.00	5348148.00	95.30940c	(91101724)	533646.00	5348148.00	90.97649c	(91092324)
533746.00	5348148.00	83.77333c	(90100724)	532546.00	5348048.00	110.44442c	(87100524)
532646.00	5348048.00	114.13145c	(87100524)	532746.00	5348048.00	116.61461c	(90110224)
532846.00	5348048.00	118.40057c	(87021824)	532946.00	5348048.00	123.20111c	(89012424)
533046.00	5348048.00	128.00319c	(87021824)	533146.00	5348048.00	131.30992c	(88010224)
533246.00	5348048.00	129.86497c	(88010224)	533346.00	5348048.00	122.59238c	(87011824)
533446.00	5348048.00	108.34659c	(89020624)	533546.00	5348048.00	104.71988c	(91092324)
533646.00	5348048.00	94.25452c	(90100724)	533746.00	5348048.00	87.66271c	(90100724)
532546.00	5347948.00	118.96175c	(89102924)	532646.00	5347948.00	118.92771c	(91092324)
532746.00	5347948.00	123.49403c	(90110224)	532846.00	5347948.00	128.09618c	(90110224)
532946.00	5347948.00	134.67563c	(87021824)	533046.00	5347948.00	140.93492c	(91092324)
533146.00	5347948.00	145.11771c	(87112524)	533246.00	5347948.00	143.74864c	(88010224)
533346.00	5347948.00	135.99741c	(89121124)	533446.00	5347948.00	121.47358c	(91092324)
533546.00	5347948.00	108.22050c	(90100724)	533646.00	5347948.00	98.59285c	(90100724)
533746.00	5347948.00	86.71154c	(90100724)	532546.00	5347848.00	126.07459c	(89102924)
532646.00	5347848.00	127.70599c	(87122724)	532746.00	5347848.00	132.55748c	(87122724)
532846.00	5347848.00	137.90785c	(87122724)	532946.00	5347848.00	151.08195	(91092924)
533046.00	5347848.00	157.14992	(89021224)	533146.00	5347848.00	162.31796c	(87112524)
533246.00	5347848.00	164.93898	(89010624)	533346.00	5347848.00	146.95775c	(89020624)
533446.00	5347848.00	134.34735c	(88010224)	533546.00	5347848.00	112.63376c	(88010224)
533646.00	5347848.00	99.54002c	(88010224)	533746.00	5347848.00	88.65804c	(89020624)
532546.00	5347748.00	135.52467c	(90110224)	532646.00	5347748.00	135.97089c	(90110224)
532746.00	5347748.00	139.46341c	(90110224)	532846.00	5347748.00	147.87682c	(87121324)
532946.00	5347748.00	158.99026c	(89012424)	533046.00	5347748.00	168.66658c	(88010224)

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
533146.00	5347748.00	172.80029c	(88120824)	533246.00	5347748.00	168.70490	(89010624)
533346.00	5347748.00	159.47235c	(89020624)	533446.00	5347748.00	139.47096c	(88010224)
533546.00	5347748.00	114.47643c	(88010224)	533646.00	5347748.00	99.17725c	(88010224)
533746.00	5347748.00	89.33243c	(88010224)	532546.00	5347648.00	138.05272c	(90110224)
532646.00	5347648.00	138.22125c	(87121324)	532746.00	5347648.00	139.05394c	(87121324)
532846.00	5347648.00	147.46600c	(87121324)	532946.00	5347648.00	155.50937c	(87100524)
533046.00	5347648.00	165.84584	(91092924)	533146.00	5347648.00	172.18494	(89010624)
533246.00	5347648.00	164.68399c	(91092324)	533346.00	5347648.00	161.68774c	(89020624)
533446.00	5347648.00	143.79228c	(89020624)	533546.00	5347648.00	117.03400c	(89020624)
533646.00	5347648.00	100.66514c	(90100624)	533746.00	5347648.00	91.55064c	(87100424)
532546.00	5347548.00	139.21957	(89010624)	532646.00	5347548.00	140.44862c	(87100524)
532746.00	5347548.00	142.63347	(89010624)	532846.00	5347548.00	147.41435c	(87100524)
532946.00	5347548.00	157.42882	(89010624)	533046.00	5347548.00	162.50006c	(87011824)
533146.00	5347548.00	166.96422	(91092924)	533246.00	5347548.00	167.15565c	(89121124)
533346.00	5347548.00	153.60822c	(89020624)	533446.00	5347548.00	135.98372c	(89020624)
533546.00	5347548.00	118.11809c	(90032124)	533646.00	5347548.00	106.08533c	(90032124)
533746.00	5347548.00	96.97544c	(90100624)	532546.00	5347448.00	140.21094	(89010624)
532646.00	5347448.00	142.54411c	(88010224)	532746.00	5347448.00	149.50317c	(88010224)
532846.00	5347448.00	151.73451c	(87121324)	532946.00	5347448.00	155.72548c	(87121324)
533046.00	5347448.00	159.92035c	(87011824)	533146.00	5347448.00	161.24294c	(91092324)
533246.00	5347448.00	159.61465c	(91092324)	533346.00	5347448.00	144.51132c	(91092324)
533446.00	5347448.00	132.11462c	(90032124)	533546.00	5347448.00	116.49306c	(90032124)
533646.00	5347448.00	106.62576c	(90032124)	533746.00	5347448.00	100.89423c	(90032124)
532546.00	5347348.00	140.27640c	(87100524)	532646.00	5347348.00	147.45424c	(88010224)
532746.00	5347348.00	152.72894c	(87121324)	532846.00	5347348.00	155.05789c	(87121324)
532946.00	5347348.00	167.59740c	(88010224)	533046.00	5347348.00	161.73555c	(89020724)
533146.00	5347348.00	159.13124c	(91092324)	533246.00	5347348.00	160.25456c	(87101824)
533346.00	5347348.00	143.73784c	(91092324)	533446.00	5347348.00	130.98518c	(88121524)
533546.00	5347348.00	118.08881c	(87122624)	533646.00	5347348.00	107.89400c	(90032124)
533746.00	5347348.00	104.00962c	(90032124)	532546.00	5347248.00	142.81799c	(90110624)
532646.00	5347248.00	147.97188c	(89020724)	532746.00	5347248.00	153.43892c	(90110224)
532846.00	5347248.00	158.05434c	(90122224)	532946.00	5347248.00	167.23045c	(88010224)
533046.00	5347248.00	166.70674c	(87112724)	533146.00	5347248.00	157.64391c	(87122524)
533246.00	5347248.00	155.56607c	(87101824)	533346.00	5347248.00	142.91783c	(88121524)
533446.00	5347248.00	132.06171c	(90100624)	533546.00	5347248.00	120.31197c	(88121524)
533646.00	5347248.00	113.41441c	(87122624)	533746.00	5347248.00	105.44331c	(90032124)
532546.00	5347148.00	146.84448c	(91013024)	532646.00	5347148.00	151.39816c	(91013024)
532746.00	5347148.00	154.11797c	(88010224)	532846.00	5347148.00	162.06735c	(90120724)
532946.00	5347148.00	163.05328c	(88010224)	533046.00	5347148.00	163.07152c	(90122524)
533146.00	5347148.00	155.66431c	(87011824)	533246.00	5347148.00	150.90070c	(91092324)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
533346.00	5347148.00	140.41306c	(88121524)	533446.00	5347148.00	132.12506c	(90100624)
533546.00	5347148.00	126.73587c	(88121524)	533646.00	5347148.00	112.81203c	(88121524)
533746.00	5347148.00	107.56950c	(90032124)	532546.00	5347048.00	148.52040c	(89110224)
532646.00	5347048.00	150.65233c	(87011624)	532746.00	5347048.00	156.91310c	(89103124)
532846.00	5347048.00	161.66904c	(90021924)	532946.00	5347048.00	161.45178c	(87112724)
533046.00	5347048.00	161.93668c	(88010224)	533146.00	5347048.00	156.83598c	(87121324)
533246.00	5347048.00	151.23634c	(87121324)	533346.00	5347048.00	141.73260c	(88121524)
533446.00	5347048.00	134.44308c	(87112824)	533546.00	5347048.00	129.92764c	(90100624)
533646.00	5347048.00	120.15655c	(88121524)	533746.00	5347048.00	112.63992c	(89020624)
532546.00	5346948.00	154.20705c	(91121524)	532646.00	5346948.00	157.55324c	(90110624)
532746.00	5346948.00	161.97250c	(87122824)	532846.00	5346948.00	165.83231c	(87112724)
532946.00	5346948.00	163.44139c	(87112724)	533046.00	5346948.00	158.35371c	(88121524)
533146.00	5346948.00	155.86237c	(88010624)	533246.00	5346948.00	152.80257c	(87121324)
533346.00	5346948.00	145.59581c	(87121324)	533446.00	5346948.00	140.80362c	(87112824)
533546.00	5346948.00	133.13031c	(88121524)	533646.00	5346948.00	125.12028c	(88121524)
533746.00	5346948.00	115.98307c	(89020624)				

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532144.00	5346539.00	13.97885	(88100224)	532546.00	5346539.00	14.63265	(88121624)
532949.00	5346539.00	14.88428	(88013124)	533351.00	5346539.00	8.80193	(87100824)
533753.00	5346539.00	5.89998	(87100824)	531742.00	5346137.00	9.59162	(87020724)
532144.00	5346137.00	8.99777	(88012624)	532546.00	5346137.00	11.64577	(88121424)
532948.00	5346137.00	8.81414	(88102724)	533351.00	5346137.00	6.45379	(88031424)
530937.00	5345735.00	5.81387	(87111724)	531339.00	5345735.00	6.71764c	(87011124)
531742.00	5345735.00	6.54433	(88012624)	532144.00	5345735.00	7.47874c	(88113024)
532546.00	5345735.00	8.20178c	(90122524)	532949.00	5345735.00	5.94567c	(87101024)
530937.00	5345332.00	5.37632c	(87011124)	531339.00	5345332.00	5.48488	(90081124)
531742.00	5345332.00	5.67441c	(89101524)	532144.00	5345332.00	6.49788c	(87122824)
530937.00	5344930.00	4.40151c	(88100924)	531339.00	5344930.00	4.18142c	(88120224)
532546.00	5348148.00	14.36180c	(91011024)	532646.00	5348148.00	16.78160c	(90110224)
532746.00	5348148.00	19.05083c	(91070124)	532846.00	5348148.00	20.54523c	(87121324)
532946.00	5348148.00	22.36066c	(89102924)	533046.00	5348148.00	22.88305	(89021224)
533146.00	5348148.00	21.94119c	(89021424)	533246.00	5348148.00	19.82612c	(89082424)
533346.00	5348148.00	19.17679c	(87081524)	533446.00	5348148.00	17.31844c	(91092324)
533546.00	5348148.00	17.06441c	(90100724)	533646.00	5348148.00	17.57656c	(87122724)
533746.00	5348148.00	14.42020c	(87011824)	532546.00	5348048.00	15.05938c	(87011924)
532646.00	5348048.00	18.82456c	(91011024)	532746.00	5348048.00	22.16138c	(87032924)
532846.00	5348048.00	24.18719	(87111024)	532946.00	5348048.00	26.08180	(91092824)
533046.00	5348048.00	28.43569	(89021224)	533146.00	5348048.00	27.41325	(91113024)
533246.00	5348048.00	25.37468c	(88120824)	533346.00	5348048.00	22.50723	(89021224)
533446.00	5348048.00	21.33867c	(91072124)	533546.00	5348048.00	22.20566c	(91072124)
533646.00	5348048.00	18.80536c	(91072124)	533746.00	5348048.00	15.57925	(87042524)
532546.00	5347948.00	14.48224c	(91011024)	532646.00	5347948.00	19.20190c	(87081724)
532746.00	5347948.00	26.22577c	(91011024)	532846.00	5347948.00	30.13522c	(87011924)
532946.00	5347948.00	32.68983	(87111024)	533046.00	5347948.00	36.13626	(89021224)
533146.00	5347948.00	35.91508c	(87112524)	533246.00	5347948.00	33.93097c	(88120824)
533346.00	5347948.00	30.42161c	(87122724)	533446.00	5347948.00	27.77093c	(87122724)
533546.00	5347948.00	26.25651c	(87011824)	533646.00	5347948.00	19.94397	(87042524)
533746.00	5347948.00	15.94294	(89022624)	532546.00	5347848.00	12.89799c	(88061624)
532646.00	5347848.00	17.51511c	(88011724)	532746.00	5347848.00	25.36682c	(90111924)
532846.00	5347848.00	36.96277c	(87081724)	532946.00	5347848.00	42.64253	(88111524)
533046.00	5347848.00	49.72473	(91011624)	533146.00	5347848.00	50.47129c	(87021824)
533246.00	5347848.00	46.91795c	(88120824)	533346.00	5347848.00	43.69092c	(87011824)
533446.00	5347848.00	39.60247c	(87011824)	533546.00	5347848.00	27.38043c	(87011824)
533646.00	5347848.00	22.14639c	(87101724)	533746.00	5347848.00	17.74918c	(87101724)
532546.00	5347748.00	14.24304c	(88102424)	532646.00	5347748.00	17.23620c	(91081724)
532746.00	5347748.00	23.47790c	(91101424)	532846.00	5347748.00	34.19653c	(90111924)
532946.00	5347748.00	50.06476	(88111524)	533046.00	5347748.00	56.11435c	(87081324)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
533146.00	5347748.00	58.49134c	(90012024)	533246.00	5347748.00	53.12638c	(89020624)
533346.00	5347748.00	51.47105c	(87101824)	533446.00	5347748.00	40.20252c	(90100724)
533546.00	5347748.00	27.93895c	(87020924)	533646.00	5347748.00	23.88898c	(87020924)
533746.00	5347748.00	19.45824c	(87020924)	532546.00	5347648.00	16.72195c	(89110124)
532646.00	5347648.00	19.93125c	(88021824)	532746.00	5347648.00	25.54313c	(89110224)
532846.00	5347648.00	36.49574c	(88102424)	532946.00	5347648.00	48.55331c	(89110224)
533046.00	5347648.00	48.42900c	(90012124)	533146.00	5347648.00	47.30226c	(90012024)
533246.00	5347648.00	48.66065c	(88121024)	533346.00	5347648.00	50.32639c	(87100424)
533446.00	5347648.00	39.06261c	(87100424)	533546.00	5347648.00	30.06712c	(87091024)
533646.00	5347648.00	23.01883c	(91012424)	533746.00	5347648.00	18.07362c	(87092724)
532546.00	5347548.00	18.21423c	(88021824)	532646.00	5347548.00	23.01115c	(89012524)
532746.00	5347548.00	31.83582c	(87021024)	532846.00	5347548.00	45.23661c	(89110224)
532946.00	5347548.00	54.98500c	(90102324)	533046.00	5347548.00	50.39128c	(87011924)
533146.00	5347548.00	43.59742c	(87010624)	533246.00	5347548.00	44.46003c	(90110524)
533346.00	5347548.00	43.90742	(90011424)	533446.00	5347548.00	35.43748c	(89010524)
533546.00	5347548.00	28.77586c	(87101824)	533646.00	5347548.00	21.45239c	(90110524)
533746.00	5347548.00	17.83453c	(91100224)	532546.00	5347448.00	24.30745c	(87021024)
532646.00	5347448.00	31.96815c	(87020424)	532746.00	5347448.00	41.29325c	(90102424)
532846.00	5347448.00	56.28056c	(87021024)	532946.00	5347448.00	66.78380c	(87011124)
533046.00	5347448.00	60.17387c	(89110124)	533146.00	5347448.00	49.96237c	(87010924)
533246.00	5347448.00	45.77842c	(91031324)	533346.00	5347448.00	42.17809	(91100324)
533446.00	5347448.00	34.29958	(91100324)	533546.00	5347448.00	26.40464c	(88121524)
533646.00	5347448.00	21.71633c	(87112824)	533746.00	5347448.00	18.17459c	(90100624)
532546.00	5347348.00	26.59576c	(88101124)	532646.00	5347348.00	33.06837c	(91013024)
532746.00	5347348.00	44.64011c	(90121224)	532846.00	5347348.00	60.21581c	(90121224)
532946.00	5347348.00	72.13268c	(88120224)	533046.00	5347348.00	67.00455c	(88120324)
533146.00	5347348.00	56.47014c	(88120324)	533246.00	5347348.00	46.73298c	(89121724)
533346.00	5347348.00	36.21291	(89090524)	533446.00	5347348.00	31.26847c	(88010124)
533546.00	5347348.00	24.30191c	(87102224)	533646.00	5347348.00	21.16513	(91100324)
533746.00	5347348.00	15.44201	(91100324)	532546.00	5347248.00	27.94917c	(90121224)
532646.00	5347248.00	35.89806	(89112224)	532746.00	5347248.00	47.71679c	(90121224)
532846.00	5347248.00	62.23832c	(90123024)	532946.00	5347248.00	62.75002c	(88120224)
533046.00	5347248.00	59.06250c	(90122524)	533146.00	5347248.00	52.38974c	(90122524)
533246.00	5347248.00	39.11748	(91021024)	533346.00	5347248.00	27.95886c	(90110524)
533446.00	5347248.00	24.55781	(89101424)	533546.00	5347248.00	23.49722c	(87102224)
533646.00	5347248.00	19.99244	(90101024)	533746.00	5347248.00	15.57183	(90101024)
532546.00	5347148.00	29.40117	(89112224)	532646.00	5347148.00	36.79571c	(91121524)
532746.00	5347148.00	40.48316c	(87011124)	532846.00	5347148.00	46.18302c	(87011124)
532946.00	5347148.00	49.14806c	(91010324)	533046.00	5347148.00	46.12312c	(87122824)
533146.00	5347148.00	37.88032	(88121624)	533246.00	5347148.00	29.19987	(91021024)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LP ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
533346.00	5347148.00	20.58977	(88031424)	533446.00	5347148.00	19.90807c	(89112124)
533546.00	5347148.00	18.35489	(90101024)	533646.00	5347148.00	16.93328c	(91100424)
533746.00	5347148.00	16.28487c	(90110524)	532546.00	5347048.00	28.71343c	(90121224)
532646.00	5347048.00	30.03523c	(87020624)	532746.00	5347048.00	33.20518	(91081424)
532846.00	5347048.00	37.70982c	(90120724)	532946.00	5347048.00	37.66406c	(91010324)
533046.00	5347048.00	35.14074c	(88102824)	533146.00	5347048.00	28.85647	(87121724)
533246.00	5347048.00	22.07926	(87121724)	533346.00	5347048.00	16.10219	(91021024)
533446.00	5347048.00	15.05970c	(89112124)	533546.00	5347048.00	14.18894	(91051824)
533646.00	5347048.00	12.91673c	(90110524)	533746.00	5347048.00	12.96201c	(91100424)
532546.00	5346948.00	24.52686	(87020724)	532646.00	5346948.00	24.83369	(87020724)
532746.00	5346948.00	28.78803c	(88120224)	532846.00	5346948.00	31.13883c	(91010324)
532946.00	5346948.00	30.35735c	(88102824)	533046.00	5346948.00	28.05920c	(88102824)
533146.00	5346948.00	22.06017	(87121724)	533246.00	5346948.00	17.37266	(87121724)
533346.00	5346948.00	13.69392c	(87112724)	533446.00	5346948.00	12.74335	(89101424)
533546.00	5346948.00	12.60145c	(89112124)	533646.00	5346948.00	10.72764	(91051824)
533746.00	5346948.00	9.66545	(91100324)				

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	84.92263 AT (	532946.00,	5347348.00,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	83.00710 AT (	532946.00,	5347248.00,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	82.99566 AT (	533046.00,	5347448.00,	0.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	82.89134 AT (	532846.00,	5347248.00,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	82.69269 AT (	532946.00,	5347448.00,	0.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	82.51408 AT (	533046.00,	5347548.00,	0.00,	0.00)	DC	
LP	1ST HIGHEST VALUE IS	24.20470 AT (	533146.00,	5347548.00,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	23.82564 AT (	533146.00,	5347548.00,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	23.81213 AT (	533046.00,	5347548.00,	0.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	23.72484 AT (	533046.00,	5347548.00,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	23.42451 AT (	533146.00,	5347648.00,	0.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	23.40421 AT (	533146.00,	5347648.00,	0.00,	0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	257.39651c	ON 87122724: AT (	533346.00,	5347748.00,	0.00,	0.00)	DC	
	HIGH 6TH HIGH VALUE IS	173.42439c	ON 87011124: AT (	532546.00,	5346137.00,	0.00,	0.00)	DC	
LP	HIGH 1ST HIGH VALUE IS	91.84203c	ON 87122724: AT (	533346.00,	5347748.00,	0.00,	0.00)	DC	
	HIGH 6TH HIGH VALUE IS	72.13268c	ON 88120224: AT (	532946.00,	5347348.00,	0.00,	0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** Message Summary : ISCSTDFT Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 537 Informational Message(s)

A Total of 537 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
CO W205 4 MODOPT: No Option Parameter Setting. Forced by Default to RURAL

****
*** ISCSTDFT Finishes Successfully ***
****

DISPERSION MODELING FILE

E-3: REVISED CONTROLLED

(REVISED INDUSTRIAL EMISSIONS)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**_ Terrain Model is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR

**This Run Includes: 212 Source(s); 1 Source Group(s); and 25 Receptor(s)

**The Model Assumes A Pollutant Type of: PM10

** Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.10 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07
Output Units = (MICROGRAMS-PER-CUBIC-METER)

**Input Runstream File: REV5.INP ; **Output Print File: REV5.OUT
**This Run is Part of a Multi-year Run.
NOTE: PERIOD Results Are for Current Period Only.
Short Term Results Are Cumulative Across All Years Processed.
**File for Saving Result Arrays: REV5.SAV
**File for Initializing Result Arrays: REV4.SAV

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
LP_EFB	0	0.76900E+00	533133.0	5347684.0	0.0	24.38	428.70	16.37	1.42	YES	
LP_EFBBH	0	0.30000E-01	533145.0	5347681.0	0.0	7.62	344.74	30.98	0.31	YES	
LP_TCY	0	0.13000E+00	533036.0	5347601.0	0.0	13.72	0.00	33.87	0.42	YES	
IN_DRYER	0	0.15100E+00	532467.0	5348300.0	0.0	10.70	407.00	14.50	1.00	YES	
IN_VENT	0	0.10000E-01	532360.0	5348353.0	0.0	11.00	0.00	1.00	0.75	YES	
LG_DRYER	0	0.70600E+00	535544.0	5350438.0	0.0	18.30	388.00	27.74	0.71	YES	
LG_COOLR	0	0.33000E-01	535533.0	5350436.0	0.0	13.70	319.00	17.74	0.16	YES	
LD_CYC	0	0.10100E+00	532406.0	5347933.0	0.0	15.20	0.00	1.00	0.75	YES	
LD_GAS	0	0.10000E-01	532465.0	5348020.0	0.0	6.10	463.00	10.00	0.60	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
LP_FUG	0	0.73800E-05	532948.0	5347344.0	0.0	5.00	402.00	402.00	0.00	
IN_FUG	0	0.32400E-05	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
LG_FUG	0	0.78300E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
LD_FUG	0	0.10100E-05	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
1	0	0.42000E-06	534155.0	5344125.0	0.0	5.00	402.00	402.00	0.00	
2	0	0.25500E-06	530535.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
3	0	0.42000E-06	534155.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
4	0	0.21500E-06	530535.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
5	0	0.33900E-06	530937.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
6	0	0.91500E-06	531339.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
7	0	0.42000E-06	534155.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
8	0	0.27900E-06	530535.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
9	0	0.14200E-06	530937.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
10	0	0.42900E-06	531339.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
11	0	0.29600E-05	531742.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
12	0	0.10500E-05	532144.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
13	0	0.86000E-07	532546.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
14	0	0.44100E-06	534155.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
15	0	0.26100E-06	530535.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
16	0	0.99100E-06	530937.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
17	0	0.23700E-05	531339.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
18	0	0.31500E-06	531742.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
19	0	0.93900E-06	532144.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
20	0	0.24100E-05	532546.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
21	0	0.27400E-05	532949.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
22	0	0.23900E-05	533351.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
23	0	0.16700E-06	533753.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
24	0	0.44100E-06	534155.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
25	0	0.11000E-06	530535.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
26	0	0.59900E-06	530937.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
27	0	0.58100E-06	531339.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
28	0	0.49100E-06	531742.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
29	0	0.17900E-05	532144.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
30	0	0.21100E-05	532546.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
31	0	0.31600E-05	532949.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
32	0	0.33700E-05	533351.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
33	0	0.44100E-06	533753.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
34	0	0.98300E-07	534155.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
35	0	0.15900E-06	530535.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
36	0	0.10500E-05	530937.0	5346539.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

IOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
37	0	0.60200E-06	531339.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
38	0	0.89000E-06	531742.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
39	0	0.29400E-05	532144.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
40	0	0.28800E-05	532546.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
41	0	0.26900E-05	532949.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
42	0	0.17300E-05	533351.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
43	0	0.98300E-07	533753.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
44	0	0.38000E-06	530535.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
45	0	0.98300E-07	530937.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
46	0	0.56600E-06	531339.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
47	0	0.13900E-05	531742.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
48	0	0.26000E-05	532144.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
49	0	0.30700E-05	532546.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
50	0	0.24200E-05	532949.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
51	0	0.10400E-05	533351.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
52	0	0.98300E-07	533753.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
53	0	0.77100E-07	530535.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
54	0	0.77100E-07	530937.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
55	0	0.65800E-06	531339.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
56	0	0.18800E-05	531742.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
57	0	0.28000E-05	532144.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
58	0	0.16100E-05	532546.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
59	0	0.13600E-05	532949.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
60	0	0.98300E-07	533351.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
61	0	0.25000E-06	530535.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
62	0	0.21800E-06	530937.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
63	0	0.79400E-06	531339.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
64	0	0.23000E-05	531742.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
65	0	0.54100E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
66	0	0.52400E-06	532546.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
67	0	0.71200E-06	532949.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
68	0	0.98300E-07	533351.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
69	0	0.17000E-06	530535.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
70	0	0.17000E-06	530937.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
71	0	0.29800E-06	531339.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
72	0	0.21500E-06	531742.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
73	0	0.27100E-06	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
74	0	0.62200E-06	532546.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
75	0	0.70100E-06	532949.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
76	0	0.84400E-06	533351.0	5348148.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
77	0	0.98300E-07	533753.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
78	0	0.14200E-06	530535.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
79	0	0.14200E-06	530937.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
80	0	0.15000E-06	531339.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
81	0	0.18400E-06	531742.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
82	0	0.10600E-06	532144.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
83	0	0.13800E-06	532546.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
84	0	0.13800E-06	532949.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
85	0	0.60200E-06	533351.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
86	0	0.98300E-07	533753.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
87	0	0.14200E-06	530535.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
88	0	0.12600E-06	530937.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
89	0	0.11700E-06	531339.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
90	0	0.21500E-06	531742.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
91	0	0.84500E-07	532144.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
92	0	0.10000E-06	532546.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
93	0	0.10000E-06	532949.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
94	0	0.41300E-06	533351.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
95	0	0.34900E-06	533753.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
96	0	0.98300E-07	534155.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
97	0	0.14100E-06	530535.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
98	0	0.12500E-06	530937.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
99	0	0.12500E-06	531339.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
100	0	0.11400E-06	531742.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
101	0	0.15400E-06	532144.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
102	0	0.10200E-06	532546.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
103	0	0.10800E-06	532949.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
104	0	0.38600E-06	533351.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
105	0	0.27900E-06	533753.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
106	0	0.40000E-06	534155.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
107	0	0.14700E-06	534558.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
108	0	0.77100E-07	530535.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
109	0	0.93100E-07	530937.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
110	0	0.93100E-07	531339.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
111	0	0.77100E-07	531742.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
112	0	0.26000E-06	532144.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
113	0	0.13100E-06	532546.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
114	0	0.12000E-06	532949.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
115	0	0.27500E-06	533351.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
116	0	0.23900E-06	533753.0	5349757.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
117	0	0.28600E-06	534155.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
118	0	0.12200E-05	534558.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
119	0	0.98300E-07	534960.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
120	0	0.98300E-07	535362.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
121	0	0.20900E-06	535765.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
122	0	0.38400E-06	536167.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
123	0	0.77100E-07	536569.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
124	0	0.77100E-07	530535.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
125	0	0.77100E-07	530937.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
126	0	0.77100E-07	531339.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
127	0	0.77100E-07	531742.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
128	0	0.57100E-06	532144.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
129	0	0.11600E-06	532546.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
130	0	0.14200E-06	532949.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
131	0	0.27500E-06	533351.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
132	0	0.25300E-06	533753.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
133	0	0.13500E-06	534155.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
134	0	0.79200E-06	534558.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
135	0	0.28200E-06	534960.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
136	0	0.28200E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
137	0	0.60800E-06	535765.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
138	0	0.11200E-05	536167.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
139	0	0.11600E-05	536569.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
140	0	0.98300E-07	532144.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
141	0	0.77100E-07	532546.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
142	0	0.50000E-06	532949.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
14[illegible]	0	0.27200E-06	533351.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.26200E-06	533753.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.15800E-06	534155.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
146	0	0.16400E-06	534558.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
147	0	0.36100E-06	534960.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
148	0	0.62600E-06	535362.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
149	0	0.76600E-06	535765.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
150	0	0.11400E-05	536167.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
151	0	0.46400E-06	536569.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
152	0	0.36400E-06	532144.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
153	0	0.77100E-07	532546.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
154	0	0.53100E-06	532949.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
155	0	0.32500E-06	533351.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
156	0	0.26000E-06	533753.0	5350964.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
'57	0	0.20600E-06	534155.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
'58	0	0.20600E-06	534558.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
'59	0	0.98300E-07	534960.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
160	0	0.18000E-06	535362.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
161	0	0.25700E-06	535765.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
162	0	0.27000E-06	536167.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
163	0	0.77100E-07	536569.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
164	0	0.37900E-06	532144.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
165	0	0.21300E-06	532546.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
166	0	0.12600E-06	532949.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
167	0	0.26000E-06	533351.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
168	0	0.21200E-06	533753.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
169	0	0.77100E-07	534155.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
170	0	0.77100E-07	534558.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
171	0	0.77100E-07	534960.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
172	0	0.13100E-06	535362.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
173	0	0.19500E-06	535765.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
174	0	0.12600E-06	536167.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
175	0	0.77100E-07	536569.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
176	0	0.25600E-06	532144.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
177	0	0.17600E-06	532546.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
178	0	0.12600E-06	532949.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
179	0	0.26000E-06	533351.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
180	0	0.59800E-06	533753.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
181	0	0.77100E-07	534155.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
182	0	0.77100E-07	534558.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
183	0	0.77100E-07	534960.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
184	0	0.12600E-06	535362.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
185	0	0.14700E-06	535765.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
186	0	0.14700E-06	536167.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
187	0	0.77100E-07	536569.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
188	0	0.27700E-06	532144.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
189	0	0.17300E-06	532546.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
190	0	0.12600E-06	532949.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
191	0	0.24400E-06	533351.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
192	0	0.21200E-06	533753.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
193	0	0.10900E-06	534155.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
194	0	0.77100E-07	534558.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
195	0	0.77100E-07	534960.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
196	0	0.77100E-07	535362.0	5352171.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
197	0	0.11000E-06	535765.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
198	0	0.13200E-06	536167.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
199	0	0.77100E-07	536569.0	5352171.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR
NOCMPL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs											
ALL	LP_EFB	, LP_EFBBH,	LP_TCY	, LP_FUG	, IN_DRYER,	IN_VENT	, IN_FUG	, LG_DRYER,	LG_COOLR,	LG_FUG	, LD_CYC	, LD_GAS ,
	LD_FUG	, 1	, 2	, 3	, 4	, 5	, 6	, 7	, 8	, 9	, 10	, 11 ,
	12	, 13	, 14	, 15	, 16	, 17	, 18	, 19	, 20	, 21	, 22	, 23 ,
	24	, 25	, 26	, 27	, 28	, 29	, 30	, 31	, 32	, 33	, 34	, 35 ,
	36	, 37	, 38	, 39	, 40	, 41	, 42	, 43	, 44	, 45	, 46	, 47 ,
	48	, 49	, 50	, 51	, 52	, 53	, 54	, 55	, 56	, 57	, 58	, 59 ,
	60	, 61	, 62	, 63	, 64	, 65	, 66	, 67	, 68	, 69	, 70	, 71 ,
	72	, 73	, 74	, 75	, 76	, 77	, 78	, 79	, 80	, 81	, 82	, 83 ,
	84	, 85	, 86	, 87	, 88	, 89	, 90	, 91	, 92	, 93	, 94	, 95 ,
	96	, 97	, 98	, 99	, 100	, 101	, 102	, 103	, 104	, 105	, 106	, 107 ,
	108	, 109	, 110	, 111	, 112	, 113	, 114	, 115	, 116	, 117	, 118	, 119 ,
	120	, 121	, 122	, 123	, 124	, 125	, 126	, 127	, 128	, 129	, 130	, 131 ,
	132	, 133	, 134	, 135	, 136	, 137	, 138	, 139	, 140	, 141	, 142	, 143 ,
	144	, 145	, 146	, 147	, 148	, 149	, 150	, 151	, 152	, 153	, 154	, 155 ,
	156	, 157	, 158	, 159	, 160	, 161	, 162	, 163	, 164	, 165	, 166	, 167
	168	, 169	, 170	, 171	, 172	, 173	, 174	, 175	, 176	, 177	, 178	, 179
	180	, 181	, 182	, 183	, 184	, 185	, 186	, 187	, 188	, 189	, 190	, 191 ,
	192	, 193	, 194	, 195	, 196	, 197	, 198	, 199 ,				

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

DCMPL

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: \DATA\MET\SPKN91.MET
SURFACE STATION NO.: 24157
NAME: UNKNOWN
YEAR: 1991

FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
UPPER AIR STATION NO.: 24157
NAME: UNKNOWN
YEAR: 1991

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
91	1	1	1	31.0	5.14	273.7	4	450.4	450.4	0.0000	0.0	0.0000	0	0.00
91	1	1	2	28.0	5.66	273.1	4	417.0	417.0	0.0000	0.0	0.0000	0	0.00
91	1	1	3	34.0	6.17	273.1	4	383.6	383.6	0.0000	0.0	0.0000	0	0.00
91	1	1	4	33.0	5.66	273.1	4	350.2	350.2	0.0000	0.0	0.0000	0	0.00
91	1	1	5	23.0	5.14	273.1	4	316.8	316.8	0.0000	0.0	0.0000	0	0.00
91	1	1	6	32.0	5.66	272.6	4	283.3	283.3	0.0000	0.0	0.0000	0	0.00
91	1	1	7	35.0	5.66	272.6	4	249.9	249.9	0.0000	0.0	0.0000	0	0.00
91	1	1	8	23.0	4.63	272.6	4	216.5	216.5	0.0000	0.0	0.0000	0	0.00
91	1	1	9	27.0	5.66	272.6	4	183.1	183.1	0.0000	0.0	0.0000	0	0.00
91	1	1	10	21.0	6.17	272.6	4	149.7	149.7	0.0000	0.0	0.0000	0	0.00
91	1	1	11	54.0	4.12	273.1	4	116.3	116.3	0.0000	0.0	0.0000	0	0.00
91	1	1	12	66.0	3.60	273.1	4	82.8	82.8	0.0000	0.0	0.0000	0	0.00
91	1	1	13	133.0	3.09	269.8	4	49.4	49.4	0.0000	0.0	0.0000	0	0.00
91	1	1	14	129.0	2.06	269.8	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	15	142.0	4.12	269.8	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	16	144.0	0.00	269.3	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	17	141.0	0.00	268.7	4	20.7	20.7	0.0000	0.0	0.0000	0	0.00
91	1	1	18	207.0	2.06	269.3	4	25.5	25.5	0.0000	0.0	0.0000	0	0.00
91	1	1	19	214.0	0.00	269.3	4	30.3	30.3	0.0000	0.0	0.0000	0	0.00
91	1	1	20	207.0	0.00	269.3	4	35.1	35.1	0.0000	0.0	0.0000	0	0.00
91	1	1	21	220.0	2.57	269.3	4	40.0	40.0	0.0000	0.0	0.0000	0	0.00
91	1	1	22	242.0	2.57	269.3	4	44.8	44.8	0.0000	0.0	0.0000	0	0.00
91	1	1	23	230.0	2.57	269.8	4	49.6	49.6	0.0000	0.0	0.0000	0	0.00
91	1	1	24	220.0	2.57	269.8	4	54.4	54.4	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532546.00	5348551.00	70.29190c	(89020624)	533351.00	5347746.00	118.83192c	(89020624)
532949.00	5347344.00	126.58492c	(89020724)	532144.00	5348148.00	71.64746c	(90110224)
532144.00	5348551.00	73.54240c	(90102024)	532949.00	5347746.00	110.68018c	(88120824)
533351.00	5347344.00	92.08111c	(87112824)	532546.00	5348148.00	69.81146c	(88010224)
532949.00	5346942.00	97.72542c	(88120324)	533753.00	5347746.00	57.85901c	(90100624)
532144.00	5347746.00	74.69363c	(90110624)	532949.00	5348551.00	56.09994	(91092824)
532546.00	5346942.00	95.18027c	(89020724)	531742.00	5347746.00	68.42316c	(89110124)
532546.00	5347344.00	81.36042c	(87103024)	531742.00	5348148.00	63.73232c	(90102024)
533753.00	5347344.00	59.09447c	(87011824)	532949.00	5348148.00	70.91614c	(87021824)
532144.00	5348953.00	48.24516	(91092924)	532546.00	5348953.00	46.81160c	(87011624)
531742.00	5348953.00	42.14807c	(90110224)	533351.00	5348551.00	53.15311c	(87112524)
533753.00	5348148.00	58.21824c	(90100724)	533753.00	5346942.00	63.10082c	(90110524)
533351.00	5348148.00	67.23328c	(87112524)				

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 6TH HIGH VALUE IS	126.58492c	ON 89020724:	AT (532949.00, 5347344.00, 0.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

```
*** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT                                    MULTYR

NOCMPL

*** Message Summary : ISCSTDFT Model Execution ***

---------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            2 Warning Message(s)
A Total of          537 Informational Message(s)

A Total of          537 Calm Hours Identified


   ******** FATAL ERROR MESSAGES ********
                *** NONE ***


   ********   WARNING MESSAGES   ********
CO W205     4 MODOPT: No Option Parameter Setting.  Forced by Default to     CONC
CO W205     4 MODOPT: No Option Parameter Setting.  Forced by Default to    RURAL

   ****************************************
   *** ISCSTDFT Finishes Successfully ***
   ****************************************
```

DISPERSION MODELING FILE

CMB UNCONTROLLED EMISSIONS

(Additional Source Groups For CMB Comparison)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

\CCMPL

*** MODEL SETUP OPTIONS SUMMARY ***

. . . . . .

**S[illegible]Terrain Model is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR

**This Run Includes: 287 Source(s); 4 Source Group(s); and 1 Receptor(s)

The Model Assumes A Pollutant Type of: PM10

**[illegible]t To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.10 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07
Output Units = (MICROGRAMS-PER-CUBIC-METER)

**Input Runstream File: CMB.INP ; **Output Print File: CMB.OUT

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
LP_EFB	0	0.76900E+00	533133.0	5347684.0	0.0	24.38	428.70	16.37	1.42	YES	
LP_EFBBH	0	0.30000E-01	533145.0	5347681.0	0.0	7.62	344.74	30.98	0.31	YES	
LP_TCY	0	0.13000E+00	533036.0	5347601.0	0.0	13.72	0.00	33.87	0.42	YES	
IN_DRYER	0	0.15100E+00	532467.0	5348300.0	0.0	10.70	407.00	14.50	1.00	YES	
IN_VENT	0	0.10000E-01	532360.0	5348353.0	0.0	11.00	0.00	1.00	0.75	YES	
LG_DRYER	0	0.70600E+00	535544.0	5350438.0	0.0	18.30	388.00	27.74	0.71	YES	
LG_COOLR	0	0.33000E-01	535533.0	5350436.0	0.0	13.70	319.00	17.74	0.16	YES	
LD_CYC	0	0.10100E+00	532406.0	5347933.0	0.0	15.20	0.00	1.00	0.75	YES	
LD_GAS	0	0.10000E-01	532465.0	5348020.0	0.0	6.10	463.00	10.00	0.60	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
LP_FUG	0	0.59500E-05	532948.0	5347344.0	0.0	5.00	402.00	402.00	0.00	
:N_FUG	0	0.18700E-05	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
LG_FUG	0	0.78300E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
LD_FUG	0	0.99600E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RWC1	0	0.41300E-05	533351.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RWC2	0	0.23100E-05	532949.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RWC3	0	0.39400E-05	532949.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RWC4	0	0.38400E-05	532546.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RWC5	0	0.38900E-05	532144.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RWC6	0	0.36700E-05	532546.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RWC7	0	0.24200E-05	532949.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RWC8	0	0.37600E-05	532144.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RWC9	0	0.35400E-05	532949.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC10	0	0.34800E-05	532144.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RWC11	0	0.10200E-05	533351.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RWC12	0	0.21800E-05	532546.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RWC13	0	0.31400E-05	532546.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC14	0	0.35900E-05	533351.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC15	0	0.27500E-05	531742.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RWC16	0	0.85000E-06	532949.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RWC17	0	0.21800E-05	532144.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RWC18	0	0.21000E-05	532546.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RWC19	0	0.48900E-07	533351.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RWC20	0	0.18800E-05	531742.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RWC21	0	0.17700E-05	531742.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RWC22	0	0.15100E-05	536167.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RW[illegible]	0	0.21300E-07	532949.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.19000E-05	534558.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.13200E-06	532949.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RWC26	0	0.76700E-06	532144.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC27	0	0.10800E-05	531339.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC28	0	0.16400E-05	536167.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC29	0	0.14900E-05	532144.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RWC30	0	0.15100E-05	533351.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RWC31	0	0.13000E-05	531742.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RWC32	0	0.82200E-06	534558.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC33	0	0.11500E-05	531339.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
RWC34	0	0.21500E-06	533351.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RWC35	0	0.11000E-05	531742.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RWC36	0	0.10200E-05	535765.0	5350562.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
RWC37	0	0.54600E-06	535765.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC38	0	0.21300E-07	534155.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RWC39	0	0.21300E-07	533753.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RWC40	0	0.21300E-07	534155.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC41	0	0.00000E+00	534155.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
RWC42	0	0.00000E+00	534155.0	5344125.0	0.0	5.00	402.00	402.00	0.00	
RWC43	0	0.00000E+00	534155.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
RWC44	0	0.22200E-06	532144.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC45	0	0.52500E-06	531339.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RWC46	0	0.76700E-06	535362.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RWC47	0	0.44200E-06	531339.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RWC48	0	0.71800E-06	533753.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RWC49	0	0.69100E-06	532546.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RWC50	0	0.16700E-06	533351.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
RWC51	0	0.60100E-06	531339.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RWC52	0	0.41500E-06	532546.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RWC53	0	0.40800E-06	536569.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RWC54	0	0.14600E-06	533351.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RWC55	0	0.87700E-06	536569.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC56	0	0.55300E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RWC57	0	0.32500E-06	531339.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RWC58	0	0.46900E-06	531742.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RWC59	0	0.71800E-06	532949.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RWC60	0	0.69000E-06	532949.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RWC61	0	0.18700E-06	533753.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
RWC62	0	0.38000E-06	534155.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RWC63	0	0.18700E-06	530937.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
RWC64	0	0.21300E-07	534960.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC65	0	0.21300E-07	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC66	0	0.21300E-07	531742.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC67	0	0.29700E-06	534960.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RWC68	0	0.76500E-07	534155.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RWC69	0	0.24900E-06	533351.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RWC70	0	0.10400E-06	533753.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RWC71	0	0.49700E-06	536167.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RWC72	0	0.49700E-06	530535.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RWC73	0	0.14600E-06	533351.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RWC74	0	0.14600E-06	533351.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC75	0	0.13800E-06	533351.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RWC76	0	0.49100E-06	532144.0	5351366.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

.OCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
RWC77	0	0.13800E-06	533753.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RWC78	0	0.13800E-06	533351.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RWC79	0	0.13800E-06	533351.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RWC80	0	0.13800E-06	533753.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RWC81	0	0.11000E-06	533753.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC82	0	0.46300E-06	532144.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RWC83	0	0.11200E-06	531339.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RWC84	0	0.82800E-07	533753.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RWC85	0	0.11000E-06	533351.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
RWC86	0	0.13200E-06	530535.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
RWC87	0	0.55200E-07	533753.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RWC88	0	0.55200E-07	533753.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
RWC89	0	0.11200E-06	532144.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RWC90	0	0.19400E-06	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RWC91	0	0.32500E-06	530535.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RWC92	0	0.33100E-06	536167.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RWC93	0	0.32900E-06	532144.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
RWC94	0	0.24900E-06	530535.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RWC95	0	0.29700E-06	531339.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RWC96	0	0.30400E-06	535765.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RWC97	0	0.30700E-06	532144.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RWC98	0	0.29700E-06	530535.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC99	0	0.83900E-07	531742.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RWC100	0	0.19300E-06	530937.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RWC101	0	0.18700E-06	530535.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
RWC102	0	0.21300E-07	533753.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC[illegible]	0	0.18700E-06	530937.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
R[illegible]	0	0.19400E-06	531742.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
R[illegible]	0	0.22100E-06	535765.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RWC106	0	0.22100E-06	534155.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RWC107	0	0.22100E-06	534558.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RWC108	0	0.21500E-06	532546.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RWC109	0	0.16700E-06	531339.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RWC110	0	0.11200E-06	531742.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RWC111	0	0.18700E-06	535765.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RWC112	0	0.11000E-06	530535.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RWC113	0	0.11000E-06	530937.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RWC114	0	0.16600E-06	532546.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
RWC115	0	0.15900E-06	530937.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RWC116	0	0.15900E-06	535362.0	5350964.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
RWC117	0	0.74500E-08	532949.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC118	0	0.14900E-06	532546.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RWC119	0	0.74500E-08	532546.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RWC120	0	0.74500E-08	532949.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RWC121	0	0.13800E-06	530535.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RWC122	0	0.13800E-06	534155.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RWC123	0	0.13200E-06	534558.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RWC124	0	0.74500E-08	532546.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RWC125	0	0.76500E-07	530937.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RWC126	0	0.11800E-06	531339.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RWC127	0	0.11000E-06	530535.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RWC128	0	0.11000E-06	530937.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RWC129	0	0.11000E-06	530937.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RWC130	0	0.11200E-06	532144.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RWC131	0	0.11000E-06	530535.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
RWC132	0	0.11000E-06	530535.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RWC133	0	0.10400E-06	535765.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RWC134	0	0.10400E-06	536167.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RWC135	0	0.10400E-06	534558.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RWC136	0	0.82800E-07	534155.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RWC137	0	0.74500E-08	532949.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD1	0	0.25300E-05	533351.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RRD2	0	0.37500E-05	532949.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RRD3	0	0.20400E-05	532949.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RRD4	0	0.17900E-05	532546.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RRD5	0	0.14000E-05	532144.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RRD6	0	0.15800E-05	532546.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RRD7	0	0.28300E-05	532949.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RRD8	0	0.12300E-05	532144.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RRD9	0	0.14400E-05	532949.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD10	0	0.12100E-05	532144.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RRD11	0	0.36600E-05	533351.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RRD12	0	0.21700E-05	532546.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RRD13	0	0.12000E-05	532546.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD14	0	0.53900E-06	533351.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD15	0	0.10000E-05	531742.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RRD16	0	0.24900E-05	532949.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RRD17	0	0.11300E-05	532144.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RRD18	0	0.80700E-06	532546.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RRD19	0	0.26200E-05	533351.0	5348148.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NCCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
RRD20	0	0.61300E-06	531742.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RRD21	0	0.65000E-06	531742.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RRD22	0	0.67600E-06	536167.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD23	0	0.20900E-05	532949.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RRD24	0	0.19000E-06	534558.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD25	0	0.19100E-05	532949.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RRD26	0	0.12400E-05	532144.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD27	0	0.84600E-06	531339.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD28	0	0.23700E-06	536167.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD29	0	0.30700E-06	532144.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RRD30	0	0.22000E-06	533351.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RRD31	0	0.42900E-06	531742.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RRD32	0	0.86900E-06	534558.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD33	0	0.53500E-06	531339.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
RRD34	0	0.14100E-05	533351.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RRD35	0	0.48900E-06	531742.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RRD36	0	0.40200E-06	535765.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD37	0	0.75900E-06	535765.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD38	0	0.12400E-05	534155.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RRD39	0	0.12400E-05	533753.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RRD40	0	0.12400E-05	534155.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD41	0	0.12400E-05	534155.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
RRD42	0	0.12400E-05	534155.0	5344125.0	0.0	5.00	402.00	402.00	0.00	
RRD43	0	0.12400E-05	534155.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
RRD44	0	0.10100E-05	532144.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD45	0	0.64800E-06	531339.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RR[illegible]	0	0.40000E-06	535362.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.70600E-06	531339.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.42800E-06	533753.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RRD49	0	0.40200E-06	532546.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RRD50	0	0.85200E-06	533351.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
RRD51	0	0.39800E-06	531339.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RRD52	0	0.56000E-06	532546.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RRD53	0	0.56700E-06	536569.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD54	0	0.82900E-06	533351.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RRD55	0	0.77100E-07	536569.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD56	0	0.40000E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RRD57	0	0.57800E-06	531339.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RRD58	0	0.43000E-06	531742.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
RRD59	0	0.15200E-06	532949.0	5350964.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
RRD60	0	0.13100E-06	532949.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD61	0	0.61400E-06	533753.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
RRD62	0	0.39900E-06	534155.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RRD63	0	0.56700E-06	530937.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
RRD64	0	0.71600E-06	534960.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD65	0	0.71600E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD66	0	0.70000E-06	531742.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD67	0	0.41700E-06	534960.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD68	0	0.61600E-06	534155.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD69	0	0.42800E-06	533351.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RRD70	0	0.52800E-06	533753.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RRD71	0	0.11400E-06	536167.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD72	0	0.10500E-06	530535.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
RRD73	0	0.45300E-06	533351.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD74	0	0.45300E-06	533351.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD75	0	0.45900E-06	533351.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD76	0	0.93700E-07	532144.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RRD77	0	0.43000E-06	533753.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD78	0	0.42800E-06	533351.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RRD79	0	0.42800E-06	533351.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RRD80	0	0.42800E-06	533753.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RRD81	0	0.45500E-06	533753.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD82	0	0.95600E-07	532144.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RRD83	0	0.43700E-06	531339.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RRD84	0	0.46000E-06	533753.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD85	0	0.42800E-06	533351.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
RRD86	0	0.39200E-06	530535.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
RRD87	0	0.42800E-06	533753.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RRD88	0	0.42800E-06	533753.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
RRD89	0	0.35500E-06	532144.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD90	0	0.24900E-06	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RRD91	0	0.86100E-07	530535.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RRD92	0	0.77100E-07	536167.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RRD93	0	0.77100E-07	532144.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
RRD94	0	0.14900E-06	530535.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RRD95	0	0.89500E-07	531339.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
RRD96	0	0.83000E-07	535765.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RRD97	0	0.77100E-07	532144.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RRD98	0	0.80300E-07	530535.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD99	0	0.27400E-06	531742.0	5348148.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
RRD100	0	0.14900E-06	530937.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RRD101	0	0.14700E-06	530535.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
RRD102	0	0.31100E-06	533753.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD103	0	0.13000E-06	530937.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RRD104	0	0.11200E-06	531742.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
RRD105	0	0.83700E-07	535765.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD106	0	0.77100E-07	534155.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RRD107	0	0.77100E-07	534558.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RRD108	0	0.80800E-07	532546.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RRD109	0	0.11300E-06	531339.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
RRD110	0	0.15700E-06	531742.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RRD111	0	0.77100E-07	535765.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
RRD112	0	0.14900E-06	530535.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RRD113	0	0.14900E-06	530937.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
RRD114	0	0.77100E-07	532546.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
RRD115	0	0.79700E-07	530937.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
RRD116	0	0.79700E-07	535362.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
RRD117	0	0.22800E-06	532949.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD118	0	0.84300E-07	532546.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RRD119	0	0.21700E-06	532546.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RRD120	0	0.21700E-06	532949.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RRD121	0	0.79700E-07	530535.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
RRD122	0	0.78100E-07	534155.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD123	0	0.79200E-07	534558.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
RRD124	0	0.20000E-06	532546.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
RRD125	0	0.12800E-06	530937.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
R[illegible]	0	0.79100E-07	531339.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.79200E-07	530535.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
[illegible]8	0	0.79200E-07	530937.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
RRD129	0	0.79200E-07	530937.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
RRD130	0	0.77100E-07	532144.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RRD131	0	0.78100E-07	530535.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
RRD132	0	0.77100E-07	530535.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RRD133	0	0.78700E-07	535765.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RRD134	0	0.78700E-07	536167.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
RRD135	0	0.78600E-07	534558.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
RRD136	0	0.97700E-07	534155.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
RRD137	0	0.17100E-06	532949.0	5349757.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs											
ALL	LP_EFB ,	LP_EFBBH,	LP_TCY ,	LP_FUG ,	IN_DRYER,	IN_VENT ,	IN_FUG ,	LG_DRYER,	LG_COOLR,	LG_FUG ,	LD_CYC ,	LD_GAS ,
	LD_FUG ,	RWC1 ,	RWC2 ,	RWC3 ,	RWC4 ,	RWC5 ,	RWC6 ,	RWC7 ,	RWC8 ,	RWC9 ,	RWC10 ,	RWC11 ,
	RWC12 ,	RWC13 ,	RWC14 ,	RWC15 ,	RWC16 ,	RWC17 ,	RWC18 ,	RWC19 ,	RWC20 ,	RWC21 ,	RWC22 ,	RWC23 ,
	RWC24 ,	RWC25 ,	RWC26 ,	RWC27 ,	RWC28 ,	RWC29 ,	RWC30 ,	RWC31 ,	RWC32 ,	RWC33 ,	RWC34 ,	RWC35 ,
	RWC36 ,	RWC37 ,	RWC38 ,	RWC39 ,	RWC40 ,	RWC41 ,	RWC42 ,	RWC43 ,	RWC44 ,	RWC45 ,	RWC46 ,	RWC47 ,
	RWC48 ,	RWC49 ,	RWC50 ,	RWC51 ,	RWC52 ,	RWC53 ,	RWC54 ,	RWC55 ,	RWC56 ,	RWC57 ,	RWC58 ,	RWC59 ,
	RWC60 ,	RWC61 ,	RWC62 ,	RWC63 ,	RWC64 ,	RWC65 ,	RWC66 ,	RWC67 ,	RWC68 ,	RWC69 ,	RWC70 ,	RWC71 ,
	RWC72 ,	RWC73 ,	RWC74 ,	RWC75 ,	RWC76 ,	RWC77 ,	RWC78 ,	RWC79 ,	RWC80 ,	RWC81 ,	RWC82 ,	RWC83 ,
	RWC84 ,	RWC85 ,	RWC86 ,	RWC87 ,	RWC88 ,	RWC89 ,	RWC90 ,	RWC91 ,	RWC92 ,	RWC93 ,	RWC94 ,	RWC95 ,
	RWC96 ,	RWC97 ,	RWC98 ,	RWC99 ,	RWC100 ,	RWC101 ,	RWC102 ,	RWC103 ,	RWC104 ,	RWC105 ,	RWC106 ,	RWC107 ,
	RWC108 ,	RWC109 ,	RWC110 ,	RWC111 ,	RWC112 ,	RWC113 ,	RWC114 ,	RWC115 ,	RWC116 ,	RWC117 ,	RWC118 ,	RWC119 ,
	RWC120 ,	RWC121 ,	RWC122 ,	RWC123 ,	RWC124 ,	RWC125 ,	RWC126 ,	RWC127 ,	RWC128 ,	RWC129 ,	RWC130 ,	RWC131 ,
	RWC132 ,	RWC133 ,	RWC134 ,	RWC135 ,	RWC136 ,	RWC137 ,	RRD1 ,	RRD2 ,	RRD3 ,	RRD4 ,	RRD5 ,	RRD6 ,
	RRD7 ,	RRD8 ,	RRD9 ,	RRD10 ,	RRD11 ,	RRD12 ,	RRD13 ,	RRD14 ,	RRD15 ,	RRD16 ,	RRD17 ,	RRD18 ,
	RRD19 ,	RRD20 ,	RRD21 ,	RRD22 ,	RRD23 ,	RRD24 ,	RRD25 ,	RRD26 ,	RRD27 ,	RRD28 ,	RRD29 ,	RRD30
	RRD31 ,	RRD32 ,	RRD33 ,	RRD34 ,	RRD35 ,	RRD36 ,	RRD37 ,	RRD38 ,	RRD39 ,	RRD40 ,	RRD41 ,	RRD42
	RRD43 ,	RRD44 ,	RRD45 ,	RRD46 ,	RRD47 ,	RRD48 ,	RRD49 ,	RRD50 ,	RRD51 ,	RRD52 ,	RRD53 ,	RRD54 ,
	RRD55 ,	RRD56 ,	RRD57 ,	RRD58 ,	RRD59 ,	RRD60 ,	RRD61 ,	RRD62 ,	RRD63 ,	RRD64 ,	RRD65 ,	RRD66 ,
	RRD67 ,	RRD68 ,	RRD69 ,	RRD70 ,	RRD71 ,	RRD72 ,	RRD73 ,	RRD74 ,	RRD75 ,	RRD76 ,	RRD77 ,	RRD78 ,
	RRD79 ,	RRD80 ,	RRD81 ,	RRD82 ,	RRD83 ,	RRD84 ,	RRD85 ,	RRD86 ,	RRD87 ,	RRD88 ,	RRD89 ,	RRD90 ,
	RRD91 ,	RRD92 ,	RRD93 ,	RRD94 ,	RRD95 ,	RRD96 ,	RRD97 ,	RRD98 ,	RRD99 ,	RRD100 ,	RRD101 ,	RRD102 ,
	RRD103 ,	RRD104 ,	RRD105 ,	RRD106 ,	RRD107 ,	RRD108 ,	RRD109 ,	RRD110 ,	RRD111 ,	RRD112 ,	RRD113 ,	RRD114 ,
	RRD115 ,	RRD116 ,	RRD117 ,	RRD118 ,	RRD119 ,	RRD120 ,	RRD121 ,	RRD122 ,	RRD123 ,	RRD124 ,	RRD125 ,	RRD126 ,
	RRD127 ,	RRD128 ,	RRD129 ,	RRD130 ,	RRD131 ,	RRD132 ,	RRD133 ,	RRD134 ,	RRD135 ,	RRD136 ,	RRD137 ,	

** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
LP	LP_EFB , LP_EFBBH, LP_TCY , LP_FUG ,
RWC	RWC1 , RWC2 , RWC3 , RWC4 , RWC5 , RWC6 , RWC7 , RWC8 , RWC9 , RWC10 , RWC11 , RWC12 ,
	RWC13 , RWC14 , RWC15 , RWC16 , RWC17 , RWC18 , RWC19 , RWC20 , RWC21 , RWC22 , RWC23 , RWC24 ,
	RWC25 , RWC26 , RWC27 , RWC28 , RWC29 , RWC30 , RWC31 , RWC32 , RWC33 , RWC34 , RWC35 , RWC36 ,
	RWC37 , RWC38 , RWC39 , RWC40 , RWC41 , RWC42 , RWC43 , RWC44 , RWC45 , RWC46 , RWC47 , RWC48 ,
	RWC49 , RWC50 , RWC51 , RWC52 , RWC53 , RWC54 , RWC55 , RWC56 , RWC57 , RWC58 , RWC59 , RWC60 ,
	RWC61 , RWC62 , RWC63 , RWC64 , RWC65 , RWC66 , RWC67 , RWC68 , RWC69 , RWC70 , RWC71 , RWC72 ,
	RWC73 , RWC74 , RWC75 , RWC76 , RWC77 , RWC78 , RWC79 , RWC80 , RWC81 , RWC82 , RWC83 , RWC84 ,
	RWC85 , RWC86 , RWC87 , RWC88 , RWC89 , RWC90 , RWC91 , RWC92 , RWC93 , RWC94 , RWC95 , RWC96 ,
	RWC97 , RWC98 , RWC99 , RWC100 , RWC101 , RWC102 , RWC103 , RWC104 , RWC105 , RWC106 , RWC107 , RWC108 ,
	RWC109 , RWC110 , RWC111 , RWC112 , RWC113 , RWC114 , RWC115 , RWC116 , RWC117 , RWC118 , RWC119 , RWC120 ,
	RWC121 , RWC122 , RWC123 , RWC124 , RWC125 , RWC126 , RWC127 , RWC128 , RWC129 , RWC130 , RWC131 , RWC132 ,
	RWC133 , RWC134 , RWC135 , RWC136 , RWC137 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
RRD	RRD1 , RRD2 , RRD3 , RRD4 , RRD5 , RRD6 , RRD7 , RRD8 , RRD9 , RRD10 , RRD11 , RRD12 ,
	RRD13 , RRD14 , RRD15 , RRD16 , RRD17 , RRD18 , RRD19 , RRD20 , RRD21 , RRD22 , RRD23 , RRD24 ,
	RRD25 , RRD26 , RRD27 , RRD28 , RRD29 , RRD30 , RRD31 , RRD32 , RRD33 , RRD34 , RRD35 , RRD36 ,
	RRD37 , RRD38 , RRD39 , RRD40 , RRD41 , RRD42 , RRD43 , RRD44 , RRD45 , RRD46 , RRD47 , RRD48 ,
	RRD49 , RRD50 , RRD51 , RRD52 , RRD53 , RRD54 , RRD55 , RRD56 , RRD57 , RRD58 , RRD59 , RRD60 ,
	RRD61 , RRD62 , RRD63 , RRD64 , RRD65 , RRD66 , RRD67 , RRD68 , RRD69 , RRD70 , RRD71 , RRD72 ,
	RRD73 , RRD74 , RRD75 , RRD76 , RRD77 , RRD78 , RRD79 , RRD80 , RRD81 , RRD82 , RRD83 , RRD84 ,
	RRD85 , RRD86 , RRD87 , RRD88 , RRD89 , RRD90 , RRD91 , RRD92 , RRD93 , RRD94 , RRD95 , RRD96 ,
	RRD97 , RRD98 , RRD99 , RRD100 , RRD101 , RRD102 , RRD103 , RRD104 , RRD105 , RRD106 , RRD107 , RRD108 ,
	RRD109 , RRD110 , RRD111 , RRD112 , RRD113 , RRD114 , RRD115 , RRD116 , RRD117 , RRD118 , RRD119 , RRD120 ,
	RRD121 , RRD122 , RRD123 , RRD124 , RRD125 , RRD126 , RRD127 , RRD128 , RRD129 , RRD130 , RRD131 , RRD132 ,
	RRD133 , RRD134 , RRD135 , RRD136 , RRD137 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0   0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0   1 0 0 0 0 0
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: \DATA\MET\SPKN87.MET
SURFACE STATION NO.: 24157
NAME: UNKNOWN
YEAR: 1987

FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
UPPER AIR STATION NO.: 24157
NAME: UNKNOWN
YEAR: 1987

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-O (M)	IPCODE	PRATE (mm/HR)
87	1	1	1	241.0	3.09	272.0	4	334.7	334.7	0.0000	0.0	0.0000	0	0.00
87	1	1	2	248.0	4.12	272.0	4	334.1	334.1	0.0000	0.0	0.0000	0	0.00
87	1	1	3	234.0	4.12	272.0	4	333.5	333.5	0.0000	0.0	0.0000	0	0.00
87	1	1	4	243.0	5.14	272.0	4	332.9	332.9	0.0000	0.0	0.0000	0	0.00
87	1	1	5	263.0	3.60	272.0	4	332.3	332.3	0.0000	0.0	0.0000	0	0.00
87	1	1	6	252.0	3.09	272.0	4	331.7	331.7	0.0000	0.0	0.0000	0	0.00
87	1	1	7	265.0	2.57	272.0	4	331.1	331.1	0.0000	0.0	0.0000	0	0.00
87	1	1	8	303.0	4.12	272.6	4	330.6	330.6	0.0000	0.0	0.0000	0	0.00
87	1	1	9	317.0	5.66	273.1	4	330.0	330.0	0.0000	0.0	0.0000	0	0.00
87	1	1	10	321.0	5.66	273.7	4	329.4	329.4	0.0000	0.0	0.0000	0	0.00
87	1	1	11	344.0	5.66	273.7	4	328.8	328.8	0.0000	0.0	0.0000	0	0.00
87	1	1	12	356.0	4.63	274.3	4	328.2	328.2	0.0000	0.0	0.0000	0	0.00
87	1	1	13	33.0	6.17	274.8	4	327.6	327.6	0.0000	0.0	0.0000	0	0.00
87	1	1	14	49.0	4.12	274.3	4	327.0	327.0	0.0000	0.0	0.0000	0	0.00
87	1	1	15	12.0	2.57	274.3	4	327.0	327.0	0.0000	0.0	0.0000	0	0.00
87	1	1	16	354.0	4.63	274.3	4	327.0	327.0	0.0000	0.0	0.0000	0	0.00
87	1	1	17	11.0	2.57	274.3	4	340.4	340.4	0.0000	0.0	0.0000	0	0.00
87	1	1	18	7.0	0.00	274.3	4	354.4	354.4	0.0000	0.0	0.0000	0	0.00
87	1	1	19	154.0	2.57	274.3	4	368.3	368.3	0.0000	0.0	0.0000	0	0.00
87	1	1	20	47.0	1.54	273.7	4	382.2	382.2	0.0000	0.0	0.0000	0	0.00
87	1	1	21	40.0	2.06	273.7	4	396.2	396.2	0.0000	0.0	0.0000	0	0.00
87	1	1	22	102.0	3.09	273.7	4	410.1	410.1	0.0000	0.0	0.0000	0	0.00
87	1	1	23	60.0	3.09	273.7	4	424.0	424.0	0.0000	0.0	0.0000	0	0.00
87	1	1	24	10.0	3.60	273.7	4	438.0	438.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

NOCMPL

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

GROUP ID			AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	HIGH	1ST HIGH VALUE IS	177.91277c	ON 87122724:	AT (533351.00,	5346539.00,	0.00,	0.00)	DC	
LP	HIGH	1ST HIGH VALUE IS	0.00000c	ON 0:	AT (0.00,	0.00,	0.00,	0.00)		
RWC	HIGH	1ST HIGH VALUE IS	111.12527c	ON 87122724:	AT (533351.00,	5346539.00,	0.00,	0.00)	DC	
RRD	HIGH	1ST HIGH VALUE IS	66.78749c	ON 87122724:	AT (533351.00,	5346539.00,	0.00,	0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

```
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT         DFAULT

NOCMPL

*** Message Summary : ISCSTDFT Model Execution ***

 --------- Summary of Total Messages --------

A Total of           0 Fatal Error Message(s)
A Total of           5 Warning Message(s)
A Total of         425 Informational Message(s)

A Total of         425 Calm Hours Identified


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
CO W205    4 MODOPT: No Option Parameter Setting.  Forced by Default to     CONC
CO W205    4 MODOPT: No Option Parameter Setting.  Forced by Default to    RURAL
SO W320  358 APARM : Source Parameter May Be Out-of-Range for Parameter      QS
SO W320  359 APARM : Source Parameter May Be Out-of-Range for Parameter      QS
SO W320  360 APARM : Source Parameter May Be Out-of-Range for Parameter      QS

   ***************************************
   *** ISCSTDFT Finishes Successfully ***
   ***************************************
```

DISPERSION MODELING FILE

E-4: CMB UNCONTROLLED EMISSIONS

(Additional Source Groups For CMB Comparison)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** MODEL SETUP OPTIONS SUMMARY ***

- -

...e Terrain Model is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates PERIOD Averages

**This Run Includes: 212 Source(s); 1 Source Group(s); and 294 Receptor(s)

**...odel Assumes A Pollutant Type of: PM10

*...el Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.10 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07
Output Units = (MICROGRAMS-PER-CUBIC-METER)

**Input Runstream File: DSGN5.INP ; **Output Print File: DSGN5.OUT
**This Run is Part of a Multi-year Run.
NOTE: PERIOD Results Are for Current Period Only.
Short Term Results Are Cumulative Across All Years Processed.
**File for Saving Result Arrays: DSGN5.SAV
**File for Initializing Result Arrays: DSGN4.SAV
**Detailed Error/Message File: DSGN5.ERR

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
LP_EFB	0	0.76900E+00	533133.0	5347684.0	0.0	24.38	428.70	16.37	1.42	YES	
LP_EFBBH	0	0.30000E-01	533145.0	5347681.0	0.0	7.62	344.74	30.98	0.31	YES	
LP_TCY	0	0.13000E+00	533036.0	5347601.0	0.0	13.72	0.00	33.87	0.42	YES	
IN_DRYER	0	0.15100E+00	532467.0	5348300.0	0.0	10.70	407.00	14.50	1.00	YES	
IN_VENT	0	0.10000E-01	532360.0	5348353.0	0.0	11.00	0.00	1.00	0.75	YES	
LG_DRYER	0	0.70600E+00	535544.0	5350438.0	0.0	18.30	388.00	27.74	0.71	YES	
LG_COOLR	0	0.33000E-01	535533.0	5350436.0	0.0	13.70	319.00	17.74	0.16	YES	
LD_CYC	0	0.10100E+00	532406.0	5347933.0	0.0	15.20	0.00	1.00	0.75	YES	
LD_GAS	0	0.10000E-01	532465.0	5348020.0	0.0	6.10	463.00	10.00	0.60	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
LP_FUG	0	0.59500E-05	532948.0	5347344.0	0.0	5.00	402.00	402.00	0.00	
IN_FUG	0	0.18700E-05	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
LG_FUG	0	0.78300E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
LD_FUG	0	0.99600E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
1	0	0.12400E-05	534155.0	5344125.0	0.0	5.00	402.00	402.00	0.00	
2	0	0.52400E-06	530535.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
3	0	0.12400E-05	534155.0	5344527.0	0.0	5.00	402.00	402.00	0.00	
4	0	0.33400E-06	530535.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
5	0	0.75400E-06	530937.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
6	0	0.16900E-05	531339.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
7	0	0.12400E-05	534155.0	5344930.0	0.0	5.00	402.00	402.00	0.00	
8	0	0.41100E-06	530535.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
9	0	0.19000E-06	530937.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
10	0	0.90300E-06	531339.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
11	0	0.37600E-05	531742.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
12	0	0.18000E-05	532144.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
13	0	0.10000E-06	532546.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
14	0	0.12700E-05	534155.0	5345332.0	0.0	5.00	402.00	402.00	0.00	
15	0	0.37800E-06	530535.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
16	0	0.23900E-06	530937.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
17	0	0.19300E-05	531339.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
18	0	0.72100E-06	531742.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
19	0	0.20100E-05	532144.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
20	0	0.43400E-05	532546.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
21	0	0.49800E-05	532949.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
22	0	0.41300E-05	533351.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
23	0	0.33200E-06	533753.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
24	0	0.12700E-05	534155.0	5345734.0	0.0	5.00	402.00	402.00	0.00	
25	0	0.13300E-06	530535.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
26	0	0.20500E-06	530937.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
27	0	0.11500E-05	531339.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
28	0	0.90000E-06	531742.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
29	0	0.33100E-05	532144.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
30	0	0.43500E-05	532546.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
31	0	0.59900E-05	532949.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
32	0	0.66600E-05	533351.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
33	0	0.12700E-05	533753.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
34	0	0.98300E-07	534155.0	5346137.0	0.0	5.00	402.00	402.00	0.00	
35	0	0.21800E-06	530535.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
36	0	0.31700E-06	530937.0	5346539.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
37	0	0.11700E-05	531339.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
38	0	0.15900E-05	531742.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
39	0	0.52900E-05	532144.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
40	0	0.52500E-05	532546.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
41	0	0.60600E-05	532949.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
42	0	0.46800E-05	533351.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
43	0	0.98300E-07	533753.0	5346539.0	0.0	5.00	402.00	402.00	0.00	
44	0	0.60200E-06	530535.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
45	0	0.98300E-07	530937.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
46	0	0.10000E-05	531339.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
47	0	0.24900E-05	531742.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
48	0	0.46800E-05	532144.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
49	0	0.56300E-05	532546.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
50	0	0.52500E-05	532949.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
51	0	0.17300E-05	533351.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
52	0	0.98300E-07	533753.0	5346941.0	0.0	5.00	402.00	402.00	0.00	
53	0	0.77100E-07	530535.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
54	0	0.77100E-07	530937.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
55	0	0.38700E-06	531339.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
56	0	0.17300E-05	531742.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
57	0	0.49900E-05	532144.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
58	0	0.29100E-05	532546.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
59	0	0.33400E-05	532949.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
60	0	0.98300E-07	533351.0	5347343.0	0.0	5.00	402.00	402.00	0.00	
61	0	0.39700E-06	530535.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
62	0	0.34200E-06	530937.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
63	0	0.28000E-06	531339.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
64	0	0.24200E-05	531742.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
65	0	0.95400E-06	532144.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
66	0	0.97500E-06	532546.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
67	0	0.21100E-05	532949.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
68	0	0.98300E-07	533351.0	5347746.0	0.0	5.00	402.00	402.00	0.00	
69	0	0.25900E-06	530535.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
70	0	0.25900E-06	530937.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
71	0	0.54900E-06	531339.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
72	0	0.35800E-06	531742.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
73	0	0.44400E-06	532144.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
74	0	0.10900E-05	532546.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
75	0	0.20400E-05	532949.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
76	0	0.26700E-05	533351.0	5348148.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
77	0	0.98300E-07	533753.0	5348148.0	0.0	5.00	402.00	402.00	0.00	
78	0	0.19000E-06	530535.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
79	0	0.19000E-06	530937.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
80	0	0.19700E-06	531339.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
81	0	0.26800E-06	531742.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
82	0	0.10600E-06	532144.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
83	0	0.22500E-06	532546.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
84	0	0.22500E-06	532949.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
85	0	0.16300E-05	533351.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
86	0	0.98300E-07	533753.0	5348550.0	0.0	5.00	402.00	402.00	0.00	
87	0	0.18900E-06	530535.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
88	0	0.16200E-06	530937.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
89	0	0.14100E-06	531339.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
90	0	0.30600E-06	531742.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
91	0	0.84500E-07	532144.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
92	0	0.12600E-06	532546.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
93	0	0.12600E-06	532949.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
94	0	0.10200E-05	533351.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
95	0	0.80000E-06	533753.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
96	0	0.98300E-07	534155.0	5348953.0	0.0	5.00	402.00	402.00	0.00	
97	0	0.18800E-06	530535.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
98	0	0.16000E-06	530937.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
99	0	0.16000E-06	531339.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
100	0	0.12800E-06	531742.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
101	0	0.18900E-06	532144.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
102	0	0.13100E-06	532546.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
103	0	0.14700E-06	532949.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
104	0	0.97400E-06	533351.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
105	0	0.63200E-06	533753.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
106	0	0.77900E-06	534155.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
107	0	0.18300E-06	534558.0	5349355.0	0.0	5.00	402.00	402.00	0.00	
108	0	0.77100E-07	530535.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
109	0	0.10500E-06	530937.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
110	0	0.10500E-06	531339.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
111	0	0.77100E-07	531742.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
112	0	0.46700E-06	532144.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
113	0	0.20700E-06	532546.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
114	0	0.17800E-06	532949.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
115	0	0.59800E-06	533351.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
116	0	0.54200E-06	533753.0	5349757.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
117	0	0.69200E-06	534155.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
118	0	0.20900E-05	534558.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
119	0	0.98300E-07	534960.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
120	0	0.98300E-07	535362.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
121	0	0.30500E-06	535765.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
122	0	0.61100E-06	536167.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
123	0	0.77100E-07	536569.0	5349757.0	0.0	5.00	402.00	402.00	0.00	
124	0	0.77100E-07	530535.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
125	0	0.77100E-07	530937.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
126	0	0.77100E-07	531339.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
127	0	0.77100E-07	531742.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
128	0	0.12300E-05	532144.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
129	0	0.16700E-06	532546.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
130	0	0.23500E-06	532949.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
131	0	0.59800E-06	533351.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
132	0	0.56600E-06	533753.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
133	0	0.18000E-06	534155.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
134	0	0.16900E-05	534558.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
135	0	0.73700E-06	534960.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
136	0	0.73700E-06	535362.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
137	0	0.13000E-05	535765.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
138	0	0.18800E-05	536167.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
139	0	0.95400E-06	536569.0	5350160.0	0.0	5.00	402.00	402.00	0.00	
140	0	0.98300E-07	532144.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
141	0	0.77100E-07	532546.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
142	0	0.82100E-06	532949.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.59700E-06	533351.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.56800E-06	533753.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
[illegible]	0	0.21600E-06	534155.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
146	0	0.21100E-06	534558.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
147	0	0.71400E-06	534960.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
148	0	0.11700E-05	535362.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
149	0	0.14200E-05	535765.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
150	0	0.21900E-05	536167.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
151	0	0.97500E-06	536569.0	5350562.0	0.0	5.00	402.00	402.00	0.00	
152	0	0.55900E-06	532144.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
153	0	0.77100E-07	532546.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
154	0	0.87000E-06	532949.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
155	0	0.67600E-06	533351.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
156	0	0.56600E-06	533753.0	5350964.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
157	0	0.29800E-06	534155.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
158	0	0.29800E-06	534558.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
159	0	0.98300E-07	534960.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
160	0	0.23900E-06	535362.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
161	0	0.38700E-06	535765.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
162	0	0.40800E-06	536167.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
163	0	0.77100E-07	536569.0	5350964.0	0.0	5.00	402.00	402.00	0.00	
164	0	0.58400E-06	532144.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
165	0	0.29500E-06	532546.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
166	0	0.16200E-06	532949.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
167	0	0.56600E-06	533351.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
168	0	0.48300E-06	533753.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
169	0	0.77100E-07	534155.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
170	0	0.77100E-07	534558.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
171	0	0.77100E-07	534960.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
172	0	0.15500E-06	535362.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
173	0	0.26400E-06	535765.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
174	0	0.16200E-06	536167.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
175	0	0.77100E-07	536569.0	5351366.0	0.0	5.00	402.00	402.00	0.00	
176	0	0.38500E-06	532144.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
177	0	0.23400E-06	532546.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
178	0	0.16100E-06	532949.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
179	0	0.56600E-06	533351.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
180	0	0.11500E-05	533753.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
181	0	0.77100E-07	534155.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
182	0	0.77100E-07	534558.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
183	0	0.77100E-07	534960.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
184	0	0.16200E-06	535362.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
185	0	0.18300E-06	535765.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
186	0	0.18300E-06	536167.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
187	0	0.77100E-07	536569.0	5351769.0	0.0	5.00	402.00	402.00	0.00	
188	0	0.40600E-06	532144.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
189	0	0.24300E-06	532546.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
190	0	0.16100E-06	532949.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
191	0	0.53800E-06	533351.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
192	0	0.48300E-06	533753.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
193	0	0.13200E-06	534155.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
194	0	0.77100E-07	534558.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
195	0	0.77100E-07	534960.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
196	0	0.77100E-07	535362.0	5352171.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	EMISSION RATE SCALAR VARY BY
197	0	0.13400E-06	535765.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
198	0	0.15700E-06	536167.0	5352171.0	0.0	5.00	402.00	402.00	0.00	
199	0	0.77100E-07	536569.0	5352171.0	0.0	5.00	402.00	402.00	0.00	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

:OCMPL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs											
ALL	LP_EFB	, LP_EFBBH,	LP_TCY	, LP_FUG	, IN_DRYER,	IN_VENT	, IN_FUG	, LG_DRYER,	LG_COOLR,	LG_FUG	, LD_CYC	, LD_GAS ,
	LD_FUG	, 1	, 2	, 3	, 4	, 5	, 6	, 7	, 8	, 9	, 10	, 11 ,
	12	, 13	, 14	, 15	, 16	, 17	, 18	, 19	, 20	, 21	, 22	, 23 ,
	24	, 25	, 26	, 27	, 28	, 29	, 30	, 31	, 32	, 33	, 34	, 35 ,
	36	, 37	, 38	, 39	, 40	, 41	, 42	, 43	, 44	, 45	, 46	, 47 ,
	48	, 49	, 50	, 51	, 52	, 53	, 54	, 55	, 56	, 57	, 58	, 59 ,
	60	, 61	, 62	, 63	, 64	, 65	, 66	, 67	, 68	, 69	, 70	, 71 ,
	72	, 73	, 74	, 75	, 76	, 77	, 78	, 79	, 80	, 81	, 82	, 83 ,
	84	, 85	, 86	, 87	, 88	, 89	, 90	, 91	, 92	, 93	, 94	, 95 ,
	96	, 97	, 98	, 99	, 100	, 101	, 102	, 103	, 104	, 105	, 106	, 107 ,
	108	, 109	, 110	, 111	, 112	, 113	, 114	, 115	, 116	, 117	, 118	, 119 ,
	120	, 121	, 122	, 123	, 124	, 125	, 126	, 127	, 128	, 129	, 130	, 131 ,
	132	, 133	, 134	, 135	, 136	, 137	, 138	, 139	, 140	, 141	, 142	, 143 ,
	144	, 145	, 146	, 147	, 148	, 149	, 150	, 151	, 152	, 153	, 154	, 155 ,
	156	, 157	, 158	, 159	, 160	, 161	, 162	, 163	, 164	, 165	, 166	, 167
	168	, 169	, 170	, 171	, 172	, 173	, 174	, 175	, 176	, 177	, 178	, 179
	180	, 181	, 182	, 183	, 184	, 185	, 186	, 187	, 188	, 189	, 190	, 191 ,
	192	, 193	, 194	, 195	, 196	, 197	, 198	, 199 ,				

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: \DATA\MET\SPKN91.MET
SURFACE STATION NO.: 24157
NAME: UNKNOWN
YEAR: 1991

FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
UPPER AIR STATION NO.: 24157
NAME: UNKNOWN
YEAR: 1991

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
91	1	1	1	31.0	5.14	273.7	4	450.4	450.4	0.0000	0.0	0.0000	0	0.00
91	1	1	2	28.0	5.66	273.1	4	417.0	417.0	0.0000	0.0	0.0000	0	0.00
91	1	1	3	34.0	6.17	273.1	4	383.6	383.6	0.0000	0.0	0.0000	0	0.00
91	1	1	4	33.0	5.66	273.1	4	350.2	350.2	0.0000	0.0	0.0000	0	0.00
91	1	1	5	23.0	5.14	273.1	4	316.8	316.8	0.0000	0.0	0.0000	0	0.00
91	1	1	6	32.0	5.66	272.6	4	283.3	283.3	0.0000	0.0	0.0000	0	0.00
91	1	1	7	35.0	5.66	272.6	4	249.9	249.9	0.0000	0.0	0.0000	0	0.00
91	1	1	8	23.0	4.63	272.6	4	216.5	216.5	0.0000	0.0	0.0000	0	0.00
91	1	1	9	27.0	5.66	272.6	4	183.1	183.1	0.0000	0.0	0.0000	0	0.00
91	1	1	10	21.0	6.17	272.6	4	149.7	149.7	0.0000	0.0	0.0000	0	0.00
91	1	1	11	54.0	4.12	273.1	4	116.3	116.3	0.0000	0.0	0.0000	0	0.00
91	1	1	12	66.0	3.60	273.1	4	82.8	82.8	0.0000	0.0	0.0000	0	0.00
91	1	1	13	133.0	3.09	269.8	4	49.4	49.4	0.0000	0.0	0.0000	0	0.00
91	1	1	14	129.0	2.06	269.8	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	15	142.0	4.12	269.8	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	16	144.0	0.00	269.3	4	16.0	16.0	0.0000	0.0	0.0000	0	0.00
91	1	1	17	141.0	0.00	268.7	4	20.7	20.7	0.0000	0.0	0.0000	0	0.00
91	1	1	18	207.0	2.06	269.3	4	25.5	25.5	0.0000	0.0	0.0000	0	0.00
91	1	1	19	214.0	0.00	269.3	4	30.3	30.3	0.0000	0.0	0.0000	0	0.00
91	1	1	20	207.0	0.00	269.3	4	35.1	35.1	0.0000	0.0	0.0000	0	0.00
91	1	1	21	220.0	2.57	269.3	4	40.0	40.0	0.0000	0.0	0.0000	0	0.00
91	1	1	22	242.0	2.57	269.3	4	44.8	44.8	0.0000	0.0	0.0000	0	0.00
91	1	1	23	230.0	2.57	269.8	4	49.6	49.6	0.0000	0.0	0.0000	0	0.00
91	1	1	24	220.0	2.57	269.8	4	54.4	54.4	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

OCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532144.00	5352574.00	32.28388	(89062224)	532546.00	5352574.00	30.71496c	(91092324)
532949.00	5352574.00	29.12335c	(87021824)	533351.00	5352574.00	33.39556c	(87021824)
533753.00	5352574.00	36.65221	(88041724)	534155.00	5352574.00	34.17435c	(88031824)
534558.00	5352574.00	30.13359c	(87081524)	534960.00	5352574.00	27.39724c	(89121124)
535362.00	5352574.00	25.14064c	(88031824)	535765.00	5352574.00	22.48068c	(88010224)
536167.00	5352574.00	27.23593c	(91092324)	536569.00	5352574.00	28.69557	(88041724)
536972.00	5352574.00	26.93293	(88041724)	532144.00	5352171.00	34.65460	(89062224)
532546.00	5352171.00	32.78848c	(91092324)	532949.00	5352171.00	30.89676c	(88021924)
533351.00	5352171.00	35.19522	(89021224)	533753.00	5352171.00	40.81307	(89021224)
534155.00	5352171.00	40.03023	(89010624)	534558.00	5352171.00	32.71342c	(89121124)
534960.00	5352171.00	27.64407c	(89121124)	535362.00	5352171.00	26.35412c	(87122724)
535765.00	5352171.00	27.30269c	(91092324)	536167.00	5352171.00	31.47860	(88041724)
536569.00	5352171.00	32.00726	(88041724)	536972.00	5352171.00	29.30960c	(90100724)
532144.00	5351769.00	36.37662c	(89121124)	532546.00	5351769.00	35.32024c	(91092324)
532949.00	5351769.00	33.97447	(91092824)	533351.00	5351769.00	38.72606	(89021224)
533753.00	5351769.00	39.14722c	(87112524)	534155.00	5351769.00	38.01515c	(88010224)
534558.00	5351769.00	32.77137c	(90062024)	534960.00	5351769.00	30.22155c	(87011824)
535362.00	5351769.00	30.87237c	(87122724)	535765.00	5351769.00	32.77373	(91092924)
536167.00	5351769.00	37.41366	(91092924)	536569.00	5351769.00	35.44609c	(90100724)
536972.00	5351769.00	34.77517c	(87100424)	532144.00	5351367.00	36.40688c	(88012124)
532546.00	5351367.00	35.77041c	(91092324)	532949.00	5351367.00	38.43427c	(88120824)
533351.00	5351367.00	42.24363c	(87011624)	533753.00	5351367.00	42.14856c	(88031824)
534155.00	5351367.00	39.58596c	(87122724)	534558.00	5351367.00	35.20428c	(90062024)
534960.00	5351367.00	33.10215c	(88010224)	535362.00	5351367.00	37.06476	(88041724)
535765.00	5351367.00	41.06626c	(87121324)	536167.00	5351367.00	45.34285c	(87121324)
536569.00	5351367.00	42.46346c	(87100424)	536972.00	5351367.00	38.18437c	(87100424)
532144.00	5350965.00	36.83018c	(89021424)	532546.00	5350965.00	36.85775c	(91092324)
532949.00	5350965.00	39.20734c	(88120824)	533351.00	5350965.00	42.70615c	(87112524)
533753.00	5350965.00	42.78962c	(87081324)	534155.00	5350965.00	41.49460	(89010624)
534558.00	5350965.00	38.61922c	(87011824)	534960.00	5350965.00	39.04084c	(88031824)
535362.00	5350965.00	44.80029c	(87100424)	535765.00	5350965.00	52.43771c	(91101724)
536167.00	5350965.00	57.25296c	(90032124)	536569.00	5350965.00	57.58709c	(90032124)
536972.00	5350965.00	43.32753c	(91012424)	530535.00	5350562.00	32.08355c	(87121324)
530937.00	5350562.00	33.67432	(91091124)	531339.00	5350562.00	35.06247c	(87121324)
531742.00	5350562.00	36.85146	(91092924)	532144.00	5350562.00	44.91707c	(87021824)
532546.00	5350562.00	42.25634	(88041724)	532949.00	5350562.00	37.90494	(89021224)
533351.00	5350562.00	42.71409c	(87112524)	533753.00	5350562.00	44.45164c	(87011624)
534155.00	5350562.00	41.15432c	(87112524)	534558.00	5350562.00	42.64955c	(90110224)
534960.00	5350562.00	50.70664c	(88010224)	535362.00	5350562.00	49.44891c	(91101724)
535765.00	5350562.00	50.01020c	(89020624)	536167.00	5350562.00	49.88458c	(87121324)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . .

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
536569.00	5350562.00	50.61320c	(87100424)	536972.00	5350562.00	39.10158c	(87100424)
530535.00	5350160.00	33.54764c	(90110624)	530937.00	5350160.00	37.34764c	(90110224)
531339.00	5350160.00	38.32772c	(87011624)	531742.00	5350160.00	40.54977	(91092924)
532144.00	5350160.00	45.99646c	(87021824)	532546.00	5350160.00	45.49221c	(90041424)
532949.00	5350160.00	40.55202c	(90122224)	533351.00	5350160.00	45.42865c	(87011624)
533753.00	5350160.00	49.40169c	(87081524)	534155.00	5350160.00	45.51856c	(87011824)
534558.00	5350160.00	47.45085c	(88010224)	534960.00	5350160.00	53.99739c	(91101724)
535362.00	5350160.00	43.76808c	(87100424)	535765.00	5350160.00	40.30821c	(87011124)
536167.00	5350160.00	42.76082c	(89020624)	536569.00	5350160.00	38.95910c	(91062224)
536972.00	5350160.00	32.14239c	(91062224)	530535.00	5349758.00	36.58202c	(90110624)
530937.00	5349758.00	40.98947c	(87011624)	531339.00	5349758.00	43.40561c	(87011624)
531742.00	5349758.00	45.30171c	(87121324)	532144.00	5349758.00	51.05791	(91092824)
532546.00	5349758.00	50.86385	(89021224)	532949.00	5349758.00	45.46074c	(88120824)
533351.00	5349758.00	49.79835c	(87011624)	533753.00	5349758.00	55.31831	(89010624)
534155.00	5349758.00	51.39402	(88031724)	534558.00	5349758.00	51.25262c	(90122424)
534960.00	5349758.00	43.70855c	(88091224)	535362.00	5349758.00	34.95942c	(87122224)
535765.00	5349758.00	31.26266c	(88100824)	536167.00	5349758.00	33.30935c	(88121524)
536569.00	5349758.00	27.66935	(87100824)	536972.00	5349758.00	24.28196	(88082024)
530535.00	5349355.00	37.08972c	(90102024)	530937.00	5349355.00	43.04195c	(90110224)
531339.00	5349355.00	47.01653c	(87121324)	531742.00	5349355.00	52.84449c	(89030324)
532144.00	5349355.00	56.23562c	(87021824)	532546.00	5349355.00	58.52234c	(88021924)
532949.00	5349355.00	54.06161	(89021224)	533351.00	5349355.00	58.92982c	(88031824)
533753.00	5349355.00	60.28157c	(87112524)	534155.00	5349355.00	52.30790c	(87100424)
534558.00	5349355.00	47.58511c	(89020624)	534960.00	5349355.00	38.76177c	(87011824)
535362.00	5349355.00	34.04396c	(87011824)	535765.00	5349355.00	28.58148c	(87100424)
536167.00	5349355.00	26.10896c	(91012524)	536569.00	5349355.00	23.36395	(89022624)
536972.00	5349355.00	21.98416c	(87020924)	530535.00	5348953.00	36.98995c	(91033024)
530937.00	5348953.00	45.59189c	(87081324)	531339.00	5348953.00	53.94103c	(89102924)
531742.00	5348953.00	62.04680c	(89121124)	532144.00	5348953.00	66.77005c	(88021924)
532546.00	5348953.00	67.11201c	(88021924)	532949.00	5348953.00	69.35191	(91092824)
533351.00	5348953.00	72.21152c	(88031824)	533753.00	5348953.00	68.20552c	(89020624)
534155.00	5348953.00	57.57269c	(87100424)	534558.00	5348953.00	47.51111c	(87011824)
534960.00	5348953.00	39.07196c	(87011824)	535362.00	5348953.00	33.87203	(88123124)
535765.00	5348953.00	27.06929	(89022624)	536167.00	5348953.00	24.11619c	(91062224)
536569.00	5348953.00	23.18064c	(87020924)	536972.00	5348953.00	21.70180c	(91062224)
530535.00	5348551.00	38.53452c	(91071124)	530937.00	5348551.00	46.20615c	(87011924)
531339.00	5348551.00	60.65988c	(87011624)	531742.00	5348551.00	73.08141c	(87121324)
532144.00	5348551.00	90.34119c	(90102024)	532546.00	5348551.00	91.39993c	(87122724)
532949.00	5348551.00	94.62222	(89021224)	533351.00	5348551.00	96.10841c	(87112524)
533753.00	5348551.00	84.67109c	(87100424)	534155.00	5348551.00	60.74512c	(87100424)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT HULTYR

NCCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
G_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
, 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
534558.00	5348551.00	48.85009c	(90100724)	534960.00	5348551.00	40.13194c	(87100424)
530535.00	5348148.00	38.10811c	(89102924)	530937.00	5348148.00	46.46755c	(90102024)
531339.00	5348148.00	59.53104c	(87102824)	531742.00	5348148.00	92.07683c	(87011924)
532144.00	5348148.00	107.66336c	(90102024)	532546.00	5348148.00	105.42731c	(91092324)
532949.00	5348148.00	114.78968c	(87011624)	533351.00	5348148.00	110.75381c	(87112524)
533753.00	5348148.00	83.39111c	(90100724)	534155.00	5348148.00	59.32022c	(87100424)
534558.00	5348148.00	48.90924c	(87100424)	534960.00	5348148.00	38.41088	(90022624)
530535.00	5347746.00	42.49813c	(89110124)	530937.00	5347746.00	47.62983	(87101624)
531339.00	5347746.00	61.87644	(90031724)	531742.00	5347746.00	94.65424c	(87102824)
532144.00	5347746.00	127.48428c	(91101424)	532546.00	5347746.00	135.49539c	(90110224)
532949.00	5347746.00	159.46701c	(89012424)	533351.00	5347746.00	160.06244c	(89020624)
533753.00	5347746.00	88.44215c	(88010224)	534155.00	5347746.00	68.00806c	(87100424)
534558.00	5347746.00	50.67708c	(90100624)	534960.00	5347746.00	41.20120c	(91012424)
530535.00	5347344.00	46.05436c	(88113024)	530937.00	5347344.00	55.12436c	(88012724)
531339.00	5347344.00	74.34964c	(91101424)	531742.00	5347344.00	105.36899c	(91101424)
532144.00	5347344.00	138.28720c	(91101424)	532546.00	5347344.00	140.04965c	(87100524)
532949.00	5347344.00	167.20212c	(88010224)	533351.00	5347344.00	140.84453c	(91092324)
533753.00	5347344.00	103.86391c	(90032124)	534155.00	5347344.00	70.55209c	(87100424)
534558.00	5347344.00	50.63754c	(91012424)	534960.00	5347344.00	42.46613	(90022824)
530535.00	5346942.00	56.69081c	(89110224)	530937.00	5346942.00	66.42100c	(90102324)
531339.00	5346942.00	88.14016c	(88113024)	531742.00	5346942.00	121.33466c	(89110224)
532144.00	5346942.00	150.73216c	(90110624)	532546.00	5346942.00	154.40881c	(91121524)
532949.00	5346942.00	162.34468c	(87112724)	533351.00	5346942.00	145.46416c	(87121324)
533753.00	5346942.00	116.03410c	(89020624)	534155.00	5346942.00	72.84257	(90022624)
534558.00	5346942.00	55.19729	(90022824)	534960.00	5346942.00	46.44471c	(87112824)
530535.00	5346539.00	60.79886c	(88012724)	530937.00	5346539.00	73.70596c	(91052624)
531339.00	5346539.00	103.00909c	(91122024)	531742.00	5346539.00	125.70671c	(90102324)
532144.00	5346539.00	170.66139c	(89020724)	532546.00	5346539.00	173.07072c	(88120324)
532949.00	5346539.00	166.25165c	(90122524)	533351.00	5346539.00	145.09337c	(91031324)
533753.00	5346539.00	137.46400c	(88121524)	534155.00	5346539.00	85.18407c	(90110524)
534558.00	5346539.00	60.36516c	(87123124)	534960.00	5346539.00	47.69972c	(87122624)
530535.00	5346137.00	61.25288c	(87011124)	530937.00	5346137.00	81.80685c	(87011124)
531339.00	5346137.00	105.23943	(91121424)	531742.00	5346137.00	119.03635c	(88120324)
532144.00	5346137.00	159.42740c	(89110124)	532546.00	5346137.00	173.39511c	(87011124)
532949.00	5346137.00	170.78674c	(87122824)	533351.00	5346137.00	155.03171c	(89103124)
533753.00	5346137.00	126.30695c	(87122724)	534155.00	5346137.00	84.04134	(91100324)
534558.00	5346137.00	58.67984c	(87123124)	534960.00	5346137.00	47.31150c	(87112824)
530535.00	5345735.00	70.65630c	(91122024)	530937.00	5345735.00	86.29649	(91121424)
531339.00	5345735.00	109.63977	(89112224)	531742.00	5345735.00	121.37324c	(88120324)
532144.00	5345735.00	147.41997c	(91121524)	532546.00	5345735.00	169.59648c	(88121724)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): LP_EFB , LP_EFBBH, LP_TCY , LP_FUG , IN_DRYER, IN_VENT , IN_FUG ,
LG_DRYER, LG_COOLR, LG_FUG , LD_CYC , LD_GAS , LD_FUG , 1 , 2 , 3 , 4 , 5 , 6 ,
7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15 , 16 , 17 , . . .

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
532949.00	5345735.00	159.71352	(88102724)	533351.00	5345735.00	135.49757c	(87112824)
533753.00	5345735.00	95.31158	(89121024)	534155.00	5345735.00	74.41513c	(87122624)
534558.00	5345735.00	63.51004	(89121024)	534960.00	5345735.00	49.64885	(91100324)
530535.00	5345332.00	74.09613c	(90102324)	530937.00	5345332.00	87.19944	(89112224)
531339.00	5345332.00	110.78010c	(88120324)	531742.00	5345332.00	141.62505	(91121424)
532144.00	5345332.00	135.05559c	(88121724)	532546.00	5345332.00	121.44225c	(88121724)
532949.00	5345332.00	106.09454	(88121624)	533351.00	5345332.00	78.33978	(88121424)
533753.00	5345332.00	55.61998c	(91012024)	534155.00	5345332.00	53.98638c	(90021624)
534558.00	5345332.00	51.18799	(89101424)	534960.00	5345332.00	42.94878	(89121024)
530535.00	5344930.00	78.50998	(91121424)	530937.00	5344930.00	91.37539	(89112224)
531339.00	5344930.00	112.85687c	(87011124)	531742.00	5344930.00	104.78171	(88121624)
532144.00	5344930.00	98.73665c	(88121724)	532546.00	5344930.00	85.76891c	(88121724)
532949.00	5344930.00	74.24364c	(87122524)	533351.00	5344930.00	57.83482c	(89101624)
533753.00	5344930.00	47.07668c	(91012024)	534155.00	5344930.00	44.56914c	(90021624)
534558.00	5344930.00	48.04091c	(90021624)	534960.00	5344930.00	34.31788c	(91010124)
530535.00	5344528.00	74.32760	(87111724)	530937.00	5344528.00	74.10257c	(87011124)
531339.00	5344528.00	83.67630	(88010424)	531742.00	5344528.00	83.69727	(88010424)
532144.00	5344528.00	73.46290c	(88121724)	532546.00	5344528.00	65.32072	(88010424)
532949.00	5344528.00	55.40834c	(88121724)	533351.00	5344528.00	44.70200	(88013124)
533753.00	5344528.00	36.04837c	(88121524)	534155.00	5344528.00	37.80761c	(87112824)
534558.00	5344528.00	42.86942c	(89112124)	534960.00	5344528.00	32.30780c	(90110524)
530535.00	5344125.00	62.01337c	(91122324)	530937.00	5344125.00	66.36749c	(87112724)
531339.00	5344125.00	70.55959c	(90120724)	531742.00	5344125.00	65.46328c	(87122824)
532144.00	5344125.00	61.45104c	(87122824)	532546.00	5344125.00	53.29572c	(87122824)
532949.00	5344125.00	45.51448	(88102724)	533351.00	5344125.00	37.32431c	(88120324)
533753.00	5344125.00	32.95180c	(90090424)	534155.00	5344125.00	35.44909c	(87012124)
534558.00	5344125.00	33.73767	(91051824)	534960.00	5344125.00	29.62828c	(89112124)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT MULTYR

NOCMPL

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM10 IN (MICROGRAMS-PER-CUBIC-METER) **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 6TH HIGH VALUE IS	173.39511c	ON 87011124:	AT (532546.00, 5346137.00, 0.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

```
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT                                    MULTYR

NOCMPL

*** Message Summary : ISCSTDFT Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            2 Warning Message(s)
A Total of          537 Informational Message(s)

A Total of          537 Calm Hours Identified


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
CO W205    4 MODOPT: No Option Parameter Setting.  Forced by Default to     CONC
CO W205    4 MODOPT: No Option Parameter Setting.  Forced by Default to    RURAL

   ***************************************
   *** ISCSTDFT Finishes Successfully ***
   ***************************************
```

APPENDIX F: CONTROL STRATEGY SUPPORT

F-1: SANDPOINT AREA ROAD REPORTS AND ORDINANCES

SANDPOINT
INDEPENDENT HIGHWAY
DISTRICT

Post Office Box 1047 Phone 263-8131
Sandpoint, Idaho 83864

RECEIVED
FEB 15 1995
IDHW-DEQ
Coeur d'Alene Field Office

RECEIVED
MAR 27 1995
Div. of Environmental Quality
Community Programs

SUMMARY OF FUGITIVE ROAD DUST CONTROL

JANUARY, 1995

The Sandpoint Independent Highway District used 2,750 gallons of magnesium chloride and approximately 35 yards of anti skid material in the month of January, 1995. The District swept approximately 170 lane miles in January with the Elgin Crosswind sweeper, collecting approximately 50 yards of sand, dirt and garbage.

January was a very warm month. The liquid deicer proved to be very effective in this type of weather. The weather criteria used by the District in determining the use of liquid deicer rather than anti skid material is based on temperatures of 26 degrees or warmer, light snow up to one and one-half inches, black ice or freezing rains.

The District has applied the deicer compound over anti skid material in certain conditions. Also, the District has learned a truck can apply the deicer on more lane miles in less time than a sander can apply anti skid material. The majority of the anti skid material can be found on the shoulders of a road hours after being applied. On the other hand, the deicer has shown signs of being effective up to three days after being applied. The liquid deicer has melted the snow and ice allowing more sweeping days, less anti skid material being applied, and significantly reduced the accumulation of anti skid material on the streets. The streets are noticeable cleaner than the District has ever experienced at this time of year.

The District is unable to plow during a majority of the day due to traffic congestion. Therefore, the deicer is applied after a snow removal operation allowing approximately 24 hours for the deicer to work before the District can do any additional plowing. The lack of colder weather this winter has not provided the District with the opportunity to test this method at temperatures ranging from zero to 25 degrees.

SANDPOINT INDEPENDENT HIGHWAY DISTRICT

Post Office Box 1047 Phone 263-8131
Sandpoint, Idaho 83864

JANUARY, 1995

The Sandpoint Independent Highway District swept 8 days in January with the Elgin Crosswind sweeper. Approximately 170 lane miles were swept collecting an estimated 50 yards of anti skid, sand, dirt and garbage from the travel lanes.

1/ 3/95 Swept downtown core and northeast portion of Sandpoint and Boyer, Sixth, Cedar and Pine Streets
23 lane miles - 11 hours

1/ 6/95 Swept downtown core.
10 lane miles - 4 hours

1/13/95 Swept downtown, collectors, and intersection of Highway 200 and Highway 95 North for the ITD
35 lane miles - 12 hours

1/17/95 Swept downtown core.
4 lane miles - 2 hours

1/20/95 Swept downtown core.
10 lane miles - 4 hours

1/24/95 Swept northeast and northwest portions of Sandpoint
24 lane miles - 7 hours

1/27/95 Swept the majority of curbed streets within the City of Sandpoint
34 lane miles - 11.5 hours

1/31/95 Swept downtown core, northeast secion and southeast section of town
30 lane miles - 8 hours

JANUARY RECAP:

Swept 170 lane miles
50 yards of anti skid/sand/dirt/garbage collected
8 days sweeping with Elgin Crosswind sweeper

SANDPOINT
INDEPENDENT HIGHWAY
DISTRICT

Post Office Box 1047 Phone 263-8131
Sandpoint, Idaho 83864

RECEIVED
FEB 2 1995
IDHW-DEQ
Coeur d'Alene Field Office

SUMMARY OF FUGITIVE ROAD DUST CONTROL

NOVEMBER & DECEMBER, 1994

The Sandpoint Independent Highway District has been successful in increasing the winter sweeping to a regular two times per week due to the purchase of the new Elgin Crosswind sweeper. This schedule can be altered to other days due to heavy snowfall or packed snow floor. The Tymco sweeper would not operate effectively in the winter, therefore, the increased sweeping the District has been able to accomplish with the Elgin has noticably reduced the amount of sand and dirt that in previous years collected throughout the winter months.

The Sandpoint Independent Highway District has used approximately 6,000 gallons magnesium chloride during the months of November and December, 1994. Approximately half of the amount used was applied in the areas of town swept on a regular schedule. The heavy application of the liquid deicer by ITD in the downtown Sandpoint area has tracked onto the core streets reducing the amount of deicer required for the District to apply and has complimented the sweeping operation of the District as far as a dust suppressant aid.

The anti skid material used by the Sandpoint Highway District meets the specifications set forth in Sandpoint Independent Highway District resolution 94-10-1. The District has used approximate 100 yards of anti-skid material during the months of November and December. Approximately 20 yards of the anti skid material used was applied in the area of town swept on a regular schedule.

The Highway District has had the teom program loaded on the computer at the office. The equipment operators have included checking the air quality readings prior to, during and upon completion of any sweeping activities. The employees have been instructed to discontinue any sweeping activities if they see levels in excess of 70 for the eight hour period. If the higher levels may be due to fugitive road dust, the employees have been instructed to immediately begin applying the dust suppressant in the areas with higher traffic counts.

SANDPOINT INDEPENDENT HIGHWAY DISTRICT

Post Office Box 1047 Phone 263-8131
Sandpoint, Idaho 83864

NOVEMBER, 1994

The Sandpoint Independent Highway District swept 79 lane miles of road in November, 1994. The amount of sand was difficult to determine due to the amount of leaves picked up by the sweeper. By October 31, 1994, the District had picked up a majority of the leaves with loaders ~~and sweeper~~. The District continued to sweep between snow storms, when possible.

The Highway District swept 9 days in November with the Tymco sweeper accompanied by the water truck. The sweeper collected approximately 780 yards. Approximately 80 of the yards collected was sand and dirt, the balance was leaves.

11/ 1/94 Swept northwest portion of City of Sandpoint
9 lane miles - 3 1/2 hours

11/ 3/94 Swept downtown and northeast City of Sandpoint
11 lane miles - 8 hours

11/ 4/94 Swept collectors
6 lane miles - 2 1/2 hours

11/ 7/94 Swept downtown
10 lane miles - 4 hours

11/ 9/94 Swept portions of City
approximately 12 lane miles - 5 1/2 hours

11/15/94 Swept in downtown, northeast and southwest portion of City - approximately 17 lane miles

11/18/94 Swept State intersections - 2 hours
Swept northeast portion of City - approx 12 lane miles
3 hours

11/25/94 Swept northwest portion of City - 2 lane miles

NOVEMBER RECAP:

Swept 79 lane miles
80 yards of sand/dirt collected
8 days of sweeping with old Tymco sweeper

SANDPOINT
INDEPENDENT HIGHWAY
DISTRICT

Post Office Box 1047 Phone 263-8131
Sandpoint, Idaho 83864

DECEMBER, 1994

12/ 6/94 Swept 10 lane miles
Collected 2 yards of sand, dirt, etc with the Tymco sweeper. This sweeper does not work well in winter and not very effective in cold weather.

12/20/94 To date, snow had prevented the District from doing any sweeping since 12/6/94. The streets had melted enough to use the new Elgin Crosswind sweeper purchased with CMAQ funds.

Swept 10 miles in downtown Sandpoint and the 95/200 highway intersection for ITD
Collected 6 yards of sand/dirt.

12/23/94 Swept downtown - 10 lane miles
Collected 3 yards of sand/dirt.

12/28/94 Swept downtown - 10 lane miles
Collected 2 yards of sand/dirt and/or garbage.

DECEMBER RECAP:

Swept 40 lane miles
Collected 13 yards of sand/dirt
Note: All the sweeping after 12/20 was with the new Elgin Crosswind sweeper

RECEIVED
MAR 24 1994
IDHW-DEQ
Coeur d'Alene Field Office

ORDINANCE NO. 939

An ordinance of the City of Sandpoint, Bonner County, Idaho, a municipal corporation of the State of Idaho; to be known as the "Material Specifications for Street Sanding Material" ordinance; providing applicability, definitions, standards, testing requirements, reporting requirements, sweeping requirements, alternate test methods and standards, and, alternate anti-skid materials; report submittal; and, providing a savings clause and severability; and providing for the publication of this ordinance.

Be it ordained by the mayor and city council of the City of Sandpoint, Bonner County, Idaho, as follows:

SECTION I. APPLICABILITY

The provisions of this ordinance shall apply to any state, county, city or local government or private company that applies anti-skid materials to or mechanically sweeps or vacuums paved surfaces within the Sandpoint PM-10 Nonattainment area. This ordinance shall also apply to all suppliers of anti-skid materials to be used by these affected entities.

SECTION II. DEFINITIONS

A. "Affected Entities" means any state, county, city or local government or private company that applies anti-skid material to, or mechanically sweeps or vacuums paved surfaces within the Sandpoint PM-10 Nonattainment Area.

B. "Anti-skid Materials" means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.

C. "Approved Laboratory" means a certified facility capable of performing the specified tests in a competent, professional, and unbiased manner in accordance with ASTM testing procedures.

D. "DEQ" means the Idaho Department of Health and Welfare, Division of Environmental Quality.

E. "Durability Index" means the percent loss of weight as determined using the test method most recently adopted by resolution by the Sandpoint City Council.

F. "High Degree of Angularity" means that the grains exhibit sharply intersecting, planar faces over their entire surfaces. The most current recommended test method for this criteria shall be adopted by resolution by the Sandpoint City Council.

G. "Percent Fines" means that material which is acceptable as defined by standards adopted by resolution of the Sandpoint City Council.

H. "Recycled Anti-skid Material" is previously used anti-skid material which has been collected from roadways or paved areas within the Sandpoint PM-10 Nonattainment Area and is then, after washing, re-used as is or after blending with new anti-skid material.

I. "Season" means the time period beginning November 1 in one calendar year and concluding on April 30 of the next calendar year.

SECTION III. ANTI-SKID MATERIAL STANDARDS

A. All anti-skid materials applied to paved surfaces, whether new or recycled, shall meet or exceed either of the following standards:

1. Less than 2% fines and less than 45% durability index; or

2. Less than 4% fines, less than 25% durability index, and a high degree of angularity exhibited by the majority of the grains.

B. Contractual Requirements

After the effective date of this regulation, no affected entity shall execute a contract for the purchase of anti-skid materials unless the contract includes standards at least as stringent as those set forth herein.

C. User Exemptions

After the effective date of this regulation, if supplies of anti-skid material which meet the standards set forth herein are physically and economically unavailable, then affected entities may use existing stockpiles of anti-skid material until April 30 of 1994.

SECTION IV. TESTING REQUIREMENTS.

A. General

DEQ, or the user, may require tests to be performed for any of the following physical characteristics of anti-skid materials:

1. The percent fines;

2. The durability index; and

3. The degree of angularity exhibited by the majority of the grains.

B. Supplier Requirements

1. Suppliers shall test a representative sample of the anti-skid materials being produced at least once per week during production to determine the percent fines in the material and record the results of the test.

2. Suppliers shall have an approved laboratory test a representative sample of the anti-skid materials being produced at least once per month during production to determine the percent fines in the material and maintain the report of the results prepared by the approved laboratory.

3. Suppliers shall have an approved laboratory test a representative sample from each of the pit sources owned or operated by the supplier at least once during the time period in which the supplier sells anti-skid materials to an affected entity to determine the durability index of the pit material and maintain the report of the results prepared by the approved laboratory.

4. If a supplier is relying upon Section III.A.2., at least once per month during production, the supplier, or a qualified representative of the supplier, shall perform a visual examination of the angularity of the anti-skid material and record the results of the examination.

C. User Requirements

1. Affected entities shall have an approved laboratory test at least one representative sample of the first 250 tons of recycled anti-skid materials used by the entity each winter to determine the percent fines and durability index of the material.

2. Affected entities shall have an approved laboratory test at least one representative sample of each 500 tons of recycled anti-skid materials used by the entity after the initial 250 tons to determine the percent fines in the material.

3. Audit Authority

Designees of DEQ may enter the site of any supplier or user of anti-skid material at all reasonable times and upon the presentation of appropriate credentials for the purpose of obtaining a sample of material to determine if the material meets the applicable standards.

SECTION V. REPORTING REQUIREMENTS

A. Supplier Reporting Requirements

1. Suppliers relying upon Section III.A.2, shall at least once per month during production submit a signed statement to DEQ certifying that the supplier, or a qualified representative of the supplier, performed a visual examination of the angularity of the anti-skid material during the preceding month and detailing the results of that visual examination.

2. Prior to or upon delivery of anti-skid material, suppliers shall provide to DEQ and to the affected entities, that use their anti-skid material, a report documenting that the supplier has met all applicable testing requirements. The supplier shall certify in writing to the affected entity that the anti-skid materials meet the requirements of Section III.A.

3. Prior to or upon delivery of anti-skid material, suppliers shall notify DEQ and the affected entities in writing of the location (UTM coordinates) of the aggregate pit(s) from which the anti-skid material is produced.

4. The supplier shall maintain the information required under the provisions of Section IV.B. for a period of three (3) years.

B. User Requirements

1. Affected entities that use recycled anti-skid material shall submit to DEQ copies of the results of testing conducted according to Section IV.C. no later than 30 days after the tests are conducted.

2. No later than June 30 of each year, affected governmental entities shall submit a report to DEQ containing the following information for the preceding 12 months:

(a) The amount of recycled anti-skid material used;

(b) The amount of non-recycled anti-skid material used;

(c) The amount of salt or other deicing chemicals used;

(d) The same information specified in 2(a), 2(b), and 2(c), for all private companies performing sanding, salting, or deicing services under a contract with the affected governmental entity.

3. No later than June 30, of each year, private companies that use 250 tons of anti-skid material or more per season for non-governmental applications within the Sandpoint PM-10 Nonattainment Area shall submit a report to DEQ containing information for the preceding season on the total amount of anti-skid materials (both new and recycled) and salt and other deicing chemicals used.

C. Sweeper Reporting Requirements

Affected entities shall maintain monthly records to document the information described below. No later than June 30 of each year, each affected governmental entity shall submit a report to DEQ which shall contain the information described below for each priority roadway.

1. Date of each sweeping operation;

2. Lane miles swept; and

3. Type of equipment used.

D. DEQ Audit Authority

All records, including but not limited to, test results, reports and visual examination results, generated or maintained under the provisions of this ordinance shall be made available for inspection upon request by DEQ.

SECTION VI. SWEEPING REQUIREMENTS

Beginning the effective date of this regulation, the Sandpoint Independent Highway District, the City of Sandpoint, Bonner County and the Idaho Transportation Department or their contractors shall clean paved surfaces within the Sandpoint Nonattainment Area as per the guidelines set forth in the Sandpoint Area Winter Road Maintenance Plan. The Winter Road Maintenance Plan will develop guidance for cleaning paved surfaces during the winter season to meet safety and mobility requirements in addition to improving air quality. The affected governmental entities will develop the plan in conjunction with DEQ. The plan will be updated and approved annually by DEQ.

SECTION VII. ALTERNATE TEST METHODS AND STANDARDS

Alternate percent fines and durability index test procedures for percent fines and durability may be approved in writing by DEQ if DEQ determines that the alternate procedures provide a measure that is equivalent to the test procedures prescribed by this ordinance.

SECTION VIII. ALTERNATE ANTI-SKID MATERIALS

Experimentation with alternate anti-skid materials may be approved in writing by DEQ if DEQ determines that the impact of such experiments or tests does not contribute appreciably to air quality degradation.

SECTION IX. REPORT SUBMITTAL

Affected entities and suppliers shall submit all required reports to the appropriate office of the Idaho Division of Environmental Quality as identified by resolution adopted by the Sandpoint City Council.

SECTION X. PUBLIC GOOD

The provisions of this ordinance are hereby found and declared to be in the furtherance of the public health, safety, welfare and convenience and it shall be liberally construed to effect such purposes.

SECTION XI. SEVERABILITY

All ordinances or parts of ordinances or code sections in conflict with this ordinance are hereby repealed to the

extent of such conflict as necessary. Should any sentence, section, clause, part or provision of this ordinance be declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of the ordinance as a whole or any other part thereof other than the part declared to be invalid.

SECTION XII. PUBLICATION

This ordinance shall be in full force and effect upon its publication according to law in the Bonner County Daily Bee, a newspaper of general distribution in the city of Sandpoint, Idaho, and hereby declared to be the official newspaper for the publication of this ordinance.

Passed and adopted as an ordinance of the City of Sandpoint, Idaho, at a regular session of the Sandpoint City Council on February 22, 1994.

DWIGHT E. SHEFFLER, MAYOR

ATTEST:

HELEN M. NEWTON, CITY CLERK

TABLE 1. MODIFICATIONS TO ASTM METHOD C 131-89 FOR AGGREGATE MATERIAL <2.36 MM

The standard ASTM methodology should be used with the following modifications:

5. Apparatus

5.4.1 The weight of the test sample placed in the Testing Machine shall be 5,000 ± 10 g along with a charge of six (6) standard spheres.

8. Procedure

8.1 Split the sample into two equal fractions according to Method C 702. Sieve the first fraction according to the procedure outlined in Table A and record the results. Weigh the charge of spheres to be introduced into the testing machine and record the results.

8.2 Place the second sample fraction (as received) and the charge in the Los Angeles testing machine and rotate the machine at a speed of 30 to 33 rpm for 500 revolutions. After the prescribed number of revolutions, discharge the material from the machine, separate the charge, and sieve the sample material using the procedure shown in Table A. Record the results.

TABLE A. SAMPLE SIEVING PROCEDURE

1. Select the appropriate 8-in diameter, 2-in deep sieve sizes. Recommended U.S. Standard Series sizes are 3/8 in., No. 4, No. 20, No. 40, No. 100, No. 140, No. 200, and a pan. Comparable Tyler Series sizes can also be utilized. The No. 20 and the No. 200 are mandatory. The others can be varied if the recommended sieves are not available or if buildup on one particular sieve during sieving indicates that an intermediate sieve should be inserted.

2. Obtain a mechanical sieving device such as vibratory shaker or a Roto-Tap.

3. Clean the sieves with compressed air and/or a soft brush. Material lodged in the sieve openings or adhering to the sides of the sieve should be removed (if possible) without handling the screen roughly.

4. Obtain a scale (capacity of at least 1,600 g) and record make, capacity, smallest division, date of last calibration, and accuracy (if available).

5. Tare sieves and pan. Check the zero before every weighing. Record weights.

6. After nesting the sieves in decreasing order with pan at the bottom, dump dried laboratory sample (probably immediately after moisture analysis) into the top sieve. Brush fine material adhering to the sides of the container into the top sieve and cover the top sieve with a special lid normally purchased with the pan.

7. Place nested sieves into the mechanical device and sieve for 20 min. Remove the pan containing the minus No. 200 fraction and weigh. Replace pan beneath the sieves and sieve for another 10 min. Remove pan and weigh. When the differences between two successive pan sample weighings (where the tare of the pan has been subtracted) is less than 3.0%, the sieving is complete.

8. Weigh each sieve and its contents and record the weight. Check the zero before every weighing.

9. Collect the laboratory sample and place the sample in a separate container if further analysis is expected.

TABLE 2. SILT ANALYSIS PROCEDURES

1. Select the appropriate 8-in diameter, 2-in deep sieve sizes. Recommended U.S. Standard Series sizes are 3/8 in., No. 4, No. 20, No. 40, No. 100, No. 140, No. 200, and a pan. Comparable Tyler Series sizes can also be utilized. The No. 20 and the No. 200 are mandatory. The others can be varied if the recommended sieves are not available or if buildup on one particular sieve during sieving indicates that an intermediate sieve should be inserted.

2. Obtain a mechanical sieving device such as vibratory shaker or a Roto-Tap.

3. Clean the sieves with compressed air and/or a soft brush. Material lodged in the sieve openings or adhering to the sides of the sieve should be removed (if possible) without handling the screen roughly.

4. Obtain a scale (capacity of at least 1,600 g) and record make, capacity, smallest division, date of last calibration, and accuracy (if available).

5. Tare sieves and pan. Check the zero before every weighing. Record weights.

6. After nesting the sieves in decreasing order with pan at the bottom, dump dried laboratory sample (probably immediately after moisture analysis) into the top sieve. Brush fine material adhering to the sides of the container into the top sieve and cover the top sieve with a special lid normally purchased with the pan.

7. Place nested sieves into the mechanical device and sieve for 20 min. Remove the pan containing the minus No. 200 fraction and weigh. Replace pan beneath the sieves and sieve for another 10 min. Remove pan and weigh. When the differences between two successive pan sample weighings (where the tare of the pan has been subtracted) is less than 3.0%, the sieving is complete.

8. Weigh each sieve and its contents and record the weight. Check the zero before every weighing.

9. Collect the laboratory sample and place the sample in a separate container if further analysis is expected.

9.1 Calculation

Determine the abrasion loss as a percentage using the following equation:

$$aL = \frac{W_s}{W_t} \times 100$$

Where:

aL = LA abrasion loss (weight %).
W_s = Weight of sample less than 200 mesh (75 µmP) after exposure in Test Machine (g).
W_t = Total weight or original sample (g).

RECEIVED
MAR 28 1994
IDHW-DEQ
Coeur d'Alene Field Office

No.: 94-04
Date: February 22, 1994

RESOLUTION
OF THE CITY COUNCIL
CITY OF SANDPOINT, IDAHO

TITLE: ANTI-SKID ORDINANCE ADDENDA

WHEREAS: The City Council adopted Ordinance No. 939 on February 22, 1994, known as the "Material Specifications for Street Sanding Material" ordinance; and,

WHEREAS: Said ordinance provides definitions, standards and various requirements which must be adhered to; and,

WHEREAS: It is in the best interests of the city to comply with this ordinance in order to enhance the air quality standards within the city; and,

WHEREAS: Pursuant to said ordinance, the City Council hereby adopts pertinent test methods, standards and requirements to be used in coordination with the ordinance as follows:

NOW, THEREFORE, BE IT RESOLVED THAT: "Durability Index" as defined by the ordinance means the percent loss of weight as determined using the modified American Society for Testing Materials (ASTM) "Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine", designation C131-89 with modifications as found in Table 1 which is hereby adopted for use until repealed, replaced or amended by resolution; and,

BE IT FURTHER RESOLVED THAT: "High Degree of Angularity" as defined by the ordinance means that the grains exhibit sharply intersecting, planar faces over their entire surfaces with the recommended test method for this criteria being the ASTM D3398 "Index of Aggregate Particle Shape and Texture" which is hereby adopted for use until repealed, replaced or amended by resolution; and,

BE IT FURTHER RESOLVED THAT: "Percent Fines" as defined by the ordinance means the percent material passing a #200 sieve as determined using the Midwest Research Institute (MRI) method for silt analysis as a substitute for ASTM C117 and ASTM C136 as found in Table 2 which is hereby adopted for use until repealed, replaced or amended by resolution; and,

BE IT FURTHER RESOLVED THAT: The appropriate entity to which report submittals shall be submitted as required by the ordinance is currently

Idaho Division of Environmental Quality,
ATTN: Monitoring and Technical Support, Air Quality,
2110 Ironwood Parkway,
Coeur d'Alene, ID 83814, and,

shall remain until replaced or amended by resolution.

DWIGHT E. SHEFFLER, MAYOR

ATTEST:

Helen M. Newton, City Clerk

CITY COUNCIL:	YES	NO	ABSTAIN	ABSENT
(1) Miller	X			
(2) Hanson - Motion	X			
(3) Vandenberg	X			
(4) Sawyer	X			
(5) Johnson - Second	X			
(6) Staglund	X			

RESOLULATION NO. 94-10-1

A RESOLUTION ADOPTING THE ANTI-SKID MATERIAL SPECIFICATIONS FOR USE WITHIN THE BOUNDARIES OF THE SANDPOINT INDEPENDENT HIGHWAY DISTRICT.

The Sandpoint Independent Highway District current boundaries are located in an area designated by the Department of Environmental Quality as a non-attainment area due to fugitive road dust, wood smoke, and industry. The Highway District is the governmental entity exercising jurisdiction over the public street right-of-ways within the District boundaries. It is in the best interest of the District to adopt this anti-skid resolution to improve the air quality standards within the District.

All anti-skid materials, whether new or recycled, applied to the paved surfaces within the boundaries of the Sandpoint Independent Highway District shall meet or exceed the following specifications as recommended by the Idaho Transportation Department for use in non-attainment areas:

Sieve Size	Percent Passing
3/8" screen	100%
No. 8 Screen	0-40%
No. 100 Screen	0-2%

The materials should display an L.A. wear of 25% or less.

The supplier shall provide user with receipt verifying the material has been tested in accordance with ASTM testing procedures by a certified facility and meets the specifications set forth above.

Verification the anti-skid material meets the above specifications must be presented to the Highway District prior to applying any of the anti-skid material to the public street right-of-ways within the District. All recycled materials must be retested before use will be permitted.

The user shall prepare an annual report for the period May 1 through April 30 to the Sandpoint Independent Highway District indicating the amount of anti skid material used, the amount of recycled material used , the amount of salt used, and the amount and type of deicing chemical used.

All records shall be made available for inspection upon request by the Department of Environmental Quality.

The Board unanimously adopted this anti-skid resolution at the public meeting on Tuesday, October 11, 1994.

Chairman Max Birdsell

Attest:

Jackie Buck, Adm. Asst.

Commissioner Dale Millard

Commissioner Bill Haskins

IDAHO TRANSPORTATION DEPARTMENT

COEUR D'ALENE, IDAHO 83814-8764

District One,
600 W. Prairie
(208)772-1200 /FAX(208)772-1203

FAX TRANSMITTAL

DATE: 2/27/94 TIME: 3:400

TO: Don Redline

DEPT: DEQ

FAX NO.:

FROM: Bob Ewing

DEPT: District One

PAGES TO FOLLOW: 2

MESSAGE:

Don - we would propose to use CMAQ spec. for Sandpoint anti-skid material.

SIGNATURE OF SENDER RE

MTC D-1

IDAHO TRANSPORTATION DEPARTMENT

Department Memorandum

Project No.(s):

RECEIVED
NOV - 9 1993
I.T.D. DIST. 1 HIGHWAYS
COEUR D'ALENE, IDAHO

Key No.(s):

Project Identification, County, Etc.:

:: NOVEMBER 5, 1993

DISTRICT ENGINEERS
DISTRICTS 1 - 6

M: CLAYTON SULLIVAN, P.E.
MAINTENANCE SUPERVISOR

SUGGESTED STANDARD GRADATIONS FOR COVERCOAT & SANDING MATERIAL - TAKE 2

responses from the letter "Review of Gradation Specifications for Class 4 Covercoat and for Sanding Material", September 2, 1993, have been reviewed. Most of the responses were positive with the main concerns being ility in special situations and the CMAC specification. The CMAC gradation has been changed to reflect DEQ irements.

main emphasis of the letter was to have each District examine their use and specifications regarding covercoat sanding material and to try to reduce the costs by adopting a standard set of gradations throughout the State. It ised that with the increase in the maximum size aggregate for sanding material, and contractors having a dard gradation to work from, that a cheaper product can be produced. Modifications for special situations or to ice costs should not be hindered by these gradations since the 5 gradations are fairly broad in range. There was ntent to require that all 5 gradations be used in all districts. For example, District 1 may use the Black Ice ation for most of the district, the Mountain gradation for Lookout Pass and the CMAC gradation where required. addition, it is not intended that these gradations apply to cinders or pumice which are utilized for anti-skid material.

e Maintenance Manual is being updated to include the 3/8" maximum aggregate size for anti-skid material. Also, a of suggested anti-skid gradations for certain conditions will be added to aid maintenance personnel in choosing the rect material for the given condition.

ep in mind that for each crushing project, the past history of the source to be used should be reviewed, and the ifications modified accordingly. Your help in implementing these changes will be greatly appreciated.

33.jas

c: R
HO
MATERIALS SUPR.
MAINT. SUPR.

Review of gradation specifications for Class 4 cover coat and for sanding material

Current Class 4 cover coat specifications call for 100% passing the 1/2" and 95 -100% passing the 3/8". This is a normal practice in writing specifications which allows for screen wear. In practice, production will include material to provide 4 - 5% above the intended top size, in this case between the 1/2" and 3/8", with accommodation for screen wear above the 1/2".

Current sanding material specifications call for 100% passing the 1/4". These specifications often call for only small amounts passing the #200. Bids for sanding material are approaching or exceeding the cost for Class 4 cover coat material.

Manufactured sanding material needs to be milled to provide the most cost effective anti-skid material for the particular application. Sanding material for heavy snow areas needs to be fairly clean with a high percentage near the maximum permitted size. For black ice a more graded material can be used but with a high percentage above the #30 so the material does not blow off the road under traffic. In areas with air quality problems it may be necessary to specify the DEQ requirements of 0 - 2% passing the #100 and <45% L.A. Wear. On moderate to low volume roads rejects or naturally occurring materials may be appropriate as long as fines are controlled to prevent breaking of the feed chains in the sander.

Assumptions

Windshield and paint damage complaints are greatly reduced when cover coat and sanding material is 100% minus 3/8".

Concrete sand has approximately 85% minus #8 and 40% minus #30.

Assume all minus #30 will blow off the road upon application.

Specifications need to be varied depending on the source to preclude unacceptable material such as fine blow sand.

Specifications need to assure a coarse gradation for use in heavy snow areas.

Specifications for sanding material to be used in moderate to high volume traffic areas needs to be fairly clean and large enough to be seen and not blow off under traffic.

When clean sanding materials are used the application rate should be reduced. For example, the application rate based on secondary rejects containing, 50% minus #30 should be reduced by about 1/3 when using, material with 25% minus #30. Application frequency should be reduced in areas prone to snow squalls when using the coarser sanding materials.

The following gradations should be used as a guide for choosing specifications for sanding material.

Screen size	decimal inch	mm	*% passing
3/8"	.375	9.50	100
1/4"	.250	6.35	85
#4	.187	4.76	69
#6	.125 (1/8")	3.36	55
#8	.093	2.36	40
#10	.079	2.00	38
#16	.046	1.18	33
#30	.024	0.60	26
#50	.012	0.30	19
#100	.006	0.15	12
#200	.003	0.075	5

*Based on straight line gradation using, three points 100% passing the 3/8- 40% passing the #8; 5% passing the #200.

Target Gradations (percent passing specified screen size)

Screen Size	Class 4 Cover Coat	Mountain	*CMAQ	Black Ice	Standard	Rejects	B.F. SPEC
3/8"	100	100	100	100	100	100	100 3/8"
1/4"					0 - 70		0-50 #8
#4	0 - 15	0 - 40	0 - 40				
#8	0 - 5	0 - 10		0 - 25	0 - 30		
#30			0 - 2				0 - 5 #200
#100				0 - 5	0 - 10		
#200	0 - 2	0 - 5					

*Also requires <45% L.A. wear.

Sanding Material Descriptions

Mountain - Coarse fairly clean material where frequent snowfall is common.

CMAQ - Clean material for use where air quality is a problem.

Black Ice - Medium coarse fairly clean material for use in areas prone to black ice.

Standard - Cost effective sanding, material crushed or screened to meet a gradation. Sieve sizes selected to preclude large quantities of fine sand.

Rejects - Specification requires 100% minus 3/8" for use where practical, i.e. covered storage available and high fines do not cause equipment breakdown.

Conclusions

The overall statewide cost for manufacture of sanding material can be reduced and customer satisfaction maintained through use of products "Engineered" to meet local conditions.

1. Customize gradations to maximize economic use of local materials.

2. Optimize rate and frequency of application of anti-skid and de-icing materials.

3. Cost effectiveness must include customer perception and call back frequency.

4. Schedule operations to provide maximum benefit for commuters and school buses.

5. Minimize response time for unscheduled events through knowledge of commuter times, weather forecasts and experience. Position loaded sanders early when icing conditions and commute times may occur simultaneously.

STATE OF IDAHO
Cecil D. Andrus, Governor
TRANSPORTATION DEPARTMENT
DISTRICT 1 - 600 W. PRAIRIE - COEUR D'ALENE, ID - 83814-8764 - 208/772-1200

RECEIVED
JAN 20 1995
IDHW-DEQ
Coeur d'Alene Field Office

January 17, 1995

Mr. Dan Redline
Division Of Environmental Quality
2110 Ironwood Parkway
Coeur d' Alene, ID 83814

Dear Dan:

In response to your letter I have enclosed a map which should answer questions 1, 2 and 4.

1. As shown on the map by the original orange colored line. These are all State highways primarily maintained by the state.

2. The areas within the Sandpoint NAA to which ITD routinely applies anti-skid material are designated by the pink highlight. However, please note that the area designated with the green highlight is where we try not to apply anti-skid. We have designated this area as a "anti-skid free zone", and try to apply liquid deicer only.

3. The current material specifications for anti-skid material used by ITD within the Sandpoint NAA, meet the current standards set by City of Sandpoint Ordinance No. 939. The material we are using meets or exceeds the first standard, which is: Less than 2% fines and less than 45% durability index.

4. ITD applies liquid deicer on the area with the green highlight. When time and weather conditions permit we extend this area to include what is marked with the black highlight.

5. The criteria for applying liquid deicer versus anti-skid are varied. The temperature has to be above 10 degrees and rising for the liquid. The liquid works well on dry or wet pavement and shallow snow floor. I have not found it to be effective on snow floor over 1" thick. The effectiveness of the liquid is reduced with rain or freezing rain. I feel that liquid deicer works very well in the downtown area with high ADT counts. With a thick snow floor, or ice floor we have found the liquid deicer to work well in conjunction with anti-skid material. The deicer will glue down the anti-skid to the floor so it won't blow off. This helps to cut down on the amount of anti-skid that has to be applied.

6. The roadway cleaning in the Sandpoint NAA is done primarily by the Sandpoint Independent Highway District (SIHD). ITD does have a contract with a private company to clean from the Chamber of Commerce building and over Sandcreek bridge. This is done once per year in the spring. ITD will also clean this area and the areas outside of the SIHD boundaries on a yearly basis. SIHD has been very helpful in volunteering to sweep outside of their boundaries. They have been willing to do this for ITD when ITD does not have the available sweeping equipment and when the weather is conducive to sweeping.

7. The establishment of the "anti-skid free zone" we have instituted has contributed greatly in bringing a positive impact on reducing emissions. So far this winter season ITD has applied only 95 c.y. of anti-skid in the "free zone". ITD has also installed ground speed control sensors on three sanding trucks that operate in the Sandpoint NAA. ITD also purchased a 800 gallon liquid deicer spray rig for use in the NAA. I have found the deicer to work well as a deicing agent and also as a dust suppressant, either during sweeping operations or before . DEQ supplied the local ITD office with the software for the TEOMCOMM so as to enable ITD to monitor the emissions on a as needed basis. The various committees, especially the public awareness committee, have helped to bring to light to the public the need for the reducing, and how to reduce the emissions. I feel that all of the above has certainly have a positive impact on helping to reduce the emissions in the Sandpoint NAA.

I hope that this will give you the information that you need. Please feel free to contact me at any time.

Sincerely,

Chuck Spickelmire
Maintenance Foreman

TRANSPORTATION DEPARTMENT

DISTRICT 1 · 600 W. PRAIRIE · COEUR D'ALENE, ID · 83814-8764 · 208/772-1200

September 8, 1994

Dan Redline
Division of Environmental Quality
2110 Ironwood Parkway
Coeur d' Alene, ID 83814

Dear Dan:

After our conversation today I have compiled the test result for the percentage of material passing on the #200 sieve for the Sandpoint area stockpiles. As you can see by the averages the material meets the current specifications required by DEQ and the City of Sandpoint.

The average for the plain anti-skid material is 1.55%. The average for the salt treated anti-skid is 1.65%. The specifications call for 2% on the #200 sieve. Hopefully this will put to rest any doubts you might have.

You also asked me why, you had not received the supplier certification that the anti-skid material meets the City of Sandpoints' requirements per ordinance #939. I guess I plead guilty. I was under the impression that since the material was produced before the ordinance went into effect that we did not have to submit the certification. The material was produced between November 11, 1993 and December 8, 1993. Ordinance #939 went into effect on February 22, 1994. Please let me know if you need more documentation on this subject.

As you will note there are test numbers that have a "A" after them. This is to signify a backup test that was conducted after a failing test on the #200 sieve. In the four backup tests the material passed. This is the standard testing procedure in the industry.

I will provide this information to the members of the Fugitive Road Dust Sub-Committee also for their information.

If you need anything else please feel free to contact me.

Sincerely,

Chuck Spickelmire
Maintenance Foreman

cc. Jackie Buck, SIHD
Larry Peak, Interstate
Frank Steenvoorden, LP
Steve Lafrenz, Lake Pre-Mix

PLAIN ANTI-SKID STOCKPILED AT SANDPOINT I.T.D. MTCE. YARD

TEST #	% ON #200 SIEVE
1	2.00
2	1.20
3	0.40
4	1.60
5	1.90
6	1.60
7	2.00
8	2.00
9	1.60
10	1.40
11	1.60
12	1.70
13	1.40
14	1.80
15	2.00
16	2.00
17	1.70
18	1.80
19	1.00
20	1.80
21	1.70
AVERAGE	1.55

SALT TREATED ANTI-SKID STOCKPILED AT SANDPOINT MTCE. YARD

TEST #	% ON #200 SIEVE
22	1.60
23	1.90
24	1.80
25	1.90
25A	1.30
26	3.80
26A	2.00
27	2.90
27A	1.40
28	2.10
29	1.90
30	0.40
31	1.60
32	1.90
33	1.60
34	0.40
35	0.80
36	2.00
37	4.60
37A	1.10
38	1.90
39	0.80
40	1.90
41	1.60
42	1.20
43	2.00
44	1.80
45	2.00
46	1.70
47	1.60
48	1.70
49	1.60
50	1.90
51	1.90
52	3.50
52A	0.80
53	1.70
54	1.10
55	1.60
56	1.60
57	1.80
58	2.00
59	0.80
60	0.80
61	1.40
62	1.20
63	1.10

MATERIAL PRODUCED FROM 11/17/93 THRU 12/8/93

SALT TREATED ANTI-SKID STOCKPILED AT SANDPOINT MTCE. YARD

TEST #	% ON #200 SIEVE
64	1.00
65	1.80
66	0.60
67	1.80
68	1.40
69	1.20
70	1.60
71	1.60
72	1.60
73	2.00
AVERAGE	1.65

MATERIAL PRODUCED FROM 11/17/93 THRU 12/8/93

Planning

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
IDAHO DIVISION
3050 LAKEHARBOR LANE, SUITE 126
BOISE, IDAHO 83703-6217

FEDERAL-TRANSIT ADMINISTRATION
915 SECOND AVENUE, SUITE 3142
SEATTLE, WA 98174

RECEIVED
FEB 03 1995
ID. TRANS. DEPT.

Date: JAN 27 1995

REPLY TO: HPR-ID/710.1

Mr. Dwight M. Bower, Director
Idaho Transportation Department
P. O. Box 7129
Boise, Idaho 83707

Dear Mr. Bower:

Mr. Mickelson's November 2 letter submitted the FY 1995-1997 State Transportation Improvement Program (STIP) to FHWA and FTA for our joint approval. Your December 5 letter requested two additional projects be added to the STIP submitted with your November 2 letter.

With the understandings stated below, we agree that the STIP submission as amended by the December 5 letter:

- identifies all proposed highway and transit projects in the State funded under Title 23 and the Federal Transit Act, including Federal Lands projects;
- is consistent with your interim long-range statewide transportation plan;
- is consistent with the metropolitan transportation improvement programs approved by the respective metropolitan planning organizations and by your Department acting on behalf of the Governor as delegated;
- in the non-attainment areas for carbon monoxide or ozone, includes only projects determined to conform with the State Implementation Plan;
- demonstrates adequate fiscal constraint;
- meets the requirements of 23 CFR 450.222 (project selection) for the projects listed for FY 1995, 1996 and FY 1997; and
- has been developed with adequate public involvement.

It is our understanding:

- o individual projects in Air Quality Non-attainment areas that are not exempt or neutral and are not from a conforming urbanized area TIP and Plan, such as those proposed in the Sandpoint area in Bonner County, where no MPO exists and no TIP is required, are subject to Conformity Determination requirements.

- o Only the projects listed for FYs 1995, 1996 and 1997 are considered to be included in the STIP. All of these projects are considered to be selected and can be advanced.

- o this action does not serve as an eligibility determination for Federal participation. It also does not serve as Federal approval action for programs or projects for which FHWA and FTA have no approval authority, including the State Rail Program and the Aeronautics Program.

- o This STIP approval action is valid for a period of two years from the date of this letter or until a new STIP is approved, whichever occurs first. The STIP hereby approved may be amended consistent with the provisions of 23 CFR 450.

We believe considerable progress has been made in Idaho to develop a STIP that is fully consistent with the regulations. We are particularly pleased that additional information related to fiscal constraint was presented. Please express our appreciation to the ITD and MPO staff people that have worked during the past year to prepare a document that is usable to the Department and is responsive to the regulations. We are aware of the efforts already underway to develop the next version of the STIP. As the next version of the STIP is developed we believe further consideration should be given to the way project phases, i.e. preliminary engineering, right-of-way, and construction are shown in the STIP. We are still concerned about the current practice of aggregating preliminary engineering and right-of-way for "minor" projects. We intend to work with you during the coming year to resolve this issue.

With the noted understandings, the Idaho STIP is hereby approved as submitted.

Sincerely yours,

Jack T. Coe
Division Administrator
Federal Highway Administration

Terry L. Ebersole
Regional Administrator
Federal Transit Administration

SANDPOINT NONATTAINMENT AREA
FISCAL YEAR 1995 FUNDED TRANSPORTATION PROJECTS
WITH DIRECT PM_{10} EMISSION REDUCTION BENEFIT
PROJECT SUMMARIES

Congestion Mitigation and Air Quality Development Program

Project Key Number:	5990
Project Name/Location:	Deicer Equipment, Sandpoint
Project Jurisdiction:	Sandpoint Independent Highway District
Project Type:	Miscellaneous Improvements
Project Costs:	$ 140,000.00

State Funded Development Program

Project Key Number:	5878
Project Name/Location:	Sandpoint Streets (US 95 from milepost 473.9 to milepost 475.5)
Project Jurisdiction:	Idaho Transportation Department, District 1
Project Type:	Resurfacing (Pavement rehabilitation and minor surface treatment)
Project Costs:	$ 450,000.00

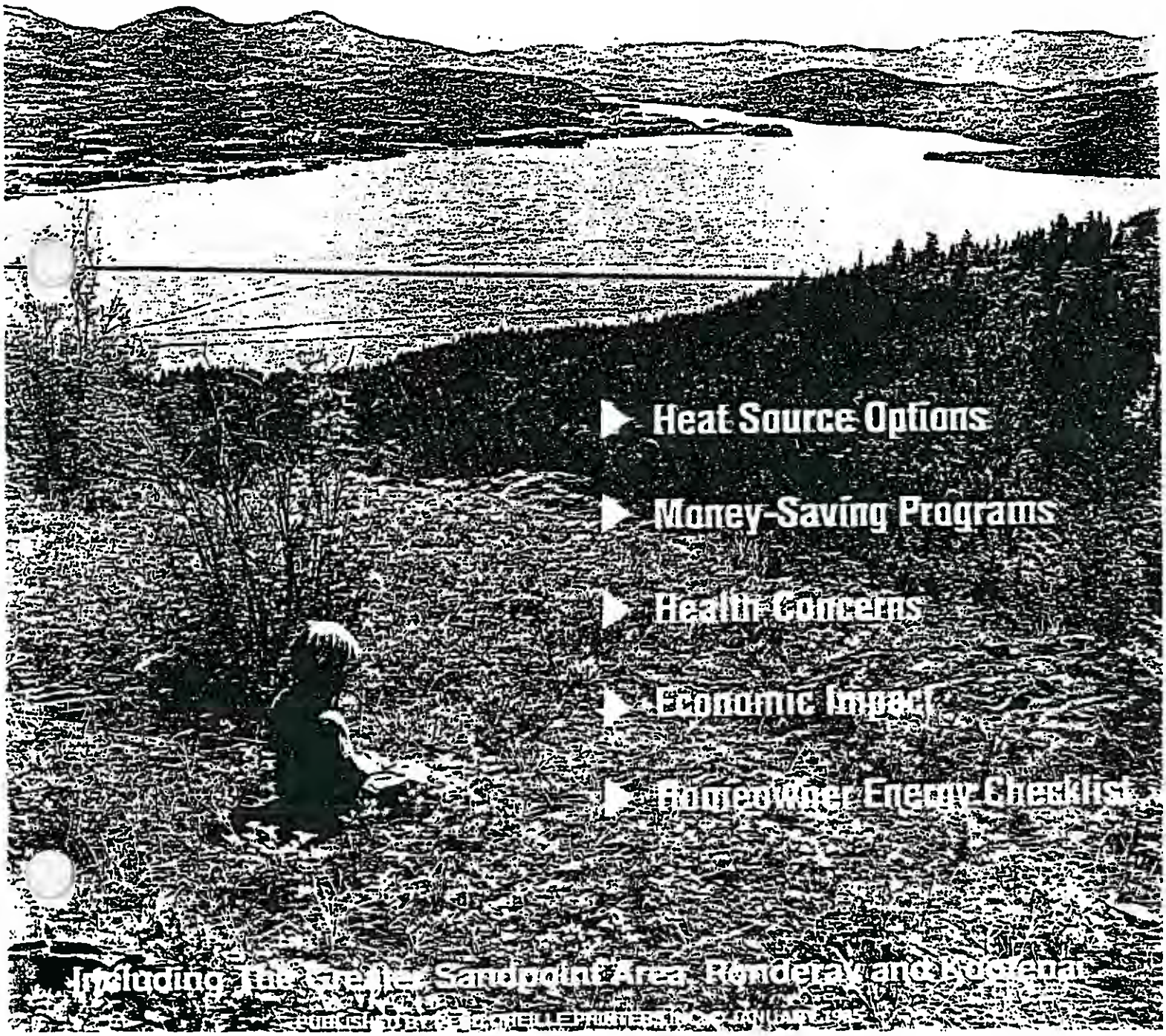
Source: Idaho State Transportation Improvement Program, Fiscal Year 1995 through 1997, pages 26 and 31. Approved by Chairman John X. Combo, Idaho Transportation Board, on September 22, 1994; and by Jack T. Coe, Division Administrator, Federal Highway Administration and Terry L. Ebersole, Regional Administrator, Federal Transit Administration on January 27, 1995.

APPENDIX F

F-2: AIR QUALITY, SEARCHING FOR SOLUTIONS

AIR QUALITY

Searching for Solutions

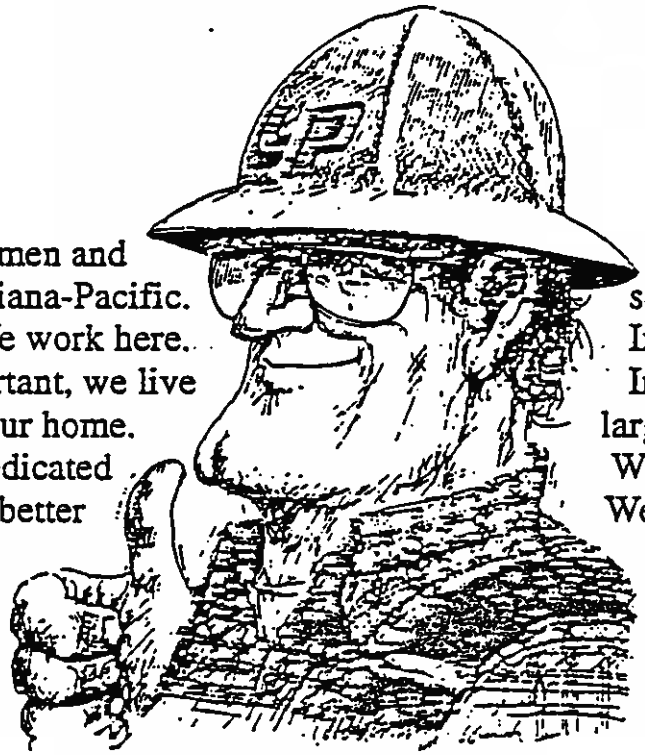


Including Fairbanks, the Tanana Valley, Sandpoint Area, Rondeau and Coeur d'Alene

Publish Date: Bonneville Printing, Inc. January 1995

Clean air, clean water and the good earth. Sandpoint is blessed with all three and we're doing our part to see that it stays that way because ...

WE LIVE HERE, TOO



We're the men and women of Louisiana-Pacific. We work here. More important, we live here. It's our home. And we're dedicated to making it a better place to live. That's why we're active in the life of the community. In schools. In churches. In government. In organizations large and small. We're your neighbors. We're Louisiana-Pacific And we like it here.

Louisiana-Pacific

P.O. Box 249 Sandpoint, Idaho 83864 263-3145

Air Quality:

Searching for Solutions

January 1995

Contents

Introduction	1
The area's non-attainment battle	2
Reclassification	4
Task force: A Search for solutions	5
Questions & Answers	7
Health concerns	8
The economic impact: Changing business	11
The role of local government	12
Idaho Tax Credit	12
Heat source options	14
Natural gas	14
Electricity	14
Wood stoves	16
Pellet stoves	16
Heat pumps	18
Water furnace	19
New technology	19
Money saving programs	20
Wood stove legislation	22
Weatherization	22
Glossary	23
Homeowner's energy checklist	27

Sandpoint's possible reclassification as a serious non-attainment area has been referred to as a train on a track with no brakes.

A collision, say Environmental Protection Agency officials, is "inevitable."

Not so, argued a community task force made up of local business leaders, governmental officials and residents.

Through a series of misadventures, missteps and miscommunication, the area's State Implementation Plan was late.

This publication is designed to increase the community's awareness and get us all involved, to make us part of the solution, not the problem.

We have made great strides — a new street sweeper has kept the streets clean, a buy-out program has removed almost 60 uncertified stoves from circulation.

All that's needed is more time — time to implement the rest of programs planned to clean up the air and time to give the ones already in place a chance to work.

As a community, let's work together to continue what we have already begun.

Area fights to reach attainment

Sandpoint's battle with air quality seems to be the plot of a *Twilight Zone* episode.

After all, the area is tailor-made for postcards — wide blue skies, majestic mountains and the state's largest lake.

However, the area's battle to stay off the Environmental Protection Agency's "serious" non-attainment list for violation of federal air quality standards is no laughing matter.

The area, which includes Sandpoint, Kootenai and Ponderay, was listed as a "moderate" non-attainment site by the EPA in 1987 and reclassification to serious carries potential heavy sanctions.

Sanctions which range from withholding of federal highway funds on the state or local level to "two-for-one" emission limits which mandate that before any new industry comes into the area, twice the emissions it produces must first be reduced among existing industries.

The Division of Environmental Quality has applied for an extension from the EPA to delay reclassification for one year. The extension would allow the community time to gather more data and prove it's trying to reach attainment.

"We're waiting for final confirmation," said Dan Redline, DEQ air quality analyst. "We should know within a month so we can move forward."

As part of the Clean Air Act, the EPA can grant extensions if a community has at least one year with no violations and needs additional time to gather data. Up to two extensions can be granted.

If the area meets federal air quality standards at that time, it will be reclassified as an attainment area.

The issue is not "something that will go away overnight," Redline said.

It will take continued efforts by the community task force and area residents to clean up the area's air.

Once that happens, a maintenance plan must be developed and followed.

"Once you clean up the air, you can't get rid of everything and revert back to the beginning," said Redline. "It requires a continued commitment by the community so it won't reoccur."

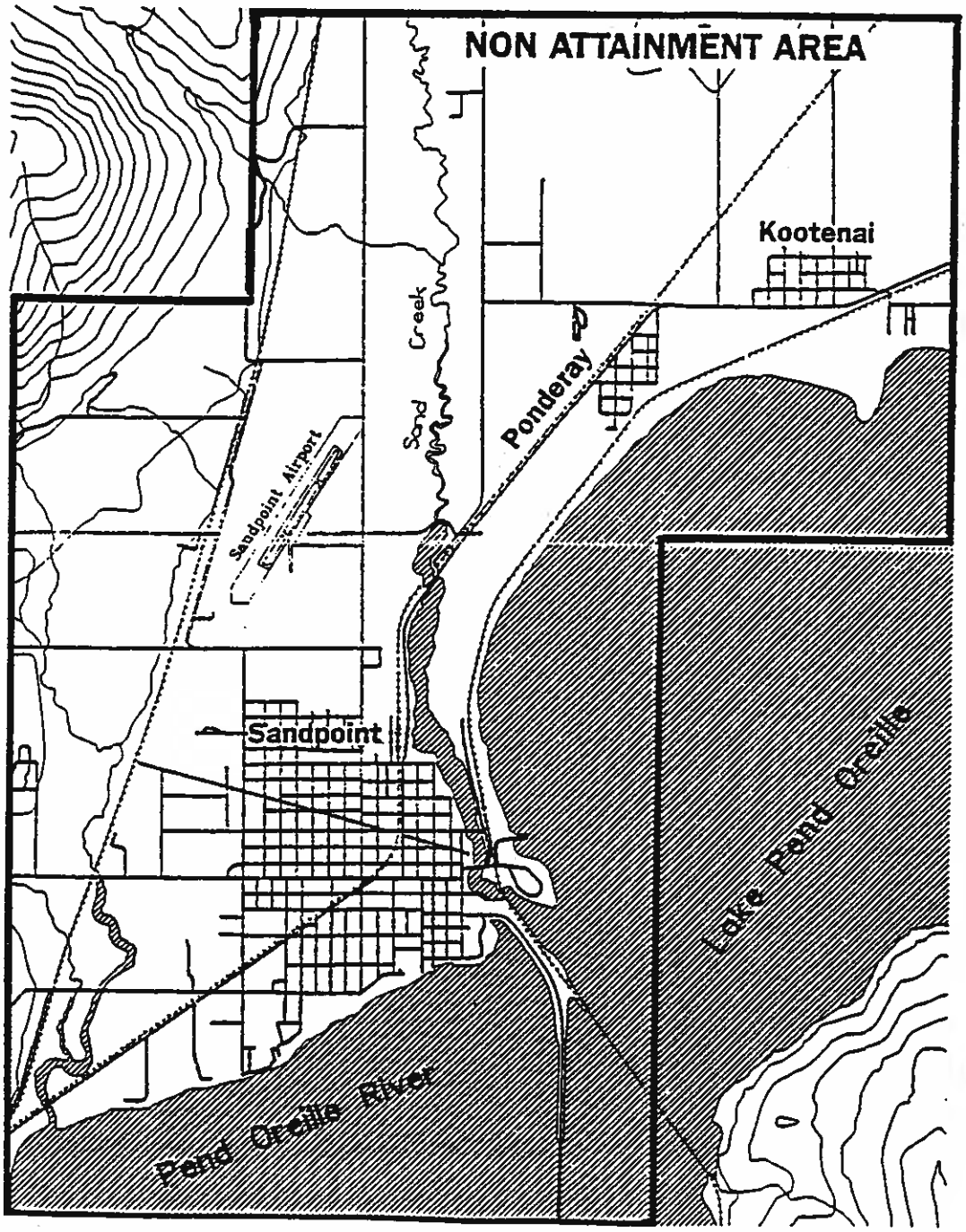
There has been some debate on whether the Sandpoint area missed the message that the air quality problem was a serious one or whether the message was ever received.

It may never be known what actually happened, said Jonathan Coe, executive director of the Greater Sandpoint Chamber of Commerce.

What is important is to concentrate on the problem at hand, work out a fair solution and bring the area into compliance.

The area first came to the

See HISTORY, page 3



History

Continued from Page 2

[illegible]tion of the DEQ in [illegible] when initial monitoring of the area's air quality showed violation of federal air standards. A year later, monitoring equipment was stationed on top of the Sandpoint post office.

The DEQ monitors air quality every other day from October to March and every sixth day from April to September.

Over the past eight years, the Sandpoint area has recorded nine PM-10 particulate violations — most of which have occurred in the late fall when strong high pressure systems have trapped pollutants in the air.

The latest violation occurred last year during 1994's Winter Carnival when a Christmas tree bon[illegible] contributed to a viola[illegible] of federal standards.

The DEQ has traced the area's air quality problems to three main sources — wood stove smoke, fugitive road dust and industrial emissions.

In the wintertime, wood stove smoke and road dust cause the most problems with smoke generating about 35 percent of the pollutants and road dust contributing another 28 percent.

On an annual basis, smoke generates about 15 percent of PM-10 particulates, road dust 46 percent and industrial emissions 25 percent. Building construction accounts for another 11 percent.

Over the past few months area industry leaders, along with the Greater Sandpoint Chamber of Commerce, have fought to raise the community's awareness and forge a plan to bring the area into compliance with federal air guidelines.

The plan drafted by the task force outlines a three-pronged effort to bring the area into attainment — a wood stove buy-out program, higher quality sanding materials and a public awareness campaign.

Sandpoint and DEQ officials have said they plan to step up efforts to inform community residents when the area gets close to the "red" zone.

When the PM-10 count reaches 100, residents will be asked to voluntarily cut back on wood stove use.

In addition, the Sandpoint Independent Highway District will step up street sweeping, use cleaner sanding material and use a liquid de-icer.

If the area is reclassified as serious, those steps — and others — would likely become mandatory.

A State Implementation Plan for the area was drafted by the DEQ two years ago, which includes much of the steps implemented by the task force.

The SIP also called for a series of permits for four area industries. However, those have since been put on hold while new data is reviewed.

Because of changes in the permits and EPA mandates, the DEQ is in the process of revising the SIP, which was rejected by the federal agency last August.

That revision includes a new computer model, which could result in further changes in the plan.

Regardless of what happens with the SIP, in the end the responsibility for resolving the area's air quality problems rests with the community.

"What the community can do is stay involved and stay informed," said Redline.

A community effort is the key to finding a solution, agreed Coe.

"We as a community are always most effective if we can organize ourselves in a cooperative way to respond to a problem like this," he added.

Credits:

Caroline Lobsinger .....Writer/editor
Scott Johnson ..... Sales representative

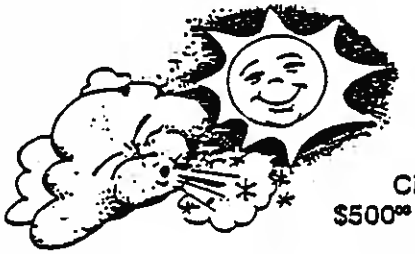
The city of Sandpoint provided the distribution of Environmental Protection Agency air quality wood stove tradeout grants.

Cover photograph by Duane D. Davis, courtesy of the Greater Sandpoint Chamber of Commerce.

Additional copies available at the Greater Sandpoint Chamber of Commerce, advertisers, and Pend Oreille Printers.

A Pend Oreille Printers Publication

© January 1995



Save **Money** & **Breathe** Easy

City of Sandpoint
$500.00 grants still available

Serving Bonner & Boundary Counties

FOR ALL YOUR HEATING NEEDS — LICENSED & INSURED

- Gas • LP • Electric • Oil
- Wood • Boilers • Sheet Metal
- New Construction • Remodeling • Mobile Homes

24 HOUR EMERGENCY SERVICE
ALL MAKES & MODELS

Cometto's HEATING & COOLING

Residential & Commercial

HEIL Authorized Sales & Service

FREE ESTIMATES
265-2247

Change out your non-approved heating unit today!

METALS RECYCLING
ALUMINUM, COPPER, BRASS, STEEL

CALL US FOR CURRENT PRICES ON RECYCLABLE ITEMS.

GUARANTEED DESTRUCTION ON SCRAPPING STOVES FOR THE STOVE CHANGEOUT PROGRAM

Buying and selling the basics.
Pacific

1000 TRIANGLE DR.
SANDPOINT

263-2584

Extension may halt reclassification

By July, Sandpoint area residents will know whether the community will be reclassified as a "serious" non-attainment area by the Environmental Protection Agency.

According to the Clean Air Act, communities which failed to bring their air quality into compliance with federal standards by Dec. 31, 1994, will be reclassified.

Ambient standards for PM-10 are a particulate count of 150 for a 24-hour period, which the Sandpoint area has violated nine times in the past eight years, and an annual average of 50.

In many ways, reclassification is a matter of the level of enforcement. A voluntary program — such as a ban on wood stoves during bad air days — becomes mandatory.

The timelines are more stringent and there is less flexibility.

Where "reasonably available" measures were accepted, "best" possible measures are now mandatory.

Under the reclassification procedure, the assumption is that voluntary measures failed to bring the area into compliance and that additional, more stringent standards are necessary.

In Sandpoint's case, "serious doesn't mean you have worse air," said DEQ air quality analyst Dan Redline.

"It just means you haven't met the deadline."

The "light at the end of the tunnel" is actually a combination of hard work and community effort, Redline said.

If the EPA grants the area an extension to gather more information because of "one bad year," it doesn't mean the area can just sit back and not make changes.

It means continuing to execute the SIP and working to bring the area into compliance.

The other route open to the community is if violations are caused by sources outside the immediate area — such as dust storms from the Palouse. Such occurrences can warrant a waiver from the EPA.

However, a request for a waiver for the Sandpoint area by the DEQ was denied and the state agency is waiting to hear whether the EPA will grant a one-year extension to gather more information.

While reclassification may be a technicality in some respects because Sandpoint has not fully enacted its SIP, it is something all parties are working to avoid.

"Nobody wants for the area to go serious," said Redline.

"However, the EPA has to follow the laws it's required to uphold."

Did you know:

Sandpoint is one of 197 communities identified by the Environmental Protection Agency as a non-attainment area for one of six pollutants. Cities identified range in size from Lame Deer, Mont., with a population of 1,000 for PM-10 particulates; to Spokane, Wash., with a population of 279,000 for carbon monoxide and PM-10 particulates; to Los Angeles (South Coast Air Basin) with a population of more than 13.5 million for a number of pollutants including PM-10.

Through the efforts of a community-based task force, Kootenai County recently reached an agreement with the EPA and the Division of Environmental Quality to clean up its air within a two-year period — avoiding designation as a non-attainment area for violation of federal air standards for PM-10 particulates.

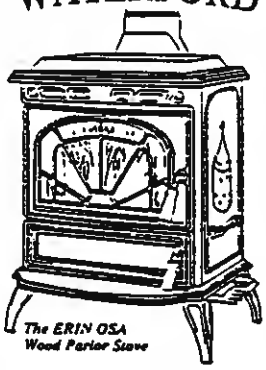
Lippert Heavy Equipment

Commercial Developments
Roads - Private and Forest
Site Preparation
Water & Sewer Systems

Working with you to protect & improve our Environment

(208) 263-5520
Sandpoint, Idaho

Warm Up With WATERFORD



The ERIN OSA Wood Parlor Stove

Energy Efficient Elegance!

- Clean burning design
- Non-catalytic for easy use
- Mobile Home Approved
- Colors in lustrous porcelain-enamel
- Elegant and durable cast iron

See the full Waterford line at:

THE LOG HOUSE
263-4913
3240 Hwy. 95 N

WATERFORD

Task force searches for solutions

— Did you know:

The liquid de-icer and $105,000 vacuum sweeper are "working quite well," according to Sandpoint Independent Highway District foreman Gary Ormiston.

While the winter has been relatively mild, Ormiston said the new equipment has made quite an improvement in how the streets look.

Streets that were lined with piles of dried sand in years past are now "perfectly clean," he said. "That's something that's never happened before."

The highway district has used about 5,300 gallons of the de-icer — at about 50 cents per gallon. While the de-icer is more expensive, it lasts an average of three days and has allowed crews to use less sanding material.

The net result?

The highway district has had to spend less on sand, saving money in the long run.

It's a little like the battle between David and Goliath.

When a community task force began efforts to bring the Sandpoint area into compliance with federal air quality standards, even the most optimistic acknowledged they faced a task of gigantic proportions.

The group has come a long way in just over eight months.

A concerted effort to put together a plan started this summer after four area industries — LD McFarland, Louisiana-Pacific, Interstate Concrete and Lake Pre-Mix — learned they could face a rollback in their operating permits to 1990 levels.

The potential economic impact spurred the industries and the Greater Sandpoint Chamber of Commerce into forming a community advisory task force to coordinate plans with the state Division of Environmental Quality.

The task force split into three groups — a wood stove committee, a fugitive road dust committee and a public awareness committee.

Wood stove committee

The wood stove committee has focused initial efforts on a buy-out program with the help of a $95,000 Environmental Protection Agency grant.

About $67,000 of the grant was targeted toward helping Sandpoint residents upgrade from uncertified wood stoves to natural gas or convert to a certified wood or pellet stove.

Road dust committee

Phone lines between Sandpoint area leaders and the state capitol have been busy the past few months and legislators, local government officials and industry leaders have campaigned to release state funding for new road equipment.

The effort wasn't wasted.

After two years of waiting, a street sweeper made it through a maze of red tape and onto the streets maintained by the Sandpoint Independent Highway District. A liquid de-icer machine has also rolled into town and is in use.

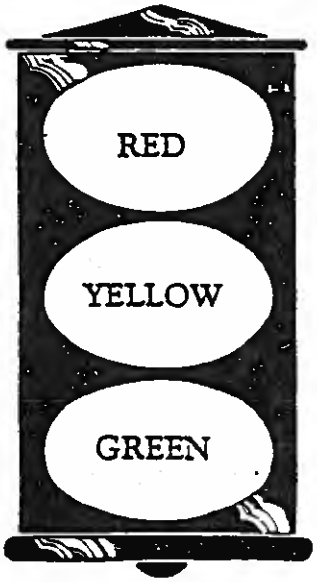
Both have been put into work and are making a difference.

The committee plans to make

See TASK FORCE, page 6

RED LIGHT, GREEN LIGHT

BONNER COUNTY VOLUNTARY CURTAILMENT AIR QUALITY PROGRAM



Please be aware of these air quality stages and act accordingly and responsibly.
Thank You.

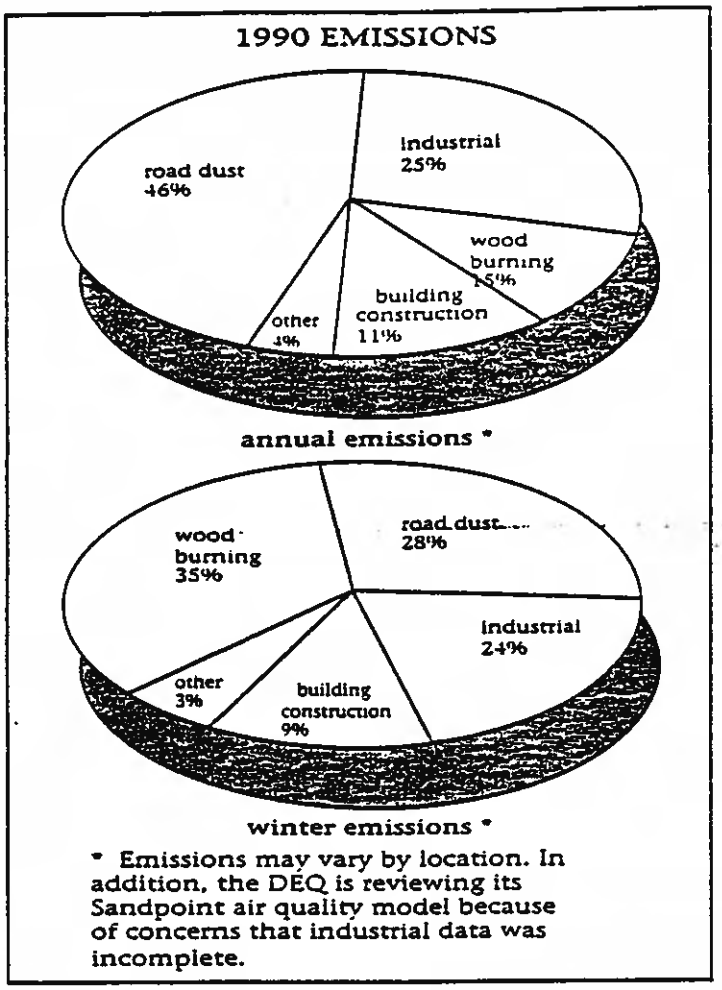
ANNOUNCEMENT CRITERIA

CONDITION RED:
If the estimated previous 24 hour PM_{10} concentration is greater than 100 $\mu g/m^3$ (75+ PSI), and stagnation conditions may persist for 12 hours, an air pollution alert is called. All outdoor open burning is prohibited and any existing open burning shall be extinguished by noon. Wood stove use should be stopped unless it is the sole source of heat. No restrictions apply to pellet stove use.

CONDITION YELLOW:
If the estimated previous 24 hour PM_{10} concentration is from 70 to 100 $\mu g/m^3$ (61-75 PSI), and stagnation conditions may persist for 12 hours, then all outdoor open burning is prohibited and any existing open burning shall be extinguished by noon. Please reduce any wood stove use unless it is the sole source of heat. No restrictions apply to pellet stove use.

CONDITION GREEN:
If the estimated previous 24 hour PM_{10} concentration is less than 70 $\mu g/m^3$ (0-60 PSI), no burning restrictions will be called.

Sandpoint Area
Air Quality Advisory Committee
Idaho Division of Environmental Quality



Task force

Continued from Page 5

formal announcements, along with Sandpoint Mayor Ron Chaney, to advise the community when the area is in "the red zone" — over a PM-10 count of 100.

The idea is to warn residents the area is close to violating federal air standards and let them know what can be done to keep it from happening.

A voluntary ban on wood stove use was called last March when cool nights and dusty roads combined to put the area in danger of going over a PM-10 count of 150.

While the area did not exceed federal standards, it did trigger DEQ limits for voluntary curtailment, prompting a two-week ban on wood stove use.

Public awareness committee

The task force also has worked on publishing a series of pamphlets on everything from how to dry and stack wood, how to burn cleanly and coordinated efforts by local retailers for additional rewards for upgrading to a certified stove.

Without public awareness of the problem and what must be done, task force members say attainment of federal air quality standards isn't possible.

The group has taken the message to the air and print — brochures published, ads run and programs discussed.

The public awareness campaign has been successful on focusing attention on the problem. The key, task force members said, is to keep awareness up and the community involved. Continued plans call for additional brochures, ads and information.

In addition, the Greater Sandpoint Chamber of Commerce and the task force have applied for an EPA grant to fund a half-time position.

The person hired would help the area respond to EPA and DEQ requirements, implement its SIP and coordinate an education campaign.

It's these efforts by committee members which have brought the Sandpoint area this far, Chaney said.

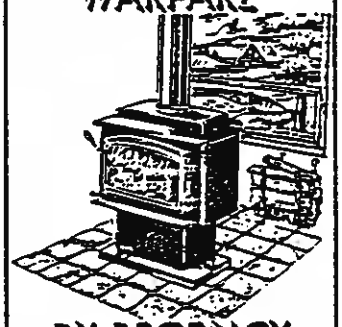
"The project of attaining a status of clean air has been primarily in the hands of volunteers and I commend their efforts," he said.

"They're doing an outstanding job and I feel the community is on the right track to eliminate the problem that faces us."

Information, as the adage goes and committee members emphasize, is the key to survival — and success.

To join the task force, call the chamber at 263-2161.

Come to
First Security Bank
for your
Home Improvement Loan
7% APR
Member FDIC
Currently giving 110%
First Security Bank.
First Security Bank of Idaho
320 North Fourth Street
P.O. Box 1528
Sandpoint, Idaho 83864
(208) 263-7563
A financial service company of First Security Corporation

COLD WEATHER WARFARE

BY REGENCY
ONE good reason to shop Casey's
CASEY'S CUSTOM HEARTH
724 Pine Street
Sandpoint
265-2281
3650 Government Way
Coeur d'Alene
664-6230

Q. How did the Sandpoint area get picked as a non-attainment area by the Environmental Protection Agency?

A. During a random test in 1986, the area was found in violation of federal air quality standards. A permanent monitor was installed on top of the Sandpoint post office a year later. The area was designated a non-attainment area because it did not meet the 24-hour national and state ambient air quality standard for PM-10.

Q. Why is the Environmental Protection Agency regulating wood stoves?

A. Residential wood stoves are one of the nation's largest sources of particulate matter air pollution (smoke). Wood smoke also contains significant amounts of carbon monoxide, hydrocarbons, and many other organic compounds. These pollutants are known to cause respiratory and cardio-vascular illness and contribute to visibility problems and property damage. The EPA requires manufacturers to produce new stoves that emit less pollution.

Q & A

Q. What makes a wood stove clean burning?

A. Wood smoke is unburned fuel, some of which accumulates in your chimney as creosote while the remainder exits the stack as smoke. The key to reducing air pollution from wood stoves is to burn fuel more completely. Three things make a stove clean burning: how it is designed, how it is installed and how you operate it. By operating your stove in ways that reduce pollution, you also save fuel and chimney cleaning costs and reduce the chances of chimney fires.

Q. Does having an EPA-certified stove save me money?

A. Yes. For example, if you have a typical unregulated stove and use three cords of wood (at $100 per cord) and have three chimney cleanings (at $50 each) per season, you can save about $200 per season by purchasing a certified stove — depending on how you use your stove. Nationally, the savings are estimated at $30 million.

Q. What can I do to make a difference?

A. There are a lot of ways — get involved in the local community task force, switch to a cleaner source of heat such as natural gas or upgrade to a certified wood or pellet stove. In addition, work with local officials to pass legislation such as a state-wide ban on uncertified stoves or join a public awareness campaign to get others informed and involved.

Q. Which source of energy should I choose?

A. It depends on a number of things — what

See Q&A, Page 10

How To Stop Smoking, Clean The Air, Save Money And Be More Popular With Your Neighbors In One Easy Step:

Switch To Natural Gas

Let's face it: Sandpoint has a clean air problem. If you heat with wood – even in a new "clean" wood stove, you're contributing to our air quality problem.

To be part of the solution, make the switch to natural gas. A new natural gas furnace will give you lots of warm, comfortable heat for about the same cost as wood. And it will do it without the smoke, ash, and other hassles of wood.

Get the facts on converting to clean, efficient and economical natural gas heat. To find out if gas is available where you live, call your furnace dealer or WWP today.

Make this the year you stop smoking. Convert to Natural Gas.

WWP

Washington Water Power

Smoke can be a deadly problem

Health concerns prompt EPA guidelines

For some, the smell of wood smoke brings back childhood memories of sitting around the campfire telling ghost stories.

For others, it has become a danger signal.

Wood smoke, largely from uncertified wood stoves, has become a major part of the air pollution problem in Bonner County along with road dust and industrial emissions.

Smoke is composed of small organic particles and, along with dust and other particles considered to be particulate matter, is regulated by the federal government. Wood smoke is a complex mixture of carbon monoxide, gases and particulate matter.

In Bonner County, wood stoves and fireplaces account for an average 35 percent of the area's total air pollution during the wintertime.

Particulate matter from wood stoves is produced mainly in the winter when stagnant air and temperature inversions limit air movement, "trapping" the pollution close to the ground and keeping it in our breathing space.

A growing body of evidence indicates medical consequences after extensive exposure to wood smoke.

Because the particles in wood smoke are too small to be filtered by the nose and upper respiratory system, they wind up deep in the lungs. They can remain there for months causing structural damage and long-term problems.

Poisonous and cancer-causing chemicals often enter the lungs by adhering to tiny particulate matter (such as wood smoke particles).

Wood smoke exposure, on a long-term basis, can cause reduced lung function and an increase in the severity of existing lung disease. It can aggravate heart conditions, lead to increased respiratory illnesses in children and aggravate asthma, emphysema, pneumonia and bronchitis as well as irritate the eyes and trigger headaches and allergies.

In addition, wood smoke interferes with normal lung development in infants and young children.

The cancer threat from air pollution is a serious public health concern. Most of the wood smoke cancer research before 1985 focused on identifying the components of soot or the particulate portion of wood smoke. In 1985, the EPA started a major long-term research program, the Integrated Air Cancer Project, to clarify the sources of air pollution and population exposure and to estimate future cancer risk.

The research has found motor vehicles and wood stoves can be a major source of cancer risk from particulate air pollution. Motor vehicle emissions can cause problems because the burning of fossil fuels produces a number of different compounds associated with the soot, or particle phase of air pollution.

EPA researchers estimate that the lifetime cancer risk from wood stove emissions may be 12 times greater than the lifetime cancer risk from exposure to an equal amount of cigarette smoke.

EPA researchers estimate that the lifetime cancer risk from wood stove emissions may be 12 times greater than the lifetime cancer risk from exposure to an equal amount of cigarette smoke.

The figures are not actual cancer risks, but an estimate based on comparisons to known carcinogens.

Individuals most at risk include infants, children, pregnant women, senior citizens, cigarette smokers and ex-smokers as well as those who suffer from allergies, asthma, or any other heart or lung illness.

Even healthy individuals are cautioned to limit heavy outdoor physical exercise (such as jogging) during periods of very poor air quality or high levels of particulate air pollution.

Several studies have found that home use of wood burning stoves increases the risk of lower respiratory tract infections such as brochiolitis and pneumonia in young children.

Newer EPA-certified stoves release much less smoke than older, uncertified stoves although they still require dry wood, proper installation, operation and maintenance to minimize air pollution.

The bottom line?

Less smoke means cleaner air — and better health.

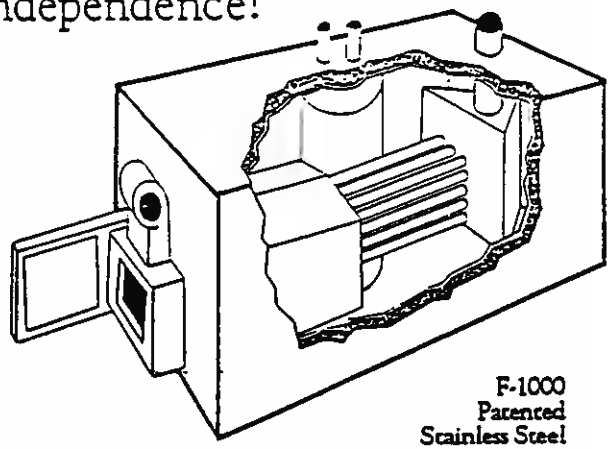
Pollution Standard Index

Descriptor	Index	Health effects
Good	0-50	None
Moderate	51-100	None
Unhealthful	101-199	Mild aggravation of symptoms in susceptible people.
Very unhealthful	200-299	Significant aggravation of symptoms and decreased tolerance in persons with heart or lung disease with widespread symptoms in general public.
Hazardous (a)	300-399	Accelerates onset of certain diseases, significant aggravation of symptoms in healthy population.
Hazardous (b)	400+	Can cause premature dealth of the ill and the elderly. Activities of healthy people will be restricted.

The Future ...

Your key to energy independence!

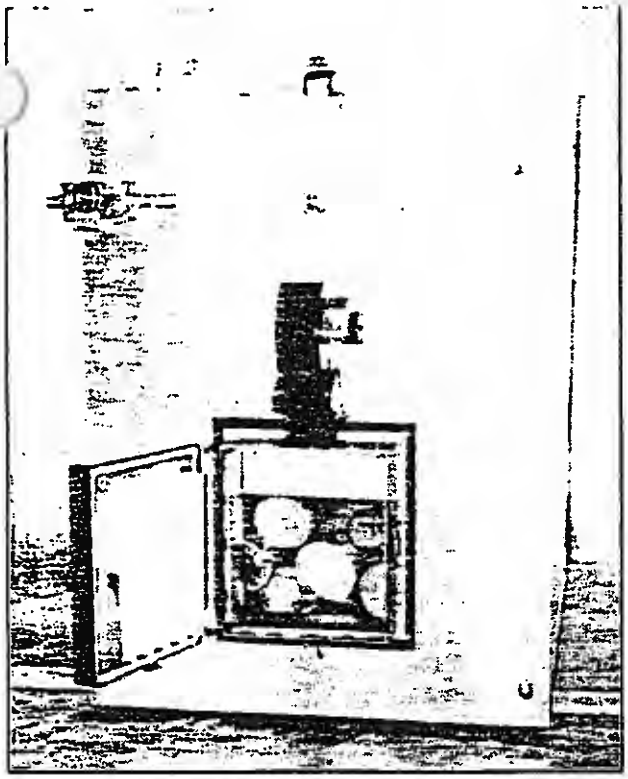
What Makes
The Future Stainless Steel Water Furnace
The Smart Choice?



F-1000
Patented
Stainless Steel
Water Furnace

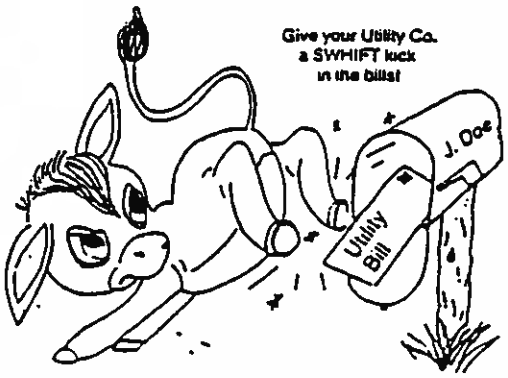
Meets EPA Guidelines

* One 4 Hour Fire Every Two Days For 100% Of Your Heat And Hot Water
  (Average During Winter. One Fire Every 12 Days Average During Summer.)
* 1000 Gallons of Heat Storage Gives You 750,000 to 1,000,000 Usable BTU's Before You Need to Build Another Fire!
* Summer Time Air Conditioning
* Stainless Steel Construction
  * No Rust * No Chemicals Needed



F-1000 *Future* Water Furnace

* Burns Up To 50% Less Wood!
  The Future has over 10,000 square inches of thin wall stainless steel heat exchange area! Ask the competition how much they have and how thick it is. Most use 1/4 inch thick mild steel that rusts! Ours is 1/16 inch stainless steel for long life and faster heat transfer. The flue temperature of *The Future* is usually only 250 to 350°F giving you minimal heat loss.
* Advanced Controls
  * Automatic Combustion Air Fan Shut Off
  * Automatic Fire Suppression If Water Gets Too Hot
* Clean Burning Fan Forced Combustion
* 100% Clean Thermostatically Controlled Heat! No smoke, odors, firewood mess, or dry air in your home!
* *The Future* Pays For Itself In Energy Savings!



SWHIFT Systems Inc.
5600 Jacobson Road
Sandpoint, Idaho 83864
Phone/Fax (208) 265-4250

Bill's Garage & Pellet Stove Designs

New & Used
Pellet Burning Display Models

AS LOW AS $475

1 FREE ton of pellets with new stove purchase*

COUPON SAVE $200.00 CASH!

Stoves, Furnaces, Conversions
Pellet Barbecues
Auto Repair

MONDAY-THURSDAY

315 Forest *Just off Cedar*

253-2041

Bill & Kay Drumwright, OWNERS

$200 COUPON

$200 COUPON

POSSIBLE $500 TRADE IN WHILE SUPPLIES LAST
*While Lignetics promotion lasts. See "Free Fuel" advertisement.

30% to 50% More Heat!

Heat Efficient
ENERGY LOGS are tightly compressed from 100% dry wood shavings. There are no binders or chemicals. ENERGY LOGS are high in combustion resulting in a clean, hot fire that leaves little or no creosote or residue deposits on the interior of your firebox. That leaves very little ash for cleanup. Our ENERGY LOGS provide a cleaner, more efficient and safer fire than regular firewood.

NORTH IDAHO ENERGY LOGS
OTHER FIRE LOGS
TAMARACK
FIR
PINE

30% TO 50% MORE HEAT THAN SAME QUANTITY OF FIREWOOD

1 Unit of Energy Logs = 1½ to 2 Cords Firewood

Net Volume = 28.8 Cubic Feet
Net Weight = 62.5 Lb/Cubic Ft.

- 100% Natural Wood
- Absolutely NO ADDITIVES
- Higher Heat Efficiency
- Longer Burning
- Easy Availability
- No Bugs or Insects
- Chimney Emissions Cut In Half
- 6-7% Moisture Content
- Cleaner Air
- Easy Handling
- Log Weight is 7-8 Pounds Each
- Approx. 68,000 BTU's Per Log
- Less Storage
- 240 Logs Per Unit
- Packaged, Banded and Poly-Wrapped in Three 80 Log Sets
- Burnable Pallet

"A Warming Trend"
NORTH IDAHO
ENERGY LOGS INCORPORATED

P.O. Box 571
Moyie Springs, ID 83845

(208) 267-5311

Q&A

Continued from Page 7

your home's layout is like, what's available and how much you want to spend, both in time and money. What may be right for your neighbor, may be all wrong for you, so research the options from wood stoves to natural gas, compare the costs, ask questions and decide.

Q. Can I save money by weatherizing my home?

A. Definitely. Not only does it help you save money since it doesn't take as much energy to heat your home, but because you're using less energy, less pollutants are released into the air. Local utilities often offer an energy audit, at no or minimal cost. The audits target the areas in your home which need improvement and offer suggestions on what you can do.

Q. How can I get the most from my wood stove?

A. First, make sure your stove is EPA-certified. That ensures it operates efficiently and cleanly, giving you a better return for your money. Second, make sure it's installed correctly. A stove that's not set up right, won't operate at peak efficiency — costing you money. Third, burn smart. The quality of wood can have a dramatic effect on your stove's efficiency. Properly seasoned wood (left to dry for at least nine months) ignites quickly and burns cleanly. In other words, "split it, stack it, dry it."

Q. Since road dust is one of the area's major sources of pollution, what can I do to help out?

A. If you're driving on an unpaved road, slow to 20 mph and stay in the travel lanes and off the shoulders of paved roads. Keep your car and the street in front of your driveway clean so you won't track dirt onto roads. In addition, move your car off the street when cleaning crews are in your area. Take a look in your rear view mirror, if you see a trail of dust, slow down.

Q. How can I reduce emissions from woodburning.

A. First, consider updating to a new, EPA-certified wood or pellet stove. This is by far the most effective means of decreasing, and virtually eliminating, wood stove emissions.

Second, when purchasing a stove, be sure to consider size. If you buy a stove that delivers too much heat for your needs or floor plan, you'll have to damper it down to a lower, less efficient level, thus creating more pollution.

Third, properly sized and insulated chimneys are mandatory to ensure adequate draft and clean stove operation.

Fourth, properly seasoned wood is critical for a clean burn.

Fifth, "tune up" your stove as often as you do your car. Regular maintenance keeps a stove clean.

Changing rules, changing business

It's not an easy thing.

Balancing profits, federal mandates and customer satisfaction.

The dance changes every day — give a little here, take a little there — with businesses, communities and governments trying to keep pace with the changing music.

The "music" these days is the pending reclassification of the Sandpoint area to a "serious" non-attainment area, which brings potential new operating permits along with it.

The economic impact of the permits, and of trying to meet federal and state clean air standards, could be a big one, said local industrial leaders. It not only could change the way they do business, but whether they do business at all.

The four businesses — LD McFarland, Lake Pre-Mix, Interstate Concrete and Louisiana-Pacific — have a combined work force of more than 150. Another 100-150 jobs are tied to L-P mills in Chilco and Priest River.

The combined payroll is in the millions.

"Once people were aware of the problem and its impact, it was a strong motivation," said Jonathan Coe, executive director of the Greater Sandpoint Chamber of Commerce. "It motivated us in a hurry."

For now, the threat of permits which mimic 1990 levels is gone — the Division of Environmental Quality plans to revise its computer model of the major sources of PM-10 particulate matter. It's expected to be several months before it's completed.

In a way, it was those permits — and the major impact they would have — which spurred the community to get involved and get down to the hard work of bringing the area into compliance with federal air quality standards.

"When the proposed permits came out, in my opinion, they were a very hastily put together document," said L-P manager Frank Steenvoorden.

The permits failed to take into account the nature of the industries, how they operated and what was involved, he said.

The decision to get involved wasn't a hard one to make, industry leaders said. It was simply a matter of survival.

Restrictions imposed by the permits would force them to shut down for the

See ECONOMY, Page 15

Did you know:

Industries that produce emissions may require a permit from the Division of Environmental Quality in order to operate.

The permits set limits on when the business can run, the amount of emissions it can produce on an annual basis, what equipment it may need to have to cut emission levels and other standards which dictate the way the company can operate as well as the number of days production is possible.

Clean up the air

and receive Idaho Tax Deduction in '95

An Idaho taxpayer who installs an alternative energy device (to include: natural gas, propane, EPA certified wood burning or pellet stove, solar, wind, gas thermal or a fluid to air heat pump) in their home, may deduct from their taxable income, 40% of the expense (in the year when device was installed), 20% per year thereafter for a period of 3 consecutive years. The amount shall not exceed $5,000 in any one taxable year.

To deduct any amount from your taxable income, you must surrender your uncertified stove for its destruction.

For more information, contact the Idaho State Tax Commission at 1-800-972-7660.

Sandpoint Area Air Quality Advisory Committee

Idaho Division of Environmental Quality

Leaders take charge in air battle

Responsibility, teamwork key to solving problem

All for one, one for all.

Much of the responsibility for meeting air quality standards lies with the community.

Too much wood smoke? Without the purchase of certified wood stoves or switching to natural gas, the problem won't drift away on its own.

Lots of dust? Without the combined efforts of local government officials, business leaders and legislators, a new street sweeper and liquid de-icer wouldn't have happened.

Industrial emissions? Local business leaders are working with the Idaho Division of Environmental Quality on a permit process that allows them to operate and keep the air clean.

Responsibility also falls on local officials.

"I'm working behind the scenes with the EPA and the DEQ, as well as Sens. (Larry) Craig and (Dirk) Kempthorne to lessen the economic impact of a serious designation," Sandpoint Mayor Ron Chaney said.

"I feel it is the city's responsibility to create and maintain a healthy, pollution-free atmosphere in which our citizens can live. However, we must also work with (all parties) to minimize any negative economic effect they may have while they address air quality concerns."

In the end, it is up to the community to decide what is important, said DEQ air quality analyst Dan Redline.

"We want to find a balance for the community as well as come up with a plan that shows (air quality) improvement," he said.

Much of the area's progress toward cleaner air has come through the task force's efforts — the wood stove buy out program, bringing new road equipment to the area and a revision of the permits.

Continued efforts — and acceptance of the responsibility — are what it's going to take to clean up the area's air. It's an effort that must be made by both residents and government officials.

"We do care about the health of our community, both physical and financial," Chaney wrote in a recent letter to the EPA.

"With the technical assistance from your agency and the Idaho Division of Environmental Quality, we can correct our problem. Please just give us the time to permit the steps we have taken and others to be taken to have their effect."

New stove brings state tax break

Upgrade also results in lower home heating costs

Installing a certified wood stove or upgrading to gas isn't just a matter of what's best for air quality.

It's also good for your pocketbook.

The Idaho Legislature approved a bill last year which allows Idaho residents to deduct alternative energy devices, its installation and remodeling for such projects on their taxes.

That adds up, especially when you can deduct 40 percent of the cost for construction, remodeling, installation or purchase of the device for the year it was completed or put into use.

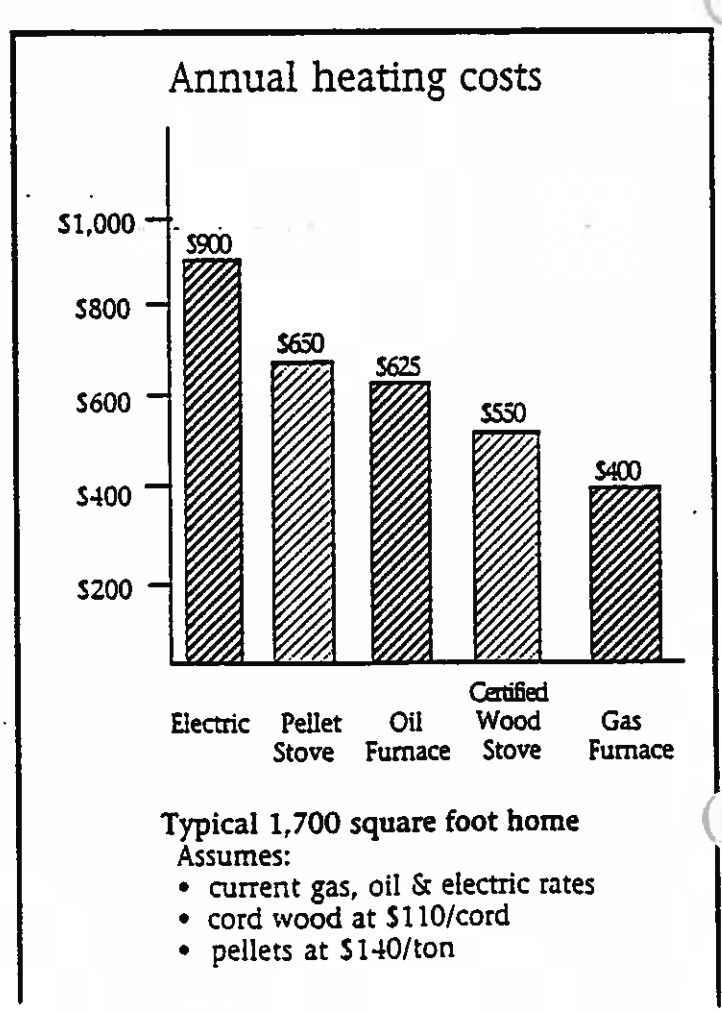
You then can deduct 20 percent a year after the initial deduction for a period of three succeeding years, providing the total amount of the deduction does not exceed $5,000 in any one year.

Individuals who purchase a home in Idaho which has an alternative energy device also can deduct some of the costs if the full deduction has not already been taken. The amount of the allowable deduction to the homeowner depends on the balance of the deduction that remains.

According to Idaho Code, an "alternative energy device" means a system or mechanism using solar energy, wind or geothermal resource, primary to provide heating, cooling, or produce electrical power.

The device can include a fluid-to-air heat pump, natural gas or propane heating or a wood burning or pellet stove which meets current Environmental

See TAXES, Page 19



MOUNTAIN SPA AND STOVE

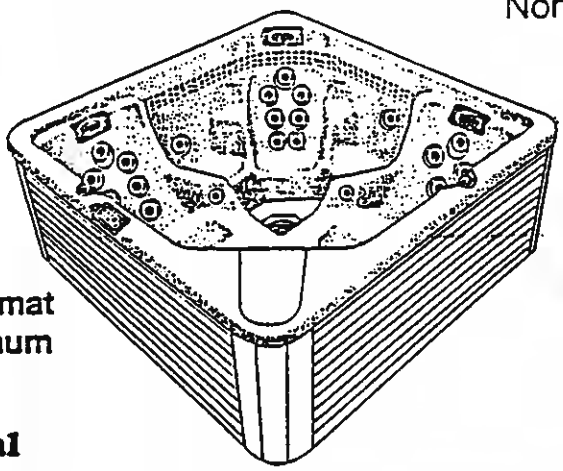
North Idaho's Largest Spa Dealer

DIMENSION ONE Spas
Everything else is just hot water.

Relax Your Mind and Your Body

North Idaho's Largest Spa Dealer featuring Dimension One Spas... The Spa Built for North Idaho.

WE GUARANTEE IT!



Diplomat Platinum

Spas cost less than $10/Month to heat

GUARANTEED

Total Satisfaction Guaranteed
(or your money Back)

100% FINANCING

Spas Starting At...

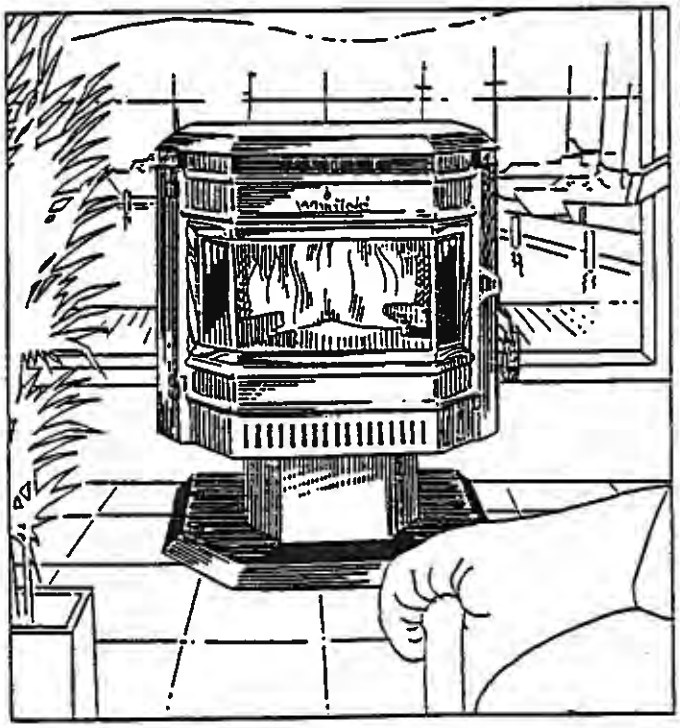
$2495 or $80 Per Month O.A.C.

Whitfield® Pellet Stoves. The World's First and Finest.

Large Selection of Stoves

- Pellet Stoves
- Gas Stoves
- Wood Stoves

Whitfield®
Pellet Stoves
Advantage III



Whitfield® pellet stoves are an excellent clean-burning home-heating alternative. And because they burn compact wood pellets (made from 100% recycled wood products), they take up less space. Plus, they're easy to install, requiring no conventional chimney. No wonder Whitfield in the most popular pellet stove in the world.

MOUNTAIN SPA AND STOVE
1225 Michigan St. Sandpoint
263-0582

Energy options heat up

From natural gas to wood, heating alternatives abound

There's something for everyone.

From wood stoves to natural gas, heating a home has never been easier or been available in so many options.

To determine what's right for you, consider what's available in your area, how much work is involved and the expense. What follows is some basic information on the main sources of heat.

Natural gas

Natural gas is considered by many as about the most "hassle-free" energy source out there.

Natural gas is delivered through underground lines directly to your furnace and you only pay for what you use when you use it.

The cost of natural gas is another plus — natural gas costs 50 cents per therm, about one-third the cost of electricity.

There are no annual maintenance costs. However, if you switch from another source of energy, you need to consider the cost of new appliances — such as a furnace — and what that may do to your budget.

The by-products of complete natural gas production (90 percent efficiency or better) are carbon dioxide (what we exhale when we breathe) and water vapor — making it cleaner than burning wood or oil.

Natural gas and oil furnaces share many characteristics.

Both furnaces circulate a small amount of very warm air to maintain comfort levels. Most incorporate central heating systems, which spread the heat evenly throughout the house.

Natural gas is considered an economical, reliable, clean burning and safe fuel.

Because natural gas is tasteless, odorless and colorless in its natural state, a powerful odor is added to it so small amounts can be detected before escaped gas can cause any problems.

Washington Water Power recently expanded its natural gas lines in the Sandpoint area with new routes running out Baldy Mountain Road, Mountain View Road and Upland Drive. Routes also are planned in other areas. To determine if natural gas is available to your home, contact the WWP office in Sandpoint.

Electricity

Electricity also is considered a safe, reliable form of heat. Given the low cost to produce energy in the Northwest, it also is an economical option.

With the recent purchase of Pacific Power & Light by Washington Water Power, the cost per kilowatt hour will drop to .0582 cents with a minimum bill of $7.42. The cost per kilowatt hour is comparable at Northern Lights, which also services the area.

A variety of systems are available, including furnaces, which provide central heating, and baseboard heaters.

The biggest drawback to baseboard heaters is the cost to operate them. Baseboard heaters often dictate different thermostat controls on each unit and require some clearance from furniture, drapes and bedding.

Electric heat creates no direct pollution on its own because there is no combustion, and as a result, no by-products of combustion.

Baseboard heaters use natural air flow to move warm air away from the appliance. However, the warm air can move up the wall as well as out into the room.

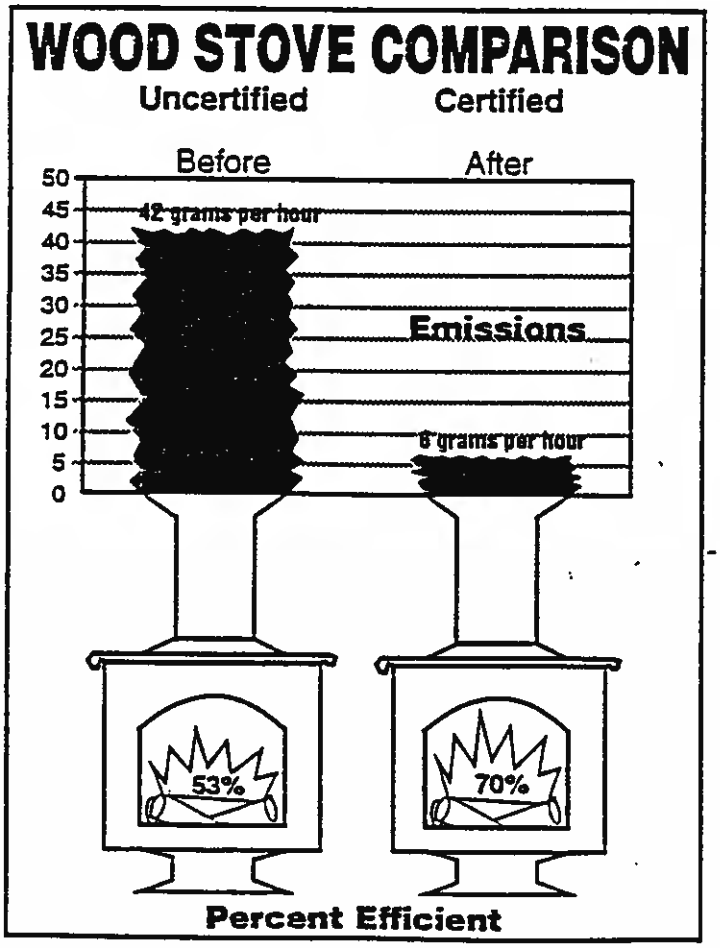
Heat delivered through a system of ducts can deliver more comfort than natural air flow or room-by-room systems. However, adding ductwork to a home can be expensive after the original construction is completed.

See OPTIONS, Page16

Did you know:

Stoves certified by the Environmental Protection Agency reduce cord wood costs and refueling expenses by as much as 25-33 percent compared to wood burning appliances sold just 10 years ago.

Hundreds of wood stoves have been certified by the EPA to meet smoke emissions standards, which require wood stoves to emit no more than 7.5 grams (if non-catalytic) or 4.1 grams (if catalytic) of smoke per hour of operation.



Economy

Continued from Page 11

year in August or September. If that were to happen, they would have to decide if it made sense to shut down permanently.

"The proposed permits would have hit us really hard," said Interstate Concrete manager Larry Peak. "It basically would have shut us down."

In L-P's case, Steenvoorden said the proposed permit would have limited the mill's operation to two months a year. It was more concerned, he said, with the number of days L-P was in operation than the amount of emissions produced.

Whether or not they would have moved if the permits had been enforced, the industry leaders said they couldn't say. It was, added, one option.

The companies have already taken steps to reduce their emissions and make their operations as clean as possible. There are restrictions on how fast trucks can drive, lots are paved or oiled and equipment is brought up to date or an alternative found.

"As a company, we've taken on a real commitment over the last 10 years to be very cognizant of the environmental issues. We're cleaning up our act, we're educating ourselves," Peak said. "Times have changed."

In many ways, there is not much more than can be done.

"The effectiveness of the yard is what would be compromised because if everything were shut down, it would get to a point where we couldn't get done what we need to do," said Fred Omodt, manager of LD McFarland.

"We're in support of clean air and doing everything we can, but when you get down to as little as we put out, you can't take out any more," said Steve Lefrenz, owner of Lake Pre-Mix.

What makes it tough to understand is that they aren't a large part of the problem. Most of the PM-10 comes from wood stove smoke and fugitive road dust. However, business leaders said they are easier to target and it's easier to develop restrictions for them.

"If we all fold up and go somewhere else, (Sandpoint) will still be listed as critical during certain days of the year," said Omodt.

Over the past 10 years, L-P has gone from having eight acres of its 25-acre operation paved to 20-plus acres paved. The mill has installed high-efficiency cyclone units, placed bag houses on truck bins and constructed shelters around them and installed an electrified filter bed system on its smokestack.

Overall, the mill has spent more than $300,000 on its own to upgrade its operation and limit emissions. It has proposed another $100,000 in emission-control measures as part of negotiations with the DEQ on a new permit.

Most of the violations occurred when the businesses were not in operation or not operating at peak capacity.

They don't want special treatment. They want fair treatment — a cooperative effort between the community, business and the state and federal government.

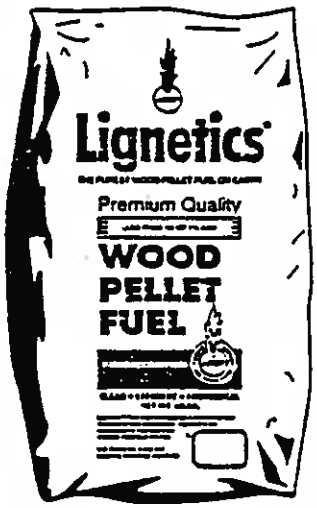
"We're committed to working with the DEQ and the EPA," Omodt said. "We'll do what we can to help provide the solution."

Steenvoorden agreed. He said L-P officials can "live with" restrictions which limit the amount of emissions and pollutions produced.

"Obviously we want to do our part," he said. "Everyone who works in this

See ECONOMY, Page 26

Free Fuel!



* The first 20 people trading out their non-certified wood stove for an EPA certified Pellet Stove will be eligible to receive **1 TON OF WOOD STOVE PELLETS FREE** donated by Lignetics of Idaho.

Upon receipt of your grant money you may pick up your one ton of pellets at the Co-Op Supply on 502 Church St. Be sure to have your certificate of completion with you for verification.

EPA GRANTS AVAILABLE

The EPA has grant money still available to help residents of the city of Sandpoint, a clean air "non-attainment" area, replace their older, non-certified wood stoves, with clean burning natural gas stoves, fireplaces or furnaces, or EPA certified wood-burning devices. Grants up to $500 are available to qualified residents for this purpose. For more information call (208) 263-3407 or stop by the Public Works Dept., Sandpoint City Hall.

CITY OF SANDPOINT
Idaho Division of Environmental Quality
Help clean Sandpoint's air!

Bring this ad to any of the participating dealers listed below and received an additional 10% off the purchase price of your new pellet stove.

Bill's Garage, Pellets and Stove 263-2041
Casey's Custom Hearth & Stove Shoppe 265-2281
The Log House 263-4913
Mountain Spa & Stove 263-0582
Stove Corral 263-1541

Options

Continued from Page 14

Wood stoves

A wood stove can be a safe, cheap and efficient source of heat.

In deciding whether to select a wood stove as your heat source, you need to look at cost, comfort and efficiency.

Deciding whether wood heat is for you means looking at several factors, including the types of wood stoves available. The two main types of stoves are catalytic and non-catalytic.

In general, wood stoves require close attention to operation and maintenance to work safely and efficiently.

Wood stoves are a good choice for people who: are willing to follow operation guidelines, have homes with an open floor plan, and are able to access a free or inexpensive source of firewood.

Technology has helped create wood stoves which are safer and more efficient. However, new technology is only part of the solution for obtaining high performance and low emissions from your stove.

The cost of wood heat is dependent on whether you cut and split your own wood or you purchase your wood from someone who does the work for you.

The average cost of a cord of wood ranges from $100 to $200, depending on the species of wood.

The EPA has certified hundreds of wood stoves that meet smoke emissions standards, which require they emit no more than 7.5 grams (in non-catalytic) or 4.1 grams (if catalytic) of smoke per hour of operation.

Both offer an overall efficiency of 65 percent or more.

Stoves range in cost from $800-$2,000 with the annual operating costs at $100 to $300, depending on whether you purchase or harvest your wood.

Wood stoves should be the smallest size available that efficiently heats your home. In selecting a stove, consider your geographic location and climate, the number of rooms in your home and your home's layout.

Heating is "user-intensive" — wood must be cut, loaded, hauled, split and stacked. However, for many wood stove owners, gathering wood is an enjoyable form of recreation.

Wood stoves are not generally designed to heat an entire home and even heat can be a big problem. It's difficult to heat homes with intricate floor plans and the stoves work best with open floor plans.

Proper installation and operation of the stove is important to ensure you get the most energy from your stove.

It's also important to keep your stove and chimney clean. Creosote can build up, resulting in less efficiency — and, possibly, a fire. Annual chimney cleanings are recommended.

Pellet stoves

Pellet stoves are similar in size and heat output to wood stoves. The primary difference is the fuel and the combustion process.

A pellet stove burns compressed wood fiber pellets, which range in cost from $110-$160 per ton. Unlike a wood stove, which requires manual loading and air supply adjustments, the pellet stove automatically meters the fuel and air supply for an even burn.

The stove requires electricity to operate the fuel and air supply systems, but only draws a small amount — equivalent to a 150-watt light bulb — and the stove usually burns for 24-48 hours before refueling.

The average startup costs range from $1,200 to $2,200. Annual operating costs average $300-$425.

Pellet stoves can be the right source of energy if: you have an open floor plan, you want to reduce the work of hauling and/or chopping wood, you want a self-starting and self-regulating heating appliance, have a poor chimney or no chimney at all, and have a backup source of heat when the power goes out.

Pellet stoves are the least polluting and the most efficient of the new technology wood stoves. They operate at their highest efficiency and lowest emissions at all burn rates.

The stoves burn more efficiently than cord wood stoves because they regulate the air-to-fuel ratio and use a lower moisture content fuel. Pellets ar

See OPTIONS, Page 18

Split it, Stack it, Dry it!

- Split firewood immediately after you cut it. That exposes more surface, letting the wood dry faster.
- Keep your wood pile about six inches off the ground to protect the bottom pieces from moisture.
- Let green wood dry for six to eight months. How dry is dry? Here's a good test: Knock two pieces together. If you hear a sharp, cracking noise, they are dry. If you hear a dull thud, they're wet.

WOOD SHOPPER'S GUIDE

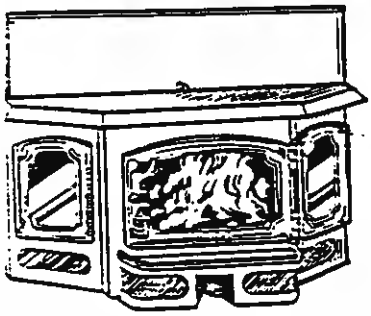
(WRAES Chart Revised)

Species	Heat[1]	Weight[2]	Split	Start	Coals	Sparks
Birch, White	M	3040	E	E	G	Mod
Cedar, West. Red	M-L	2060	E	E	P	Many
Cottonwood	L	2160	E	E	G	Mod
Fir, Douglas	M	2970	E	E	F	Mod
Fir, Grand White	L	2160				
Hemlock	M-L	2700	E	E	P	Many
Larch, Western	H-M	3330	E-Mod	E	F	Many
Pine, Lodgepole	L	2610	E	E	F	Mod
Pine, Ponderosa	M-L	2240	E	E	F	Mod
Pine, White	M-L	2250	E	E	P	Mod
Spruce, Engelman	L	2070	E	E	P	Few
Tamarack	H-M		E-Mod	E-F		Many

[1]VH – Very High; H – High; M – Medium; L – Low.
[2]Approximate weight, lb/cord, for air-seasoned (20% moisture content) wood.
E – Easy; G – Good; P – Poor; Mod – Moderate; Ex – Excellent; V – Very; Dif – Difficult; F – Fair.

LOPI™ ENERGY SYSTEMS

LOPI Stove Line Tops Wood Appliance Rating



LOPI Flush Boy Insert

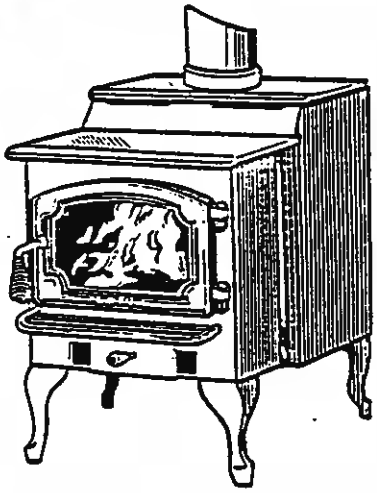
KIRKLAND WA – The LOPI line of woodstoves and fireplace inserts, have achieved the top rating in a recent independent study of all non-catalytic wood heating appliances. The study, compiled by Biomass Publications, compares and rates all EPA non-catalytic lines in the area of particulate emissions (smoke output), efficiency and heat output capacity.

In all categories, the new high-tech LOPI line received outstanding ratings. The area of average emissions for example, the LOPI line has an average emission rating of just 2.6 grams of particulate per hour. (By contrast, older, uncertified models can release up to 75 grams into the air each hour.)

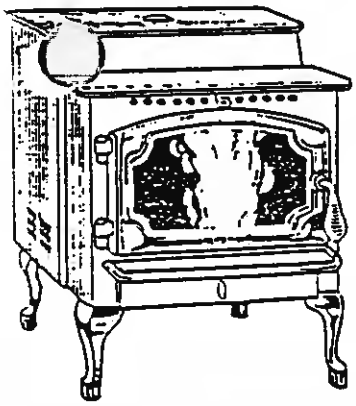
The LOPI's combined #1 overall performance rating reflects an innovative approach to combustion design which dramatically reduces harmful emissions and wood usage, while increasing the amount of heat value extracted from each load of wood. For homeowners, the LOPI line offers a unique value, with fewer trips to the woodpile, more complete home heating, and earth-safe operation.

Best of all, the LOPI line is designed with the user in mind from the start to finish. One-touch precision control, regulates flames and heat output. The LOPI line combines the unique benefits of both radiant and convective heat, and an optional, thermostatically controlled blower system can be added for even more heat distribution. Optional finishing touches for the top-rated line include an optional solid brass door and etched glass designs for the woodstoves or fireplace inserts.

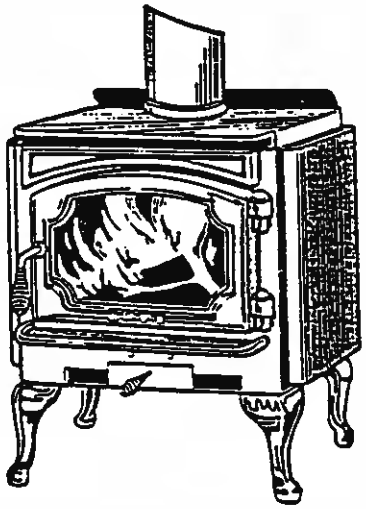
This study concludes the LOPI is today's top value in high-tech, non-catalytic home heating.



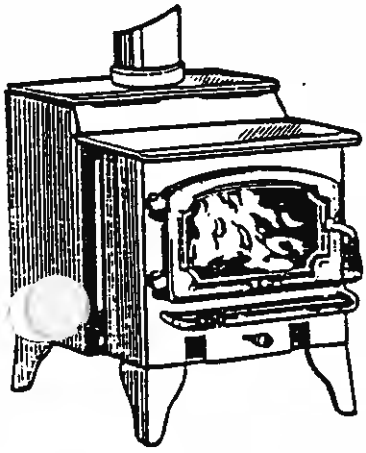
LOPI Spirit Gas Unit on Cast Legs



LOPI 400 Pellet on Cast Legs

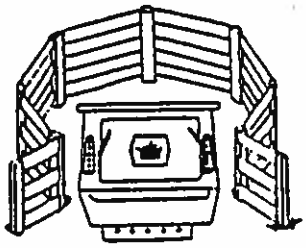


LOPI Answer on Cast Legs



LOPI Liberty 380-520 on Standard Legs

STOVE CORRAL



SALES • SERVICE • INSTALLATION
502 CEDAR ST., SANDPOINT, ID 83864

WOOD
PELLET
GAS STOVES
ACCESSORIES
263-1541

More clean energy for the Northwest

Today, the Northwest's traditional sources of energy are reaching their limits—at a time when the region's demand for energy continues to climb.

As homes and businesses seek new ways to access additional energy, natural gas is providing some sensible answers.

Pacific Gas Transmission Company's pipeline system is bringing the Northwest unparalleled access to low-cost, clean-burning natural gas. As an energy-efficient way to warm homes and an environmentally sensitive way to generate electricity in commercial quantities, gas is one fuel that is helping the Northwest ensure better air quality in the years ahead.

With a major expansion completed just over a year ago, PGT has plans underway to bring even more gas to the region beginning later this year. We're doing our part to help.

As a result, maybe we'll all breathe a little easier.

PGT

Pacific Gas Transmission Company

Options

Continued from Page 16

generally made of wood products that are dried to 6-8 percent moisture content. Seasoned wood (nine to 12 months) ranges from 15 to 20 percent moisture content.

Typically, pellet stoves have an average overall efficiency rating of 80 percent while new technology wood stoves have a 66 percent rating for non-catalytic and a 75 percent rating for catalytic.

Buying a pellet stove is a little bit like buying a new car.

There are a number of models to choose from, and the decision is influenced by performance and aesthetics.

Things to consider in buying a stove include: appropriate size, performance data and your home's floor plan.

Heat pumps

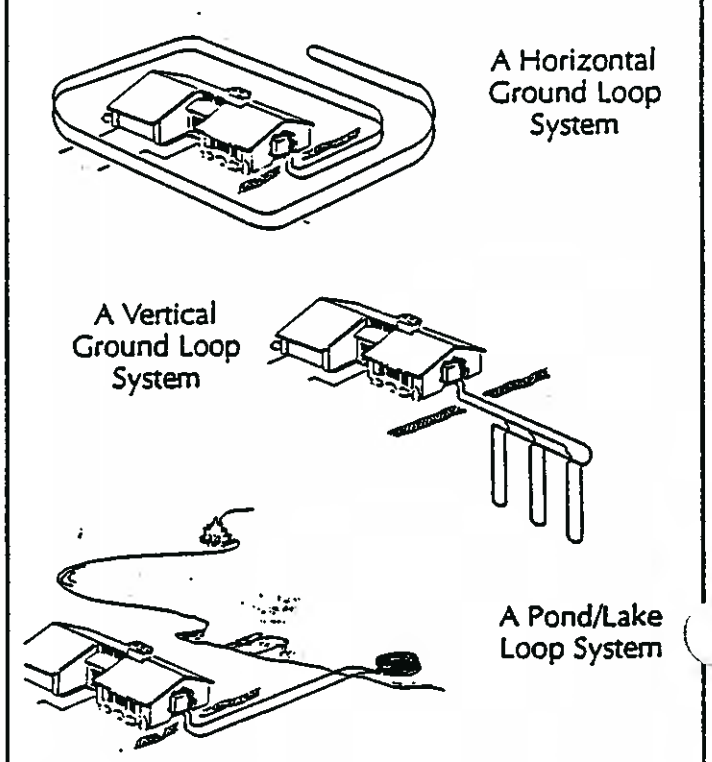
Day after day, the sun warms the earth. That energy source is tapped by one of the several kinds of heat pumps — which can help homeowners heat and cool their homes.

The transfer of heat is made possible with water circulating through a grid of buried pipe, which moves heat from the ground to the heat pump in the winter and from the pump to the ground in the summer.

Like an air conditioner or a refrigerator, a conventional "air source" heat pump operates by moving heat from one location to another. This type of heat pump cools the home during the summer by extracting heat from the home and moving it outdoors. During the winter, it provides heat from the outside air and moves it

See OPTIONS, Page 19

Ground Source Heat Pump Systems



)ptions

)nti[illegible] from Page 18

doo[illegible]

A ground source heat mp operates in the same nner, but uses the earth's mperatures as a heating cooling source.

The installed cost of a ical three-ton system ns from $1,500 to $2,500 r ton. However, the stem is considered very ficient and offers a long-rm payback.

Information on heat mp systems is available om local utilities and ualified installers.

Vater furnace

A newer source of nergy can be found with a ater furnace.

The furnace provides ontrolled heat and hot ater by utilizing hot burn chr[illegible]y (temperatures se[illegible]ore than 2000 eg[illegible]).

The water furnace works at optimal performance if located outside the house in a garage or attached building.

The furnace is a heavily insulated water tank, which ranges in size from 500-1500 gallons, with a specialized wood combustion chamber located deep inside the tank.

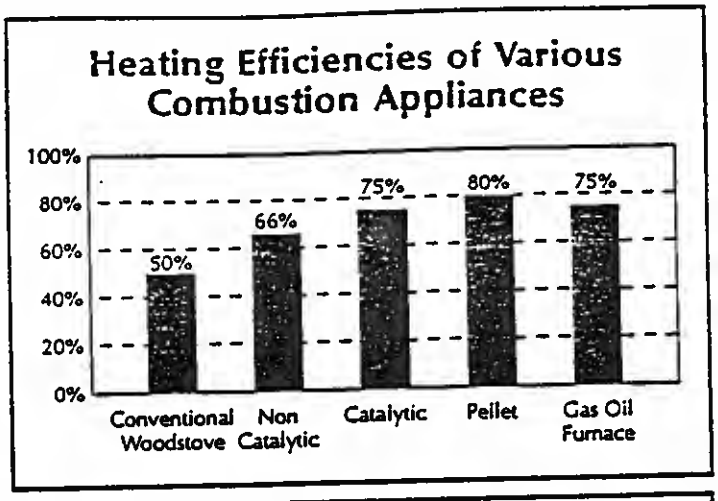
About four hours of burn time brings the temperature in the furnace up to 195 degrees, creating about 750,000 usable BTUs. Heat is transferred throughout the home using existing duct work.

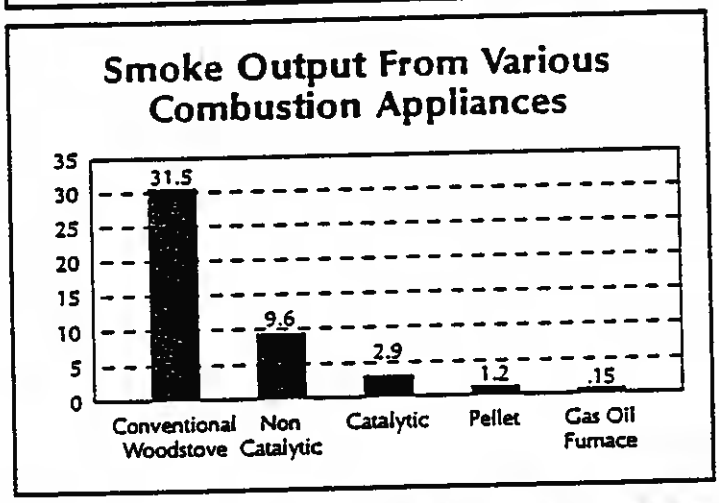
As a result, the furnace uses less wood and produces less smoke than conventional wood stoves.

New technology

Each day, new ideas are turned into potential heating sources. From solar energy systems to those utilizing the earth's thermal

See OPTIONS, Page 26





Taxes

Continued from Page 12

Protection Agency certifica-ion guidelines.

To get the deduction, the uncertified stove must be urrendered to the DEQ or designated agent for destruction.

The bill is an amend-ment of a previous law which gave deductions if a homeowner fixed up their furnace, said state Rep. Jim Stoicheff.

With the problems faced by several communities around the state, legislators wrote the law to emphasize "clean" sources of heat.

The deduction should ma[illegible]itching to natural [illegible] certified wood or [illegible]let stove more affordable.

"I think it will help," said Stoicheff. "I think if you want to make the switch anyway, (the tax credit) [illegible] give you the impetus to [illegible]

PACK RIVER HEATING
RESIDENTIAL • COMMERCIAL
NEW CONSTRUCTION
SALES & SERVICE
WE SERVICE ALL MAKES
Gas • Oil • Electric
Heat Pumps
Sheet Metal
AIR CONDITIONING
AUTHORIZED SALES & SERVICE CERTIFIED HVAC ENGINEERS
FREE ESTIMATES
263-7683
SHOP: 1243 MICHIGAN ST. - SANDPOINT

CLEAN AIR.....IT BENEFITS US ALL.
We support the efforts being made to ensure that our children have what we take for granted.
Clean Air.
"Ask us about our great Home Equity loan products."
Sandpoint Office
263-7591
Member FDIC
Bank of America

HearthStone
Woodstoves and Gas-fired Heaters
The Sterling Gas-fired Heater
Another good reason to shop Casey's
CASEY'S CUSTOM HEARTH
724 Pine Street
Sandpoint
265-2281
3650 Government Way
Coeur d'Alene
664-6230

Need a stove? Funds available

Burning cleaner doesn't have to burn a hole in your finances.

A number of programs are geared toward helping Idaho residents upgrade to either a certified wood or pellet stove, switch to natural gas or learn how to make a home energy smart.

NORTH IDAHO STOVE FUNDING PROGRAMS

	LOAN	GRANT	REBATE	UPGRADE
Dept. of Water Resources	X			X
Farm Home Adminstration	X	X		X
Washington Water Power		X	X	
Community Action Agency		X		X
Idaho Tax Credit				X

Wood stove buyout program

One of the more recent programs is a wood stove buy-out program engineered through the community task force and administered by the city of Sandpoint.

The first few months of the program have been a big success, with at least 60 Sandpoint residents switching to natural gas or upgrading to a certified wood or pellet stove.

That translates into big strides forward in eliminating wood stove emissions as a factor in the area's air quality problems.

The money is part of a $95,000 grant from the Environmental Protection Agency, with some funds going toward a project director, public awareness and administration of the grant.

While 35 $1,200 grants for conversion to natural gas were gone within two days, there are still about 26 $500 grants to convert to a certified wood or pellet stove.

The grants also can be used to convert to natural gas or oil.

Under the program set up by the community task force, a total of 85 grants were established.

Funds are awarded on a first come, first served basis.

To quality, individuals need to live in the non-attainment area, be residents of Sandpoint and be willing to turn over their uncertified wood stove.

The program is loosely tailored after one implemented in the city of Pinehurst last year, committee members said.

Under the Pinehurst program, 75 uncertified wood stoves were removed from circulation with the assistance of an EPA grant. Because the cities have similar air quality problems, the Sandpoint task force patterned its buy-out program after their successful model.

Residents interested in the program can contact the Sandpoint Public Works Department at 263-3407. Residents will be given an application which they can take to the dealer of their choice.

State-wide programs

A number of other financial programs are available from many sta and local agencies — loa are available from the Idaho Department of Water Resources, grants and loans are available from the Farmers Home Administration and grants are available from the North Idaho Community Action Agency.

Idaho Department of Water Resources

To help homeowners make the most of their energy source, energy audit programs also are offered by local utilities including Washington Water Power.

An "energy conservation loan" from the IDWR offers low-interest residential loans (as low as 6 percent) to switch to a more energy-efficient system, add insulation or make existing structures more energy efficient.

Loans, which range f $1,500 to $10,000, have a five-year repayment schedule.

To be eligible for the

See FUNDING, Page 21

L.D. McFARLAND CO.

Providing Quality Employment and a Quality Environment for over 75 years

975 Baldy Mountain Road
Sandpoint, Idaho 83864
(208) 263-2141

Funding

ed from Page 20

program, projects must show repayment within 10 ars from the energy vings.

For information on the program, contact the Idaho epartment of Water sources, Energy Division t 1-800-334-7283.

Farmers Home Administration

Home improvement loans and grants are available from the Farmers Home Administration for rural homeowners (those in a community with a population of less than 10,000). Grants can be used to remove health or safety hazards and loans can be used for those purposes as well as for bringing a home up to minimum standards.

Eligibility for loans is based on income and can range up to a maximum of $15,000.

Grants are available for those homeowners over age 62 and are based on income. The grant amount can range up to a $5,000 maximum.

For information, contact the FmHA "Home Improvement Loans and Grants" program at 765-2086.

Washington Water Power

Washington Water Power offers weatherization assistance funding, cash rebates for the installation of qualifying high efficiency equipment and funding toward the replacement of electric water heaters with natural gas units.

For information on the

See FUNDING, Page 26

Did you know:

Curious about what your energy bill may be under the different heating options? To do that, you need to calculate how much it costs for each energy form to deliver a certain amount of heat, such as one million BTUs. Then, divide that number by the rated efficiency of the heat source.

The formula and chart below can point you in the right direction.

1,000,000 ÷ BTUs per unit x price per unit x appliance efficiency percentage

BTU content of each energy form:

Natural Gas	100,000 BTU per therm
Electricity	3,413 BTU per kilowatt hour
Oil	138,000 BTU per gallon
Pellets	18.2 million BTU per ton
Cord wood	20 million BTU per cord

Now, let's put it all together.

At 5.82¢ per kilowatt hour for electric power, with an appliance efficiency rating of 100%, the formula would be:

000,000 ÷ 3,413 x .0582 x 1.00 = $17.05

The same amount of heat (1,000,000 Btus) from natural gas at 90% efficiency and 50¢ per therm would be:

1,000,000 ÷ 100,000 x .50 x .90 = $4.50

You can make exact comparisons using current energy prices and the specific efficiency of the equipment you are considering.

Quality Farm & Garden

We carry a complete line of Country Comfort stoves and fireplace inserts.

Country Comfort

Call for current models and prices

Downtown Bonners Ferry

267-5213 or 267-7022

Weatherization saves time, money

No matter which way you look at it, weatherization of your home is a winner.

Not only do you improve your home's ability to retain heat, but you save money because you need less energy.

Local utilities often offer energy audits. Audits may result in insulation, weather stripping and heating system improvements.

Free assistance is offered to low income families by the North Idaho Community Action Agency.

Weatherization grant and loan programs are available for residents living within the non-attainment area.

An audit will pinpoint ways to improve your energy efficiency by helping you use energy more wisely as well as improve the ability of your appliances to convert fuel into usable heat.

Proper insulation of your home also can result in big savings by keeping your home warmer using less energy.

Generally, when insulating, you are striving to separate cold areas from warm areas.

Achieving the recommended R-value (the higher the number, the better the insulation) will ensure money and energy savings as well as added comfort.

Before adding or installing insulation, inspect the area for leaks and adequate ventilation. Prepare the work space and fix any leaks.

Install the insulation according to directions or hire a professional.

Other weatherization procedures include caulking around windows, doors, pipes and other holes that show from the outside; and weatherstripping around doors.

Additional weatherization tips are available in booklets available at local utility companies.

— Did you know: —

While high efficiency equipment has a higher initial cost, it delivers lower fuel costs over time because it uses less fuel to produce the same amount of heat.

Checking with dealers or manufacturers to compare the long-term costs, monthly operating expenses, will help you determine the savings and payback period of both regular and high-efficiency equipment.

Bad stove ban:

State says cities, cities say state

Banning bad stoves on the state level is unlikely, according to Idaho Rep. Jim Stoicheff.

That's something city and county governments will have to tackle on their own.

"I'd say it's up to the local units of government," said Stoicheff. "I don't think we could get a state law passed."

A state law is unlikely because many areas in Idaho don't face federal air sanctions and legislators are reluctant to add something they see as unnecessary.

The cost of enforcing the ban on uncertified stoves may make many communities balk at yet another "unfunded mandate."

"It would be awfully hard to enforce a statewide law," said Stoicheff. "Many areas will say it's not a state responsibility and the state doesn't have a mandate."

Area officials said without a statewide ban, local bans will be impossible to enforce. Residents will buy stoves in communities without bans and return — bypassing local restrictions.

"I feel very strongly that state legislation is needed," said Sandpoint Mayor Ron Chaney. "We need to move forward with a statewide banning of the sale of uncertified stoves."

Chaney said he plans to work with local legislators toward that goal.

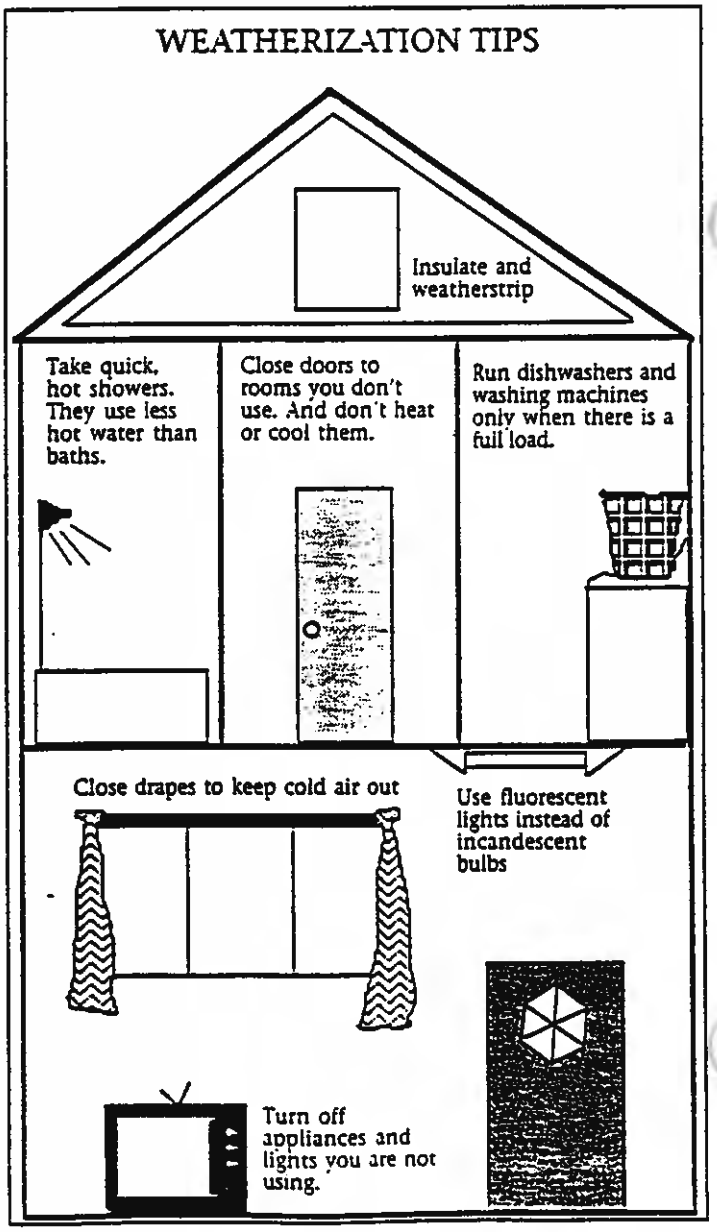
However, both said a ban is not the sole answer.

A combined effort would be the best, most effective solution, said Stoicheff.

Grants and local funding opportunities to help residents buy new stoves or upgrade to gas energy should be a key effort.

Outlawing uncertified stoves without helping residents to switch to a cleaner heat source won't have an impact. A combined approach on the local level will have a big impact, said Stoicheff.

"I find the carrot works better than the stick when working with citizens," he added. "(Funding) doesn't always have to be a federal grant. It's something we could do locally."



Glossary

Air contaminant — Any particulate matter, gas, or combination, other than water vapor or natural air.

Air pollutant — Any substance in air which could, if in high enough concentration, harm man, animals, vegetation or materials. Air pollutants may include almost any natural or artificial composition of matter capable of being airborne. There are two main groups: 1) those emitted directly from identifiable sources, and 2) those produced in air by interaction between two or more primary pollutants.

Air quality control region — An area designated by the federal government in which communities share an air pollution problem.

Air quality standards — The level of pollutants prescribed by regulations that may not be exceeded during a specified time in a defined area.

Airshed — The air supply of an area defined by natural or topographic features, as well as by political and legal boundaries.

Ambient air — That portion of the atmosphere, external to buildings, to which the public has access.

Area source emissions — Emissions produced from fixed locations that are too small and/or too numerous to be surveyed and characterized individually. The emissions generally non-industrial and commonly associated with residential and agricultural activities.

Attainment area — An area considered to have air quality standards as defined in the Clean Air Act.

British Thermal Unit (BTU) — A Btu is the amount of heat required to raise one pound of water one degree Fahrenheit, or about the amount of heat released by completely burning a wooden match.

Carcinogen — A substance or activity that causes cancer.

Catalytic wood stove — Wood stoves that are characterized by large fireboxes and extended burn times. As the smoke and gases pass through the combustor on their way to the chimney, they ignite and release additional heat to the wood stove.

Clean Air Act — Congress passed the first comprehensive Clean Air Act in 1970.

The law mandated the Environmental Protection Agency address air quality problems by setting national health standards for specific air pollutants (such as carbon monoxide, ozone, particulate, sulfur dioxide, and lead).

The law also required the EPA to regulate any air pollutant determined to be hazardous. Amendments to the act were adopted in 1990 and require a renewed commitment by individuals, government and industry to meet the standards.

Creosote — A black or dark brown substance that is shiny, crusty or tarry in consistency. It condenses from smoke and gases created when wood burns.

Criteria pollutants — The Environmental Protection Agency has set national ambient air quality standards for certain hazardous to human health. The EPA has set standards for six pollutants — ozone, carbon monoxide, total suspended particulates (PM-10), sulfur dioxide, lead and nitrogen oxide.

Division of Environmental Quality (DEQ) — The state agency charged with developing and implementing the SIP as well as ensuring federal clean air standards are attained.

Emissions — Pollution discharged into the atmosphere from smokestacks, other vents or surface areas of commercial or industrial facilities; from residential chimneys; and from motor vehicle, locomotive, or aircraft exhausts.

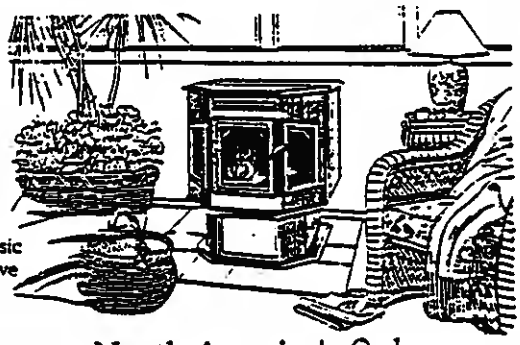
Emission standard — The maximum amount of air pollution legally allowed from a single source, mobile or stationary.

Energy efficiency — There are two types of efficiency, user efficiency and appliance efficiency. User efficiency is the ability to use energy wisely. Appliance efficiency is the ability of your furnace, stove, or other equipment to convert fuel energy into usable heat.

Environmental Protection Agency (EPA) — The independent federal government agency established in 1970 that regulates environmental matters and oversees environmental law enforcement.

Exceedance — Violation of environmental protection standards by exceeding allowable limits or concentration levels.

QUADRA-FIRE
North America's Best



1000 Classic Pellet Stove

North America's Only
Self Lighting Pellet Appliances!

Inspired design brings breakthrough technology to make heating with pellets easier than ever!
- Thermostatically Controlled
- Self Lighting–no matches or firestarters!
- Clean Burn, with no visible smoke
- 40,000 BTUs Per Hour
- Heats up to 2,500 Square Feet!
- Easy Installation
- Exquisite Styling
- 5 Year Warranty

Pellet Heating at its Finest.
Invest in the Best–Quadra-Fire!

THE LOG HOUSE
208-263-4913

Glossary

Fugitive dust — Fugitive emissions composed of particulate matter.

Heat output — The number of energy units (in BTUs) that the heater can produce per hour in low and high output modes.

Inversion — An atmospheric condition caused by a layer of warm air preventing the rise of cooling air trapped beneath it. This prevents the rise of pollutants that might otherwise be dispersed.

Mobile source emissions — Emissions from motor vehicles (not including fugitive road dust), aircraft and locomotive sources.

Modeling — An investigative technique using mathematical or physical representation of a system or theory that accounts for all or some of its known properties. Models are used to test the effect of changes of system components on the overall performance of the system.

Non-attainment area — An area where air pollution is above levels safe for public health or the environment. The Clean Air Act establishes deadlines to bring the areas into compliance with federal air quality standards.

Non-catalytic wood stove — Wood stoves with the firebox insulated with firebrick to support high temperatures for combustion efficiency. A baffle plate is located above the firebox bed to provide mixing of air and gases at temperatures needed for optimum combustion.

Opacity — A visual measurement of smoke chimney. If the smoke you see coming from your chimney is difficult to see through, your fire isn't getting enough air.

Particulate matter — Small particles of solid and liquid matter found in the atmosphere including soot, dust, organic matter, smoke or smog.

Pellets — Compressed wood fiber fuel made from wood by-products, such as chips and sawdust.

Permits — Guidelines set for certain businesses to maintain recorded data from their monitoring equipment. The data is reviewed by state agencies to assurance that companies are in compliance with the law.

Phase II certified wood stoves — Models certified as relatively clean burning by the EPA, based on carbon monoxide and particulate matter testing at accredited laboratories.

PM-10 — Particulate matter measuring less or equal to 10 micrometers (PM-10) is considered a health risk due to the body's inability to effectively filter out particles this size.

Point source emissions — Emissions confined to a specific process and fixed location, commonly ducted through a stack, and typically associated with industrial sources.

Pollution Standard Index — A method of measuring the amount of pollution generated by various contaminents.

R-value — A measure of a material's ability to slow heat transfer. The higher the number, the greater th insulating or "heat stopping" value.

Smoke — Particles suspended in the air after incomplete combustion of materials.

Smoke output — Information is compiled according to the amount of particulates released per hour of operation at a given heat output of about 13,000 BTUs per hour. The lower the smoke output, the less polluting the heater will be.

Stagnation — Lack of motion in a mass of air or water which tends to hold pollutants in place.

State Implementation Plan — An Environmental Protection Agency-approved state plan for the establishment, regulation and enforcement of air pollution standards.

HOME SWEET LOAN

Talk to First Interstate Bank and you will be pleasantly surprised at how easy it is to borrow for home improvements – or any other worthwhile purchase.

Plan on making your home sweet home even nicer. With a loan sweet loan from your friends at First Interstate Bank.

Member FDIC
First Interstate Bank
201 East Superior
Sandpoint, ID
263-2181

We at Lake Pre-Mix value the concept of being a good neighbor. Hopefully, over the course of our 15 year existence, our efforts toward this end have met with a degree of success.

We also believe that the public should be made aware of our calculated PM_{10} emissions.

FOR THE RECORD

- Lake Pre-Mix's calculated yearly contribution to PM_{10} levels amounts to around 220 pounds (about 2 cubic feet).
- Of that amount, roughly 15% is generated during the "winter" months (this is the period when air stagnation occurs).

(One conventional wood stove emits more PM_{10} in one winter than we produce in an entire year.)

We pledge to continue in our attempts to minimize our impact on the surrounding community.

Sincerely,
Steve Lafrenz, President

Serving Sandpoint Since 1980

LAKE PRE-MIX CONCRETE

263-5000

Let's Work *Together!*

Avoiding the designation of a non-attainment zone is the responsibility of citizens and industry. At Interstate we are helping to do our part through the following means:

- **A tank truck available to the Sandpoint Independent Highway District for dispersing de-icer**
- **A storage tank for de-icer used by Idaho Transportation Department and the Sandpoint Independent Highway District**
- **Brooms available to help with clean-up**
- **Manager, Larry Peak, is participating on fugitive dust committee**
- ***A commitment to do whatever it takes***

At Interstate we understand that we have a responsibility to work with citizens, industry and government to keep Sandpoint from becoming a non-attainment zone and we are committed to that goal. If you have any questions about our participation or about what it means to live in a non-attainment zone, please call Larry Peak at (208) 263-0538.

INTERSTATE

CONCRETE & ASPHALT

(208) 263-0538

Economy

Continued from Page 15

office lives in this town. We certainly don't want to be in a position where we generate all kinds of smoke and pollution. We're as proud as anyone of (the area)."

The DEQ is now working with the industries to determine what those levels will be, said Steenvoorden.

"In our business, there is no typical year," he said. "It's not like a car factory where you can generate so many cars a day, day in and day out. In this type of industry, we're heavily dependent on the markets and we build up or slow down depending on what type of market we're in."

The agency is asking questions to determine how the mill and the other industries operate so the permits reflect how production takes place.

Because the future is tied into what is done today, the companies have become actively involved — Interstate has loaned a truck to the Sandpoint Independent Highway District to dispense liquid de-icer as well as a storage tank; others have donated time and research; and still others, ideas.

With the efforts of the community task force, the businesses said they feel more confident that a fair solution can be reached.

"I feel better about it because the EPA and DEQ are looking at (what we're doing)," Peak said. "They can see the progress. We're cleaning up our roads, we're cleaning up our air and we feel good about that."

While the financial impact of reclassification could be severe for the companies, failure to meet air quality standards also could be heavy. Funds for a Highway 95 bypass could be withheld and new construction could be shut down.

Again, the cost is in the millions.

In spite of the challenges, all involved insist it's not a "doom and gloom" situation.

"One, the problem isn't all that serious," Coe said. "Two, with continued efforts of things we're already doing, we can turn it around."

Business leaders say they're working to find a fair solution, implement the solution and fix the problem.

"It needs to be a good neighbor, common sense approach. We'd be more than happy to do that. We want to be a good neighbor," Lafrenz said. "It shouldn't be a blanket permit that fits everyone into the same criteria."

A combined effort, with everyone working together, is the key to the solution, said Steenvoorden.

"We can show the federal and state officials that we as a community can handle our own problems, that we can find our own solutions. The progress we've made in eight months is significant."

Options

Continued from Page 18

energy, new products are coming out on a regular basis.

Determine what the product offers in terms of cost, installation and maintenance in comparison to what it may save you in energy costs.

Take the information that you've gathered and determine how long it will take you to recoup your investment.

Then decide if it's right for you.

Funding

Continued from Page 21

program, contact Washington Water Power's customer call center at 1-800-992-9137.

North Idaho Community Action Agency

North Idaho Community Action Agency's "weatherization program" offers free weatherization to low-income families.

The assistance, which takes the form of an energy audit, may result in insulation, weather stripping and heating system improvements.

Eligibility is based on income, family size and priority rating.

The amount of assistance goes to a maximum of $1,600.

The funds also can be used to replace wood stoves if the stove is certified as unsafe by at least two contractors. However, the total cost to replace the stove cannot exceed $1,200.

Money used to replace stoves will reduce the amount available for weatherization.

To contact the North Idaho Community Action Agency, call 1-208-664-3114.

Local bank loans

Loan programs at local banks are another option for home improvement funding. The amounts are tailored to the homeowner — making it an option which can fit just about any need. For information on the different loan programs, contact any of the local banks.

Who to contact for more information:

U.S. EPA Region 10
1200 Sixth Avenue
Seattle, Wash. 98101
1-800-424-4EPA

Dept. of Health & Welfare
Division of Environmental Quality
1410 N. Hilton, Statehouse Mail
Boise, Idaho 83720-9000
1-208-334-5860

DEQ (area office)
2110 Ironwood Pkway
Coeur d'Alene, ID 83814
1-208-769-1422

Sandpoint Independent Highway District
P.O. Box 1047
Sandpoint, Idaho 83864
1-208-263-8131

Idaho Transportation Department, District 1
600 W. Prairie
Coeur d'Alene, ID 83814
1-208-772-1200

City of Sandpoint
110 Main Street
Sandpoint, Idaho 83864
1-208-263-3317

Idaho Transportation Department
P.O. Box 257
Ponderay, Idaho 83852
1-208-263-3412

City of Ponderay
P.O. Box 500
Ponderay, Idaho 83852
1-208-265-5468

City of Kootenai
P.O. Box 566
Kootenai, Idaho 83840
1-208-265-2431

Greater Sandpoint Chamber of Commerce
(task force)
P.O. Box 928
Sandpoint, Idaho 83864
1-208-263-2161

State legislators
(session information)
- Sen. Tim Tucker
- Sen. Jim Stoicheff
- Rep. Carol Pietsch

State Capitol Building
Boise, Idaho 83720
1-800-626-0471

Air Quality hotline
1-800-6336-AIR

The Homeowner's Energy Checklist

It's time to figure it out for yourself. Now that you've had a chance to study the options, it's time to decide. Which is it going to be? Which is best for you and your family?

Below is a worksheet to help you calculate the cost of your existing system or the cost of the one you're looking at. Some lines were left blank to allow you to individualize the worksheet by adding costs specific to your system.

COSTS

$ _____ Yearly maintenance costs

$ _____ Installation costs

$ _____ Building permit

$ _____ Cleaning costs (chimney, stove tune-up, etc.)

$ _____ Hearth and wall protection

$ _____ Chimney liner

$ _____ Heating system cost

$ _____ Annual fuel costs

$ _____ Weatherization costs

$ _____ Insurance costs (some insurance policies may change depending on what type of heat source you have.)

$ _____ Building inspection costs

$ _____ Furnace tune-up costs

$ _____ Furnace filter costs

$ _____ System additions

$ _____ Loan payments

$ _____

$ _____

$ _____ SUBTOTAL

DEDUCTIONS

$ _____ Idaho Tax Credit

$ _____ Local or state grant

$ _____ Home audit savings

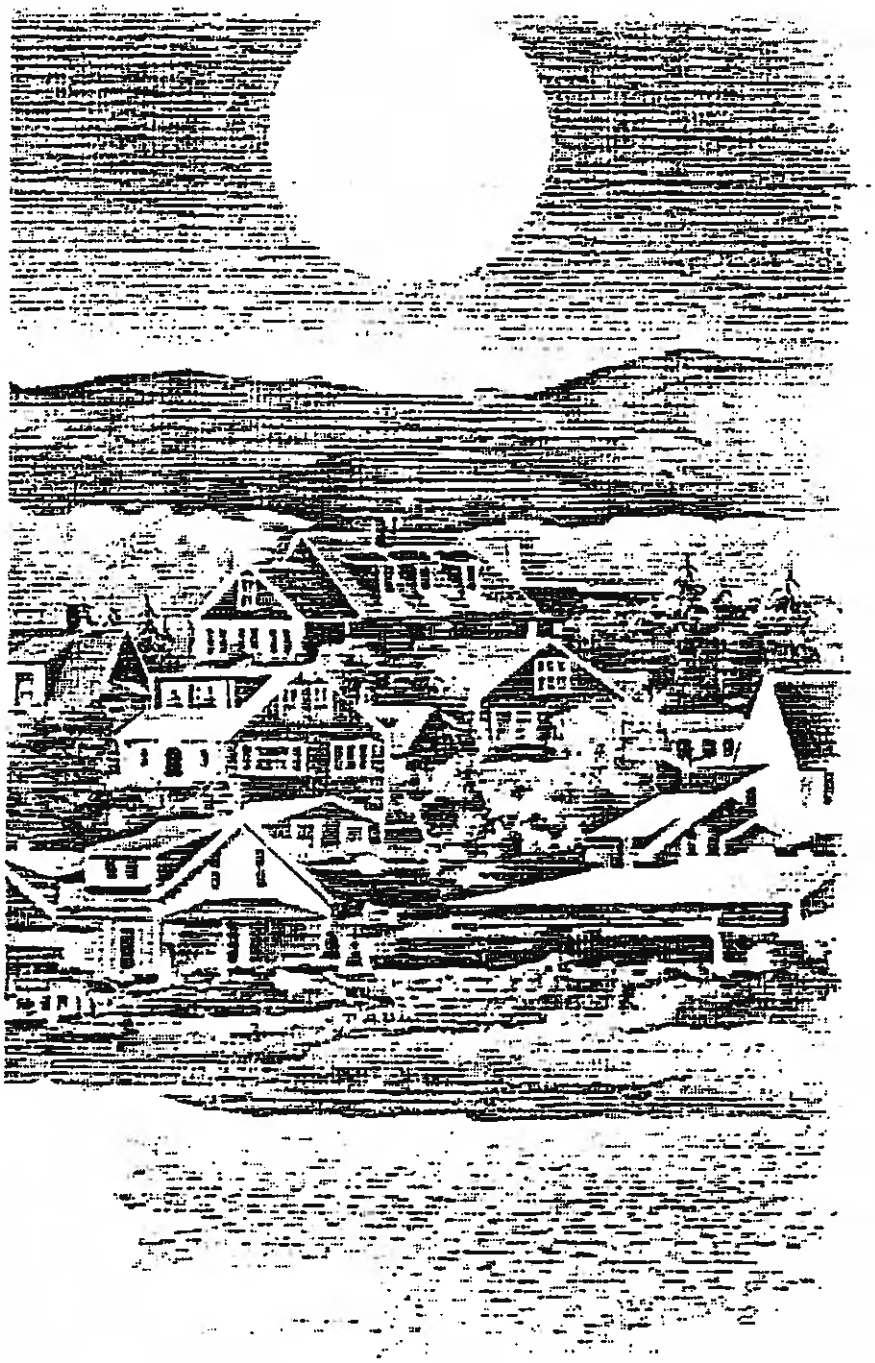
$ _____ Weatherization rebate

$ _____

$ _____ SUBTOTAL

$ _____ TOTAL COST

Our commitment to air quality is Clear



Pend Oreille Printers is pleased to publish this issue of Air Quality: Searching for Solutions. It has been a concerted effort by Pend Oreille Printers/Bonner County Daily Bee staff members and the Sandpoint Area Air Quality Advisory Committee to bring to Bonner County households information that can help them improve air quality, save money, and maintain our economy.

Look for the Daily Bee to provide you with current air quality issues and interviews that impact our community.

Working together, we will find solutions to improve our air quality and maintain the quality of life we all enjoy in Bonner County.

BONNER COUNTY DAILY BEE

"Your Newspaper for Life!"

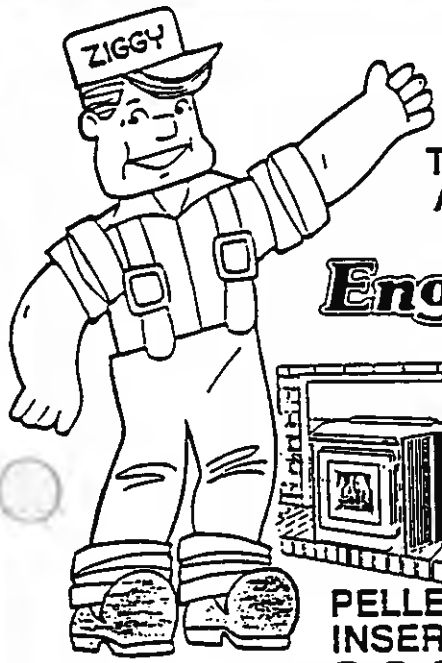
PEND OREILLE PRINTERS INC.

Serving you for over 25 years.

310 Church Street • Sandpoint, ID 83864
(208) 263-9534

Winter SUPER SPECIALS

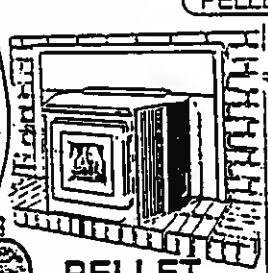
WOOD & PELLET STOVES!



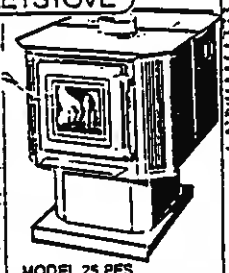
Englander®
Woodstoves

THE BEST "CLEAN AIR" STOVES IN THE COUNTRY!
ACCEPTED BY THE STATES IF ID, WA, OR, and MT D.E.Q. AND BY THE E.P.A. SEE ZIGGY TODAY!

Englander PELLETSTOVE

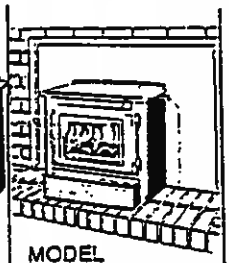


PELLET INSERT
MODEL 25 PI
HEATS APPROX. 2,000 SQ. FT.....
$1399.00



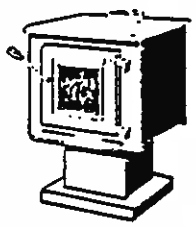
MODEL 25 PFS
PELLET STOVE
- WITH BLOWER
- 50 LB. HOPPER

$1095.00



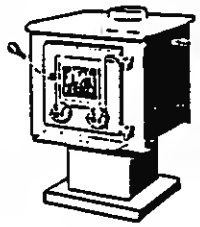
MODEL 24 JC
WOOD INSERT
- WITH BLOWER
- HEATS APPROX. 2,000 SQ. FT.

$849.00



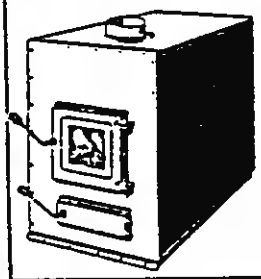
MODEL 18 MH
MOBILE HOME APPROVED
WOOD STOVE
- RADIANT HEAT
- HEATS APPROX. 1,000 SQ. FT.

$589.00



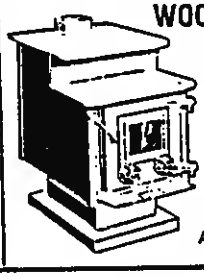
MODEL 18 PC
RADIANT HEAT
WOOD STOVE
- HEATS APPROX. 1,000 SQ. FT.
- SAFE COOL LATCH

$469.00



MODEL 28-3500
WOOD BURNING
ADD-ON FURNACE
- HOOKS UP TO EXISTING DUCT WORK
- HEATS APPROX. 3500 SQ. FT.
- ACCEPTS 28" LOGS

$899.00



WOOD STOVE WITH BLOWER
- HEATS APPROX. 2,200 SQ. FT.

MODEL 24 AC
$649.00
Available in Idaho Only

Spokane Pres-to-Logs® PELLET FUEL... $109.95
BY THE TON
FIFTY 40 LB. BAGS PER TON

ENERGY LOGS..... $139.95
BY THE UNIT
240 LOGS PER UNIT

$500.00 FROM THE E.P.A. AND D.E.Q. AVAILABLE TOWARD THE PURCHASE OF A NEW, E.P.A. CERTIFIED WOOD OR PELLET STOVE. Contact the City of Sandpoint for more information: 208-263-3407.

PRICES GUARANTEED THROUGH FEBRUARY 15TH, 1995

Ziggy's
W. 170 Wyoming Ave.
Hayden Lake, IDAHO

IN SPOKANE:

4220 N. Market St. 489-8760	620 E. Holland Rd. 467-4958	17002 E. Sprague Ave. 922-1800

Working Together
We Can Improve Our Air Quality

Air Quality affects all of us. And we all need to work to improve it. Business, industry, homeowners, contractors, and drivers all can do something to limit the amount of dust and particulates going into our air.

We can make this community economically viable and maintain it as a beautiful place to live, work and play. We indeed have a bright future. And –

With your help we can make our community an attainment area again.

Remember you can:

****Trade out your non-certified wood stove for gas, pellets, or an EPA certified stove*
****Burn your wood stove cleanly year round*
****Don't burn during red light days*

If you want to help, please contact the Sandpoint Area Air Quality Advisory Committee in care of The Greater Sandpoint Chamber of Commerce, P.O. Box 928, Sandpoint, ID 83864, 263-2161.

For the air quality forecast in your area call 1-800-633-6AIR (247).

Sandpoint Area
Air Quality
Advisory Committee
Idaho Division of Environmental Quality

Cover printed 'ed recycled stock.

APPENDIX F

F-3: PUBLIC AWARENESS - GREATER SANDPOINT AREA CHAMBER OF COMMERCE

Greater SANDPOINT CHAMBER OF COMMERCE
SANDPOINT IDAHO USA

RECEIVED
MAR 16 1995
IDHW-DEQ
Coeur d'Alene Field Office

March 14, 1995

Mr. Dan Redline
Idaho Division of Environmental Quality
2110 Ironwood Drive
Coeur d'Alene, ID 83814

Dear Dan:

In fulfillment of our part of the Request for Extension of Attainment Date for Sandpoint Nonattainment Area, I have enclosed information on the public information campaign that we have developed plus documentation of efforts to date. These are grouped as follows:

Outline of Public Awareness Program
Time Line for Public Awareness Program
Emergency Plan
Budget
Past Public Awareness Efforts

To further detail the Past Public Awareness Efforts, the contents include several articles which appeared in both the Bonner Daily Bee and the Idaho Spokesman Review. Articles also appeared in several other trade publications and are included. Lastly, we have copies of some larger print ads that appeared in the Daily Bee.

Please note that this awareness campaign only runs through the end of January 1996 which is the end of our current grant from EPA. We believe, however, that for us to be ultimately successful in improving our area's air quality and regaining "attainment" status, this program will need to be continued at least through the end of 1997. We hope that funding will be available to continue it in the same manner that we have planned for this year.

Should you have any questions, or need any clarification on the above, or the enclosures herein, please do not hesitate to call on us.

Sincerely,

Jonathan S. Coe
Executive Director

RECEIVED
MAR 27 1995
Div. of Environmental Quality
Community Programs

Enclosures

P.O. BOX 928 SANDPOINT, IDAHO 83864 208-263-2161 FAX 208-265-5289

SANDPOINT AIR QUALITY ADVISORY COMMITTEE
PUBLIC AWARENESS PROGRAM

February 1995 - January 1996

What follows is an outline of the public relations campaign we have designed to make citizens aware of the Sandpoint area's non-attainment status, the steps being taken to improve our air quality, and how they can help in these efforts. Included in the outline are the mediums we intend to use, the messages we wish to convey and the time ~~frame we will use~~. We believe that this program will fulfill the requirements of an aggressive public awareness campaign as stipulated in IDEQ's February 1, 1995 letter.

Medium	Message
Brochures	"The Guide" - is a brochure that SCAPCA had printed. We would need to re-print these with our 800#, Sandpoint non-attainment areas, and revised burn ban information. Basic message is what is allowed under red, yellow and green light status, number to call for reading. This will be produced for distribution at speaker's bureaus and through Mountain Sky Display. April, November, December, January
	Split It! Stack It! Dry It! brochure (referred to as SSD broch) addresses 20% smoke (with photo), stacking recommendations, clean burning. Distribution through Mountain Sky Display, show booth (Timberfest and County Fair), and speaker's bureaus. May, June, August, September, November
Radio	"What can you do about Sandpoint's air Quality. How do you know if it's safe to burn? Well, there are several things you can do. You can listen for air quality advisories on this radio station, you can consult the weather section in your Daily Bee, or you can call 1-800-633-6247, that's 1-800-633-6AIR. If you live in Sandpoint, remember, Sandpoint's air quality is up to you. Be sure to burn clean." March, October, November, December, January

"Remember to get wood for winter 95 - 96 early enough so that it's dry and will burn cleanly this winter. We are all concerned about Sandpoint's air quality and need to work together to keep Sandpoint beautiful. If you have any questions about your wood stove's EPA certification or what else can be done for our air quality, please call Lisa at the Sanpoint Chamber at 263-2161."
September

Newspaper — See March and September radio messages.

"Red Light, Green Light" advertisement. See Exhibit A.

These three messages will run twice in September, and weekly in October, November and January.

Cable TV PSA — In the event of an emergency, a crawl will be requested.

Cable TV Ad — "We take pride in the beauty of Sandpoint. For that reason, it is very important that we are aware of when Sandpoint's air quality. It's important to listen to the radio for advisories, look in the Bee's weather section or call 1-800-633-6247 for updates. If we all work together, we can keep Sandpoint beautiful for years to come."

Cable will show 5 times a day for September, October, November and December.

Paystubb inserts — These can be provided to area merchants/ employers for inclusion in paychecks and/or newsletters. Content will included the 800 # and other numbers to call (City for Open Burn permits, Lisa for other information)
June and September

Utilities Insert — Four lines of 25 characters each to include on Sandpoint utility bill. Initial message should be along the lines of "Be aware of whether it's safe to burn. For burn information call 1800 633-6247." If this runs later in the year, the message can be changed.
February, October

peakers Bureau — This should include presentations to Kiwanis, Rotary and School Board. Message should include discussion about PM-10s, impact of wood smoke and road dust, plan of implementing an emergency plan.
Summer and Fall

Red Light Sign — Set up a plexiglass poster in stores and schools. Will have a lever to slide back and forth to show current conditions.
Beginning March/April, continue in September

Phone Tree — The phone tree is part of our emergency response program. Contacts are comprised of businesses which: would have the Red Light Sign, or be effective in reducing PM-10 levels by advising large employee base. Also included are companies which contribute to PM-10 levels (sweepers) or reduce levels (liquid de-icers). Contacts should include:

Safeway Bonner Mall Yoke's Harold's
McDonalds Coldwater Creek Sleepy Sweeper
Louisiana Pacific Banks Schools
School Districts Federal Bldg. Post Office
City parking lots Independent Hwy District
Idaho Department of Transportation

- Booths — Our intent is to have a booth at each of these events and provide brochures to the public.

Timberfest	June 1995
County Fair	August 1995

Dirt Road Signs/Poster — Signs to be posted along dirt roads in Sandpoint advising motorists to "Drive Slowly -- Lungs at Work" Needs approval from Independent Highway District Board.
July and August

Spokane TV & Radio Announcements — As news/weather item when conditions warrant.

Display Use — Mountain Sky Display has a free standing rack system which holds many brochures. These are set up at various locations throughout Sandpoint. Mountain Sky is responsible for keeping the stock up in each cubbyhole.
November, December, January

Newsletters

We will continue to provide, and encourage other businesses to include, any Air Quality related articles in their newsletters.

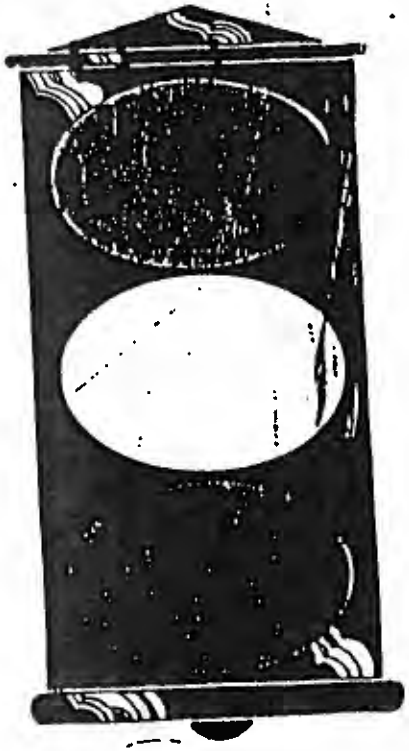
Chamber Business Lines PBCA Panida Theater
POAC Board of Realtors Sandpoint Newsline
Clean Air Coalition

y Dorry
Oee

19
. 30.

RED LIGHT, GREEN LIGHT

BONNER COUNTY VOLUNTARY CURTAILMENT AIR QUALITY PROGRAM



Please be aware of these air quality stages and act accordingly and responsibly.
Thank You.

ANNOUNCEMENT CRITERIA

CONDITION RED:
If the estimated previous 24 hour PM_{10} concentration is greater than 100 µg/m³ (75+ PSI), and stagnation conditions may persist for 12 hours, an air pollution alert is called. All outdoor open burning is prohibited and any existing open burning shall be extinguished by noon. Wood stove use should be stopped unless it is the sole source of heat. No restrictions apply to pellet stove use.

CONDITION YELLOW:
If the estimated previous 24 hour PM_{10} concentration is from 70 to 100 µg/m³ (61-75 PSI), and stagnation conditions may persist for 12 hours, then all outdoor open burning is prohibited and any existing open burning shall be extinguished by noon. Please reduce any wood stove use unless it is the sole source of heat. No restrictions apply to pellet stove use.

CONDITION GREEN:
If the estimated previous 24 hour PM_{10} concentration is less than 70 µg/m³ (0-60 PSI), no burning restrictions will be called.

CITY OF SANDPOINT
Idaho Division of Environmental Quality

Help clean Sandpoint's air!

EXHIBIT 4

SANDPOINT AIR QUALITY ADVISORY COMMITTEE
PUBLIC AWARENESS PROGRAM
TIME LINE

March 9, 1995

JANUARY

AIR QUALITY:Searching for Solutions publication distributed through Bonner County Daily Bee (Bee)

FEBRUARY

Establish phone tree contacts

Utilities Department 4 lines/25 characters

MARCH

Print labels for Split It! Stack It! Dry It!
Panhandle Special Needs to affix labels to brochures

Radio Spots

Produce "The Guide" negatives
Produce "The Guide" printing 2,000 ea.

Approach School District Superintendent Leonard Parenteau about presentation to School Board and/or faculty and/or students.

Produce plexiglass poster 6 each

APRIL

Produce and distribute paystubb insertions or copy to local area employers

Speakers Bureau - Kiwanis, Rotary, County

MAY

Print posters
(Shift information focus to Road Dust PM-10s.)

JUNE

Put up posters

Timberfest Booth

Paystubb inserts

JULY

AUGUST

County Fair Booth

SEPTEMBER

Daily Bee Newspaper

Radio Spots

Paystubb inserts

Northland Cable ads

OCTOBER

Radio Spots

Northland Cable

NOVEMBER

Radio Spots

Northland Cable

Daily Bee

Mountain Sky Display

DECEMBER

Mountain Sky Display

Radio Spots

Northland Cable

JANUARY & FEBRUARY

Radio Spots

Mountain Sky Display

Northland Cable

Daily Bee

EMERGENCY PLAN

"RED LIGHT BURNING CONDITIONS"

When Sandpoint's PSI (Pollution Standard Index) indicates that PM-10 levels have reached critical levels, the Division of Environmental Quality will phone:

**** City Hall - Ron Chaney ** and ** Chamber of Commerce - Lisa ****

Mayor Chaney will notify the media.

The Bee will post PSI in weather.

KPND will immediately release and continue to advise during news updates.

Lisa will begin phone tree. The purpose of the phone tree is to:
1) notify employees of red light status and advise them of ways to change it;
2) notify public through signs at high traffic locations like Safeway and School District of red light status;
3) notify potential contributors to high PM-10 count, to alter their activities; and
4) notify those who can help to reduce PM-10 levels by applying liquid de-icers, etc.

Contacts shall include the following:

Independent Highway District **Channel 5** **Safeway**
Bonner Mall **Louisiana Pacific** **Post Office** **Yoke's**
Coldwater Creek **School District** **Federal Building**
McDonalds **Panhandle State (and other) Bank(s)**
Idaho Dept. of Transp. **Harold's IGA** **Sleeper Sweeper**

Lisa will call Jackie Buck @ Independent Highway District to address Road Dust contributions to air quality and have sweeper trucks go out.

Next call to Northland Cable to put crawler on.

Proposed tree would commence by calling Donna @ L.P.

BUDGET

PUBLIC AWARENESS PROGRAM

Medium		Budget
Brochures	"The Guide"	1200.00
	Split It! Stack It! Dry It!	225.00
Radio		1400.00
Newspaper		2000.00
Cable TV	Production of Commercial spot	175.00
	Airing of spot	1500.00
Paystubb inserts	For employers to use in paychecks	100.00
Utilities Insert		N/C
Speakers Bureau		N/C
Plexiglass Poster		400.00
Phone Tree		N/C
Booths at:	Timberfest	25.00
	County Fair	25.00
Dirt Road Signs/Poster:	Must have Independent Highway District Board approval prior to posting	100.00
Spokane TV & Radio Announcements		N/C
Display Use:	Mtn. Sky Five mos. @ $80/mo	400.00
Newsletter Articles		N/C
	Total thus far:	$ 7,550.00

Winter launches attack on air quality

By CAROLINE LOBSINGER
Staff writer

SANDPOINT — With winter on its way, the Sandpoint area is headed into the time of year its air quality generally hits a few rough spots.

Sandpoint was identified as a "moderate" non-attainment area in 1987 and is required to have an implementation plan by the end of the year. The area faces reclassification as a "serious" non-attainment area, which could trigger a series of more stringent guidelines.

Fugitive road dust, wood smoke and industry concerns are the main causes of the city's air quality problems.

There are a number of things residents can do to keep the problem to a minimum, and improve the area's air quality, said Division of Environmental Quality air quality analyst Dan Redline.

A local community advisory group already has taken steps to address concerns and bring the area into compliance with federal regulations. Among the steps are implementation of a wood stove grant program and efforts to clear funding for a new street sweeper for the Sandpoint Independent Highway District.

In addition, a cleaner anti-skid material must be used when roads are sanded this winter, said Redline.

The stove replacement program is scheduled to get under way this winter. Residents who upgrade from an uncertified wood stove to a cleaner source of heat, such as a certified stove or natural gas, could qualify for a grant to help offset the cost.

The street sweeper, which is scheduled to arrive in December or January, will decrease the amount of fugitive dust. Plans by the Idaho Transportation Department for a $450,000 asphalt overlay program on highways within Sandpoint limits also should reduce the amount of fugitive road dust, Redline said.

Redline also said a community awareness effort is under way to inform residents on when there are air quality problems and what they can do about the issue.

The DEQ is working to inform residents what the area's pollution standard index is on a daily basis so they know what the air quality is and can take steps to cut pollution.

The index has six levels, according to the level of pollution, Redline said. Levels are: good, 0-50; moderate, 51-100; unhealthful, 101-199; very unhealthful, 200-299; hazardous (a), 300-399; hazardous (b), 400-plus.

In addition, the DEQ runs an air quality hot line from Nov. 1 through the spring. Residents can call the number (1-800-6336-AIR) to receive updated advisories for wood burning conditions.

Pollution Standard Index

Descriptor	Index	Cautionary Statements
Good	0-50	None
Moderate	51-100	None
Unhealthful	101-199	Persons with existing heart or respiratory ailments should reduce physical exertion.
Very Unhealthful	200-299	Elderly and persons with existing diseases should stay inside.
Hazardous (a)	300-399	General population should avoid outdoor activity.
Hazardous (b)	400	All persons should remain indoors, doors and windows closed.

DEQ

DAILY BEE

Continued from Page 1

Pacific, Lake Pre-Mix Concrete, Interstate Concrete and LD McFarland.

The rollback to 1990 levels was part of stiffer restrictions included in a state implementation plan, or SIP, to bring particulate levels within an acceptable level. According to federal clean air standards, air quality cannot exceed a particulate count of 150.

Industry officials had said the rollback would devastate their ability to operate and could force them to shut down.

Sandpoint was identified as a non-attainment area in 1987 and must have a implementation plan in effect and operating by the end of the year.

A computer model of the area's emissions inventory and evaluation is still under way and is expected to be completed within a few months.

"We'll know more once that's complete," said DEQ air quality analyst Dan Redline. "We'll evaluate emissions for the industrial facilities and look at what level of controls we may need for a moderate area SIP and a serious area SIP, if any."

The revision the plan in effect takes the DEQ "back to square one" with control measures dependent on the outcome of the computer model, Redline said.

Once the model is complete, additional public comment and hearings will be held.

"The community has some input on how the plan is designed and how they want it to impact the community," said Redline.

Independent tests of actual industrial emissions also are planned to determine actual contribution to the area's air quality problems.

The decision to hold off on potential permits until the new model is complete is good news, industry officials said.

The biggest complaint by industrial officials on the initial permits was that the model was based on inaccurate, out-of-date information.

Because the process is ongoing, L-P manager Frank Steenvoorden said industry officials are working to ensure the DEQ has accurate information.

However, he said the decision to delay potential permits is good news.

DEQ backs off air permit plan

New computer model will help set controls for area

By CAROLINE LOBSINGER
Staff writer

SANDPOINT — The Division of Environmental Quality has decided to hold off on a planned rollback to 1990 emission levels for four area industries.

However, partial permit will be issued for LD McFarland which prohibits the company from using a wigwam burner to dispose of combustible waste materials.

Company officials say that isn't expected to be a problem since they stopped using the wigwam for anything other than storage four years ago.

All burning equipment has been removed from the structure and there is no intention of using it for burning at any time, said Fred Omodt of LD McFarland.

The partial permit "won't have any impact because we've already shut it down," he said.

The DEQ was required to make a decision on issuing permits by Dec. 13 according to an extension of the public comment period on the proposed permits.

Four companies were targeted for emission permits — Louisiana

See DEQ, Page 3

EPA zeroing in on Sandpoint

Tarnished image a worry; process a frustration

By Kevin Keating
Staff writer

SANDPOINT — Inhaling Sandpoint's mountain air could soon become an official health risk, if the EPA has its way.

The city has landed on the EPA's black list, with the likes of Los Angeles, for having air pollution problems.

Sandpoint officials aren't happy, especially after being told they will earn status next year as a serious air quality violator.

Mayor Ron Chaney admits the city has minor problems with woodsmoke and road dust, but says being lumped in with polluters like LA is undeserved.

"Other than on those rare occasions, Sandpoint has some of the cleanest air in the world," Chaney said.

He fears the label will besmirch the city's tourism reputation. Worse yet, it could force closed doors or cutbacks at four industrial plants in town.

"We have been told that they (EPA) will publicly announce the quality of air as being unhealthy," Chaney said. "That will have an incredibly negative effect on tourism and industry and Sandpoint would suffer greatly."

Chaney is lobbying for more time to prove the city can cure its air quality problems and halt the serious listing.

EPA spokesman Steve Body said the listing is inevitable. It's not because the air is so bad, he said. It's because the city and Idaho Division of Environmental Quality waited too long to implement a plan to stop the pollution.

"Now it's not so much an air quality issue as an administrative issue," Body said.

Sandpoint has violated the Clean Air Act only nine times in the last eigl
every three
A monit
corded big
woodsmoke
Most violat
ary and Fel
City offi
explain the
avail. One
when the ci
Christmas t
kick off the
Body sai
nonetheless
"If metec
would hav
burning that
ceivable to l
mas trees or
he said.

he said. demonstration-funded project in Boise for wildlife edu- ing from the forest products industry

Photo by BILL BULEY

of the two apartments that will be featured today homeless shelter in Sandpoint.

EPA's air rules coming down on Sandpoint

By CAROLINE LOBSINGER
Staff writer

SANDPOINT — With air quality deadlines looming, the city's tied to the tracks with the train on the way.

"The train is on the track and it has no brakes," Steve Body of the Seattle office of the Environmental Protection Agency said of the city's non-attainment status. Body spoke to members of a citizens' air quality task force Thursday.

Because the city has missed several deadlines relating to a state implementation plan to improve its air quality and because air quality standards were violated earlier this year, Body said Sandpoint will likely be named as a serious non-attainment area in July.

> "We at the EPA office in Seattle see no way out of (Sandpoint's) reclassification to serious." — Steve Body

"We at the EPA office in Seattle see no way out of (Sandpoint's) reclassification to serious," he added.

Sandpoint was identified as a "moderate" non-attainment area in 1987 and is required to have an implementation plan by the end of the year. It the city fails to meet air quality standards by the end of the year, it could trigger a series of more stringent guidelines.

"If you don't attain it, this act, this train rolling down the tracks, automatically reclassifies all areas as serious," Body said.

While a final decision won't be made until next year, he said the EPA recently denied an Idaho Division of Air Quality request for a waiver of the deadlines.

That means if guidelines weren't met and Sandpoint's SIP has not been effective, the reclassification is almost automatic, said Body.

The news was met with a measure of frustration on the part of citizens' air quality task force members, who said the community was being penalized for missed deadlines by the state and what amounts to a minor problem.

Body conceded the city was "between a rock and a hard place" but added there was little flexibility given in the deadlines.

He applauded community progress to bring the city into compliance and to improve its air quality. Continued efforts by the task force to address fugitive road dust, wood smoke and industry concerns are important whether or not the city is reclassified.

A possible avenue of relief for the area lies in a question posed by both DEQ and Sandpoint area officials.

Since Sandpoint's SIP has yet to be fully implemented, and since models show the SIP will bring the community into compliance, do "reasonable measures" required under moderate non-attainment status in effect become "best measures" mandated under serious non-attainment status?

If the city is designated as serious as expected, Body said the stigma would remain until attainment is met and a 10-20 year air quality maintenance plan is completed.

ds sheriff role

ector will replace Whittaker

management skills, and that was the deciding factor for him.

"He said he would watch the budget very closely and when necessary, he would utilize himself, the chief deputy and the lieutenant to cut down on overtime," said Everhart.

"It's hard to say beyond that," he continued, "because all three candidates were very well qualified."

Navarro was considered by many to be the natural choice to follow Bruce Whittaker, who resigned the job in late July.

Navarro, second in command at the sheriff's office, was endorsed by Whittaker in his resignation letter.

The job, which will pay Sprungl $28,595 a year to start, is considered to be very stressful and difficult. but Sprungl said he's eager to face the job head-on.

"A lot of people call it a thankless job, but I don't," he said. "I know I can't please everyone, obviously, but I'm not focusing on the stressful aspect of the job. I'll deal with the stress."

sign- and
unty's after e him
for and
nger
our p.m.
ngl's

Mark Hall Real Estate
MLS

Bonner County Daily Bee 7/16/94

Action could keep city off 'serious' air list

By CAROLINE LOBSINGER
Staff writer

SANDPOINT — Execution of its state implementation plan could keep Sandpoint off the list as a serious non-attainment area, according to a Division of Environmental Quality official.

A proactive effort by the community — from a wood stove buy out program to action that would decrease fugitive road dust — may help convince the Environmental Protection Agency to give the area more time to bring its air quality into compliance with federal standards, said DEQ air quality analyst Dan Redline.

Sandpoint was identified as a "moderate" non-attainment area in 1987 and is required to have an implementation plan by the end of the year. If the city fails to meet air quality standards by Dec. 31, it could trigger reclassification as a "serious" non-attainment area.

However, Redline and representatives from Idaho's congressional delegation said continued efforts to bring the area into attainment are vital to that happening.

The community's efforts to date are "definitely a bonus on (its) behalf," said Sandy Patano, a representative for Sen. Larry Craig.

Improved public awareness, additional air quality monitors and greater involvement by other community groups will be points in the community's favor, she added.

"I think you might be able to ask for some flexibility," she added. "I can't guarantee it but our office will ask. However, it doesn't mean you can let up."

A reclassification would be a bureaucratic statement rather than a reflection on Sandpoint's air quality, said Jonathan Coe, executive director of the Greater Sandpoint Chamber of Commerce.

"We've worked hard to get our act together," Coe said.

If there are no violations of the PM-10 count this winter with at least part of the plan in place, it could create a chance to avoid reclassification, he said.

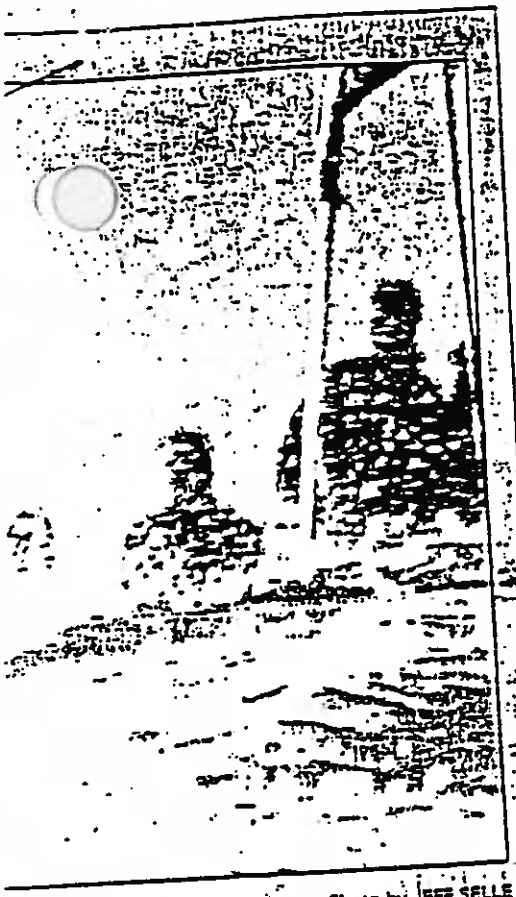
At that point, "the only reason to be shifted into the serious category is a strict, runaway interpretation of the law," said Coe.

The DEQ is going to rework its model of the plan's attainment demonstration to include updated information from four local industries. The new model will include 1993 emissions data from the industries and could result in a revision of the state implementation plan, said Redline.

Depending on how the data impacts the plan, he said it could result in a change in the operating permits required or in whether they are necessary.

The state opted to extend its comment period on the SIP until Dec. 13 to address concerns about the validity and accuracy of information used to determine the operating permits.

Daily Bee



— Photo by JEFF SELLE

goes downhill at Schweitzer.

Schweitzer

multiple sclerosis fund

Second place went to the "Nipples and Crippies" who raised $11,625 from Spokane; third went to "Crud Club One" who raised $10,250; Fourth went to "Ski Crud Club #1" who raised $6,025 and "The Bombers" took fifth with a donation of $5,320.

Teams raising $15,000 get automatic entry into the finals at Aspen.

The best Giant Slalom Time went to the "Associated Orthopedic Specialists" in 59.77 seconds.

Black said she expects at least another $10,000 to be raised as a result of the Schweitzer event.

ounty threatens o take property f late taxpayers

ANDPOINT — Mobile home and personal proper- wi o have not paid the first half of their 1994

Pact may clear up air quality problems

1-year extension may be granted

By CAROLINE LOBSINGER
Staff writer

SANDPOINT — An Environmental Protection Agency agreement clears the way for the Sandpoint area to get a one-year extension to meet federal air quality standards.

The extension gives the area until Dec. 31, 1995, to show its plan to improve air quality is working. A second extension is possible if the area has no violations.

No violations for two years would allow the area to apply for attainment status in December 1996.

Key groups and businesses affected signed the memo of understanding by Monday. The agreement outlines conditions which area entities and businesses must meet by June 30 to get the extension.

"It's very fair, very reasonable and very doable," said Sandpoint Mayor Ron Chaney.

The agreement requires a mandatory city wood burning curtailment program, possible industrial permits, an enhanced public awareness campaign and continued implementation of road sanding programs.

Monthly conference calls are planned to track progress and improve communication.

Meeting the EPA timelines set out in the agreement is very feasible, said Jonathan Coe, executive director of the Greater Sand

See AIR, Page 3

DAILY BEE

Parenteau [illegible] School District superintendent, just as he was finishing his early morning raid.

Parenteau shook his hand, he said.

"You know if more parents were to get down to the schools in the mornings, at lunch and [illegible] parents should go through the [illegible] office before they start," Parenteau said.

Parenteau said he was meeting with SHS officials Monday afternoon to come up with more ideas to deal with the problem.

Meanwhile, Vincent said he has been laid off for the winter, but a lot of parents do," Vincent said. "It's time to take the school back from these kids."

NAILS UNLIMITED by Alaina
Now at MANE REFLECTIONS
515 Pine Street • 263-4247
• Sculptured Nails • Gels
• Nail Art • Fiberglass
• Therabath Wax Dips • Silk
10% OFF on ALL Nail Services During February
Save an Additional 5% OFF with this ad!
CALL TODAY FOR AN APPOINTMENT.

AIR

Continued from Page 1

point Chamber of Commerce.

The only deadlines which may be difficult to met are those for proposed industrial permits, said Dan Redline, air quality analyst with the Division of Environmental Quality.

"Timing is everything right now," Redline said.

Officials said credit for much of what's been accomplished so far belongs to a citizens' advisory committee. The group has led efforts to cut road dust, eliminate uncertified wood stoves and improve public awareness.

"Once the EPA looked at the community and realized we had made a huge amount of progress to clean up our air, that it would have been a disgrace for us to be labeled as having unclean air," said Coe.

All sides said the extension was needed to give the area time to fully implement plans to improve air quality.

"There was a total breakdown in communication," Chaney said. "How could they expect us to correct the problem if we weren't even aware there was a problem."

Failure to get the extension could have a severe economic impact on area industries as well as local tourism.

"The ripple effect would be felt throughout Bonner County and create a negative impact on tourism," said Chaney.

Perms .... $32 & up
Haircuts. W- $10 M- $8
Ask for Monique
263-9591
SPECIAL EFFECTS SALON

BONNER COUNTY SPORTSMEN'S ASSOCIATION
GUN 'N HORN SHOW
COUNTY FAIRGROUNDS • SANDPOINT, IDAHO
12 TH ANNUAL
MARCH 3, 4, 5 - 1995
• Antler Entries (Free) must be in by 7:00 PM - 3/3/95
• Raffle: Winchester Model 70/Nikon 3 X 9 Scope (Pastime Sports)
• Certified Scoring
• Ladies Raffle... And More
• Food, Fun and Awards
• Buy, Sell or Trade
HOURS:
Fri. - Noon - 7 pm
Sat. - 9 am - 7 pm
Sun. - 9 am - 3 pm
ADMISSION: $2.00
FOR INFORMATION CALL: (208) 263-4981 - ANTLER ENTRY (208) 263-3876

Greater SANDPOINT CHAMBER OF COMMERCE

BUSINESS LINES

NEWSLETTER OF THE GREATER SANDPOINT CHAMBER OF COMMERCE FEBRUARY 1995 "WHERE QUALITY IS A WAY OF LIFE"

INFOCENTER COMING TO CHAMBER

GREAT NEW BENEFIT FOR MEMBERS

The Chamber will be installing an InfoCenter at the Chamber office. The InfoCenter is a state-of-the-art automated phone answering service that will answer incoming telephone calls. Callers will be lead through a series of choices to find the information they are seeking: lodging, realtors, things to do, restaurants, etc. Perhaps the most exciting and powerful feature of this system is that it enables callers to be transferred directly to the front desk or office of any participating business.

"We're all very excited about this system," said Jonathan Coe, Chamber Executive Director. "I believe that it will enable us to provide better service to the thousands of people calling our office for information, to give our members who choose to participate more business referrals, and to improve the accuracy of the information that we provide."

A caller to the system will first have a chance to talk to a Chamber staff member or to go into the information system. He or she will then have a choice among six categories of information: lodging, things to do, dining,

Continued on page 2.

AREA MAY BE ABLE TO AVOID "SERIOUS" AIR QUALITY STATUS

A recent meeting with DEQ and EPA officials has brought hope that our area may avoid being designated as a "serious" non-attainment area for PM-10's. Having become aware in late summer that the greater Sandpoint area is a non-attainment area for PM-10s' (fine particulates in the air which can cause respiratory problems), the Sandpoint Area Air Quality Advisory Committee with the support of your Chamber has been working hard to begin the process of cleaning up our air. That work is beginning to pay off.

As recently as December, EPA officials had indicated that our community might be reclassified from moderate non-attainment status to serious non-attainment status. This was because we had failed to meet a variety of conditions by the attainment date of December 31, 1994. Such a change would have carried with it the potential for sanctions against our community such as denial of Federal Highway Funds.

Continued on page 7.

CHAMBER ABLE NOT TO HAVE A NIGHT ON THE TOWN

Thanks to the hard work of the C.A.M.S. (Chamber Ambassadors Members of Sandpoint) and the success of the Ultimate Auction last September, the Chamber's Night on the Town fund raiser has been cancelled. The Chamber Board was able to vote to do away with what has been an annual event because the CAMS were able to contribute funds to the Chamber's general fund equal to the amount raised in previous years by the Night on the Town.

"While Night on the Town has been a fun and successful event," said Jonathan Coe, Chamber Executive Director, "it was also another time when we had to go to the business community and ask for their support by donating prizes and buying tickets. By concentrating our efforts through the CAMS on the Ultimate Auction, we won't have to ask our members for support on Night on the Town anymore. The Board was glad to be able to take advantage of the CAMS offer so we can limit our requests for contributions."

Special thanks go the Laurie Wall, Chair of the CAMS, Donna Deshon, Ultimate Auction Chair, and all the other CAMS whose hard work on the Ultimate Auction made this change possible. And please remember we need your continued support for the Auction.

THANKS TO THESE RENEWING MEMBERS FOR THEIR SUPPORT

The following businesses, organizations, and individuals have renewed their memberships in the Greater Sandpoint Chamber of Commerce between December 23rd and January 23rd. Please remember to patronize your fellow members.

BERGE BORREVIK AND ASSOCIATES—NEW YORK LIFE

BEST SPA MOTEL

BILL BROWN RENTALS

CLEARWATER LANDSCAPES, INC.

CONDO DEL SOL

ELLIOTT ENVIRONMENTAL HYDROSEEING

FOREST INN

PHIL F. FRANKLIN

FREDRICKSEN-MCDONOUGH ELECTRIC

THE INKWELL

K MART

KOOTENAI VALLEY MOTEL

LAKESIDE PROPERTIES

LANA KAY REALTY

MECHANICS PLUS

MOUNTAIN VIEW CONSTRUCTION

KEITH NICKISH, CPA

OUTDOOR EXPERIENCE

PANHANDLER PIES

PAUL WILLIAM VOGEL, ATTORNEY AT LAW

PAULA FREEMAN PARSONS, CPA

QUALITY INN VALLEY SUITES

RE/MAX NORTHWEST PROPERTIES

SANDPOINT CENTRAL RESERVATIONS

SANDPOINT RECREATIONAL RENTALS

SHARON'S HALLMARK

SWAN'S LANDING

TKE VACATION RENTALS

U OF I RESEARCH & EXTENSION CENTER

WASHINGTON WATER POWER COMPANY

WINTER RIDERS

PROGRESS ON AIR QUALITY

Continued from page 1.

limitations on construction and new sources of PM-10's, and other restrictions on business.

Now, if our community can meet certain conditions before the end of May, we may be granted one year extension of the attainment date. An additional extension might then be possible to give us the time needed to ensure we clean up our air. Those conditions include:

1) conducting an aggressive public awareness campaign about the issue. This will be conducted by the Chamber under a grant from the EPA.

2) implementation of a mandatory woodsmoke curtailment program.

3) issuance of new operating permits to the four industrial sources.

4) implementation of the road sanding program.

While a considerable amount of work must be done, particularly on item 3, to meet these conditions, it can be done. The fact that we have a chance now to avoid "serious" status and to get back into attainment is a testament to the hard work and cooperation of the members of the Air Quality Advisory Committee. The City of Sandpoint and Mayor Chaney, the Independent Highway District, the Idaho Transportation Department, along with Interstate Concrete, Louisiana Pacific, and Lignetics particularly deserve credit.

BONNER ESCROW CO

SERVING CLIENTS ACROSS THE NATION & THROUGHOUT THE WORLD SINCE 1978

313 N. Second
P.O. Box 1645
Sandpoint, ID 83864
(208) 263-7542
FAX (208) 263-8700

CEDAR ST. ELECTRIC & CONTROL, INC.

License No. C-03231

PO BOX 683, SANDPOINT • 263-4706

• INDUSTRIAL
• COMMERCIAL
• RESIDENTIAL

"From cabins to castles, and from the lake to the ski hill we do it all!"

PANHANDLE REALTY

303 CHURCH ST.
SANDPOINT, ID 83864
FAX (208) 263-5703

BUS. (208) 263-9565
1-800-545-4840

January Chamber

CHAMBER SEEKS EPA GRANT FOR AIR QUALITY HELP

In response to the designation of the Greater Sandpoint area as a non-attainment area for PM-10's, the Chamber has submitted a $21,000 grant request to the Environmental Protection Agency for support of a Public Information Assistant. Funds will provide some advertising dollars and a half-time staff person who will work with the Sandpoint Air Quality Advisory Committee to help inform the community about our air quality problem and what citizens can do to help improve our air and get us back to attainment status.

"Getting our community back into an attainment status is extremely important" said Jonathan Coe, Chamber Executive Director. "As long as we are in non-attainment, we are vulnerable to possible limitations on business activity and even possible sanctions from the federal government. With this staff person on board, we will be much better able to organize our community's response to this problem and to chart a path back to attainment."

The primary focus of the Public Information Assistant will be to direct a public information campaign. In addition, he or she will be working with the DEQ, EPA, and local government to monitor our air quality and to develop the SIP plan that will guide us back into attainment. This new staff member will also be getting information out about the voluntary Red Light/Green Light wood stove burning program.

Late January and February are our worst air quality months, and so it is hoped that EPA approval of this grant will come by early January so that the Public Information Assistant can begin work just as quickly as possible. This half-time position will be combined with another half-time position working on governmental issues to make a full-time position.

CHAMBER DAY AT SCHWEITZER SET FOR 26TH

The annual Chamber Day at Schweitzer Mountain Resort has been set for Thursday, January 26th. That day Chamber members and their employees can get an all day lift ticket for $15 and join folks from other chambers around the region for a day of fun and skiing.

Apres ski, Schweitzer will host Business After Hours from 4 to 6 pm. Wine and cheese will be served at Taps. Door prizes provided by participating chamber's will be given away to participants

This is a great chance to get up to the mountain, to visit with old friends, and to make new ones. So plan on joining us for a day of skiing and chamber fun on Thursday, January 26th.

Those interested must register with the Chamber office (263-2161) by Friday, the 20th.

Schweitzer Mountain Resort
Sandpoint, Idaho

Join us Thursday, January 26th
from 4 to 6 pm for

BUSINESS AFTER HOURS

at

SCHWEITZER MOUNTAIN RESORT

Join members of other area Chambers for wine & hors d' oeuvres
in the Caribou Room
Bring your Business Card for Door Prize Drawings

Greater SANDPOINT CHAMBER OF COMMERCE

BUSINESS LINES

NEWSLETTER OF THE GREATER SANDPOINT CHAMBER OF COMMERCE NOVEMBER 1994 "WHERE QUALITY IS A WAY OF LIFE"

AIR QUALITY NON-ATTAINMENT DESIGNATION THREATENS COMMUNITY, BUSINESSES

Much to almost everyone's surprise, our community has recently discovered that we have been designated by EPA as an air quality non-attainment area for PM-10's. This means that within an area that includes the cities of Sandpoint, Ponderay, Kootenai, and parts of Bonner County our air quality has failed to meet federal standards for fine particulates (PM-10's). These particulates can cause breathing and other health problems.

Under the Chamber's leadership, a revived Citizen's Air Quality Advisory Committee has been formed to deal with this problem. They have discovered the following:

1) The 1990 Clean Air Act designated our community as a non-attainment area.

2) Since 1986, our area has exceeded the PM-10 standard of averaging 150 or more micrograms per cubic meter of air during a 24 hour period on eight days.

3) That the State of Idaho has failed to implement a State Implementation Plan (SIP) to improve our air quality as required by EPA under the Clean Air Act. A draft SIP has been submitted to EPA.

4) That the primary causes of our winter violations are:

Continued on Page 2.

NEW GOVERNOR AND LEGISLATORS TO BE HERE NOVEMBER 14TH

On Monday, November 14th the greater Sandpoint community will host the newly elected Governor and the state legislature as part of the biennial North Idaho Legislative Tour. "This will be the first time that our community has hosted the legislature for the entire day and the Governor's banquet," said Jonathan Coe, Chamber Executive Director. "The Governor's banquet is of particular significance since it is the first time that the new governor will address the legislature."

The purpose of the legislative tour is to acquaint the legislators with North Idaho and our specific concerns before they go to Boise for the legislative session. Our theme this year is "Help Us Help Ourselves". We'll be showing the legislators some of the many things that our community has done to improve itself, thanking them for help they've

Continued on Page 3.

ANNUAL RECEPTION TO BE HELD NOVEMBER 3RD

The Chamber's Annual Reception will be held on Thursday, November 3rd from 5 to 8 pm at the Cedar Street Bridge. This annual event is a chance to celebrate the Chamber's successes of the past year, thank our outgoing officers and Board members and honor our incoming officers. Finally, we will honor the Chamber's Citizen of the Year.

We hope that all Chamber members will attend. This year we will be thanking outgoing President Jim Semick of North Idaho Insurance and retiring Board members Val Olson of Bonner General Hospital, Laurie Wall of First American Title, Pat Malloy of Cada-Pine and Bob Chapman of Yoke's for their outstanding service.

In addition, we will welcome the incoming officers. They are Rick Cox of R&L Property Management, our new President, Ken Chase of First InterState Bank, Vice President, and Dan Durkin of Penney's, Secretary/Treasurer.

Each of the Chamber's active committees will have an informational table set up at the reception. Thus, it's a great chance for new members or those who haven't been involved lately to learn more about what's going on. So mark you calendars and plan on attending November 3rd.

PRESIDENT'S CORNER

DEAR CHAMBER MEMBERS:

As I am sure you are aware the Chamber, or should I say two of its Committees, have just completed two successful events. The C.A.M.S. (Chamber Ambassador Members of Sandpoint) put on the Ultimate Auction, and the Tourism Promotion Committee put on the Western Dance.

Sharon Grigg is the Chamber staff member that works with the CAMS and was a driving force behind the Ultimate Auction. Sharon also keeps the books and membership records for the Chamber.

Carol Novak is the Tourism Manager and the Chamber staff member that works with the Tourism Promotion Committee and was the driving force behind the Western Dance. Carol is also the staff member that works with the Resort Association and helps administer our grant from the Idaho Travel Council.

Not only did these two ladies help put on two wonderful events, they found time to help each other on them as well. In between the two Chamber events Carol coordinated the Tourism Promotion Committee's assistance to the Draft Horse Show by selling tickets and giving out information during the show.

This is just an example of how diverse and how hard our Chamber staff members work for us. My hat is off to our super staff once again! Keep up the fantastic work ladies! Your efforts do not go unnoticed.

Rick Cox, President
R&L Property Management

NON-ATTAINMENT DESIGNATION THREATENS COMMUNITY

Continued from Page 1

Wood Burning: 35%

Road Dust: 28%

Industrial Sources: 24%

5) That because the State has failed to implement the SIP and we had an air quality violation in 1994, the Clean Air Act may require EPA to designate our community a "Serious" non-attainment area in 1995. If that happens we will be subject to severe restrictions from EPA that could include: withdrawal from the State of Federal Highway Funds, the prohibition of new businesses locating here, the prohibition of new construction, the required use by industry of the most expensive PM-10 control technology, mandatory controls on wood stoves, and more.

Given all of this, the Air Quality Advisory Committee has quickly mobilized our resources to implement parts of the draft SIP. It is our goal to prevent any exceedances of the 150 microgram standards in our community this winter. With that background, we may be able to convince EPA not to label us a serious non-attainment area.

To date, the following has been accomplished:

1) With the help of an EPA grant and Washington Water Power, the City of Sandpoint has created a wood stove change out program that will provide city residents with financial incentives to trade in their non-complying wood stoves for gas, pellet, or EPA certified stoves.

2) The Independent Highway District has passed an ordinance changing the type of anti-skid material that can be used on the roads. The City is considering a similar ordinance.

3) Funding is coming through for a sweeper the Highway District will use to clean up dirt and gravel from the roads before it gets into the air.

4) With the help of Interstate Concrete, the Idaho Transportation Department is developing equipment to apply liquid de-icer this winter to limit the amount of sand/gravel that has to be applied to area roads.

5) The ITD has approved a resurfacing of 95 and 2 through Sandpoint to provide a better road surface that will make the new street sweeper more effective.

6) The Committee will be asking the Cities of Sandpoint, Kootenai, and Ponderay to limit open burning when PM-10 levels are high.

7) A voluntary program to limit wood burning during periods of high PM-10 levels is being developed for this winter.

This issue is the biggest current threat to the Sandpoint business community. It is imperative that we work together to prevent any exceedance of the PM-10 standard this winter. Please contact the Chamber with any questions and comply with all requests to limit wood burning or road activities this winter.

ON THE LEVEL

PBCA

NEWSLETTER OF THE PANHANDLE BUILDING CONTRACTORS ASSOCIATION

OCTOBER 1994

Certified Wood Stoves

by Michael Lajko

Don't try building one in your garage!

"Wood burning in Idaho is a tradition like owning guns," according to Ken Acker, General Manager of Genetics, the wood pellet producer just north of Sandpoint.

But the times they are a-changing. Burning that pile of leaves in October and roasting chestnuts on an open fire may soon be only cherished memories.

The Environmental Protection Agency and the Idaho Department of Environmental Quality are ready to clamp down equally hard on Sandpoint's three sources of pollution: wood smoke, fugitive road dust and industry. Although industry's contribution to the problem is small by comparison to the other two, this is where jobs may be lost and the housing industry crip-

The Sandpoint city council is working closely with the IDEQ. Recently passed resolutions promote voluntary citizen compliance with wood stove use and the improvement of anti-skid materials used on winter roadways. The outright banning of open burning inside the Sandpoint city limits may soon be on the city's agenda.

Photo by Jim Hayne, Pend Oreille Reporter

Although non-certified stoves like this one cannot be legally manufactured anywhere in the country, you may still purchase one at a garage sale in Idaho. As air pollution laws become more strict, this situation may change.

"The only law from anywhere governing us (in Sandpoint) and our wood stoves right now is a federal law banning the manufacture of any but EPA certified stoves," said Dan Redline of the IDEQ. "And this law does not cover the resale of used stoves."

At the end of the last session the Idaho Legislature passed House Bill 712, the Alternative Energy Tax Credit that will be effective January 1, 1995. "It is for replacement of older stoves with newer EPA certified stoves, pellet stoves or natural gas or propane models," said Rick Williams, Air Quality Analyst for the

Continued on page 8

from page 1...

DEQ in Boise. "You will have to dispose of your old ove according to regulations yet to be drawn up."

According to Williams there will be forms for ocumentation. "You will have to save the receipt from the rap yard," he said, "like any other receipt you save for a ossible tax audit."

State Representative Jim Stoicheff was one of only two egislators who voted against the measure complaining bout poor language. "You could go out and buy an old lunker for ten bucks," said Stoicheff, "and then give it to he state" to get your tax credit on the new one. The tax redit would be worth a maximum of $5,000—40% the irst year and 20% in each of the next three years.

As the new federal laws were phased in starting in 1986, it eliminated the local builders of wood stoves, said Ollie Killen of the Log House in Sandpoint. At present the closest builder is Aladdin Steel Products in Colville, Washington. Nationwide the number of wood stove manufacturers fell from 350 to around forty. "It costs around $10-$15,000 to have a stove tested," said Killen, "and it can take about three months."

The EPA contracts with three testers around the country like Energy and Environmental Systems Performance Corporation in Kent, Washington. This company tests about forty wood stoves a year for particulate emissions based on a grams per hour rating. A battery of tests is performed on each stove, according to Bill Nowak, a technician for EESPC, to try to mimic in-home performance. To eliminate variables, the wood used is always air-dried dimensional Douglas Fir with a moisture content of 18-22%—seven pounds of wood per cubic foot of firebox.

Catalytic burners are expected to produce less than 4.1 g/hour while non-catalytics must put out less than 7.5 g/hour. The rate is based on an average of four different burn rates. The lowest particulate output measured on a stove under test at EESPC was 1.6 g/hour according to Nowak.

By comparison, a non-certified air-tight wood stove can belch 40-60 g/hour into the air and a fireplace can send as much as 80g/hour up the chimney.

These test labs have to be independent and totally unaffiliated with wood stove manufacturers or dealers.

In addition to testing prototypes the EESPC will perform tests for the EPA as part of a *selective enforcement audit*. In these cases, the EPA gets a complaint about a stove and forces the manufacturer to go through the testing procedure again at its own expense.

Wood stove manufacturers are also required to do a dimensional examination of every one hundred and fiftieth stove off the assembly line to insure that it is exactly like the prototype. With an in-house testing lab is also required of wood stove builders to do an accurate emissions test on every ten-thousandth stove off the line, it is no wonder that small-time stove manufacturers are a thing of the past.

Once a wood burning appliance passes the EPA standards the builder is issued a number that is to be stamped or permanently attached to the stove. According to Ollie Killen at the Log House, the consumer will also find a white ticket displayed on the stove in the showroom. ■

InterMountain Resources
Property Evaluations
You need to know...
...we know your needs.

Site Investigations
- Site-specific resource surveys encompassing soils, water, geology, wildlife, fisheries, and vegetation habitats
- Property transfer environmental audits
- Wetland determinations & delineations
- Resource damage analysis

Land Capability Analysis
- Site characterizations & land-use determinations
- Environmental impact assessments & reports
- Environmental liability & risk assessments

Project Planning
- Planning & zoning consultation
- Development of permit applications
- Agency liaison & regulation assistance

Protect your investment.
Get the facts.

InterMountain Resources
Environmental Services & Consulting Scientists
111 Cedar Street, Suite # 8
Post Office Box 1724
Sandpoint, ID 83864

Telephone (208) 263-9391 IMR Facsimile (208) 263-7013

ON THE LEVEL

PBCA

NEWSLETTER OF THE PANHANDLE BUILDING CONTRACTORS ASSOCIATION

SEPTEMBER 1994

IDEQ Update

High particulate levels and state regulation could weigh heavy on builders

Four major companies in the construction industry are being targeted by the Idaho Department of Environmental Quality (IDEQ) under a mandate from the Environmental Protection Agency (EPA) to control air pollution levels as measured by a rooftop sensor at the post office. If what's proposed becomes a reality, Lake Pre-Mix Concrete, McFarland Industries, Interstate Concrete and Asphalt and Louisiana-Pacific may all have yearly production quotas imposed upon them. This could effectively shut down our local housing industry mid-year.

If the quota technique does not produce the desired improvement in Sandpoint's air quality, the IDEQ may take aim at the rest of the building industry.

Sandpoint was recently classified as a "non-attainment area" by the IDEQ because we collectively exceeded the 24-hour average of 150 micrograms per cubic meter PM-10 National Ambient Air Quality Standards—8 times in recent years. A limit has been set on what is acceptable for airborne particulates less than 10 microns in size. Something that small can get through the filtering systems in the nose and sinuses and become lodged in the lungs with the potential for causing damage.

The IDEQ has done an emission inventory and identified three major types of this pollution: residential wood smoke, fugitive road dust and industry.

In certain areas of town, one source may predominate over the other two, but it is all lumped together by the sensor at the post office.

With its limited manpower and resources, the IDEQ is working on all three angles at once, but the portion of the problem with the easiest handle to get a grip on is industry. In Sandpoint's case, the businesses involved are an integral part of the north Idaho homebuilding industry.

Louisiana-Pacific, McFarland Industries, Lake Pre-Mix Concrete and Interstate Concrete and Asphalt are the four local entities being forced to apply for Tier II Interim Operating Permits from the IDEQ.

Photo by Dwayne Parsons

Even leaf smoke and yard waste burning contribute to measurable particulate levels and are likely to be subject to state regulation.

An information package containing the IDEQ's analyses and proposed actions is available for inspection at the library. For two months comments have been solicited by Gary Reinbold, program development specialist for the IDEQ in Boise. Reinbold will soon have at the library a "response package" containing a copy of all comments and the IDEQ's response to them. "We have received quite extensive comments," said Reinbold, "from the four pollution sources themselves, their employees and from residents in the area."

According to that sensor at the post office something like one per-cent of the particulate matter actually comes from the four businesses, but "industries are easy to go after," said Steve Lafrenz, owner of Lake Pre-Mix Concrete. "It is harder to go after a public *Continued on page 4*

DEQ *from page 1...*

:ntity like the highway district and even more difficult to :onvince people to burn cleanly."

In 1988 the IDEQ first notified the city of Sandpoint hat a problem existed. Work on the solution was shelved 'or six years and now backs are against the wall.

To meet the problem head-on, representatives of the four businesses are meeting with people from the city, the chamber and the highway district. "Our city does not have a serious dust problem," said Larry Peak, manager of Interstate Concrete and Asphalt. "But if we violate the 150mpc limit just once a lot of things automatically start to happen. The first people to get jumped on are the 'permitted' industries. This happens whether or not those businesses are actually causing the problem."

Everyone agrees that the bulk of the problem in the winter is wood smoke and dust from traction sand kicked up on clear dry days—combined with frequent temperature inversions. Lafrenze points out that four of the eight non-compliance days were in winter when concrete businesses do very little work.

It must be noted that the IDEQ did not go to the four "permitted" industries in town and measure particulate levels at the sites. Instead, they use computer models of similar industries combined with historical analyses. The baseline emissions data was from 1990, for the State Implementation Plan (SIP) finalized in 1993.

In 1990 the McFarland pole yard "was using an old wigwam burner to dispose of bark chips on an infrequent basis," according to Les Lonning, head of the Environmental Department at the main office of McFarland Cascade in Tacoma.

"Now it's used only for storage. Plus, we have paved over two acres of our lot since 1990." In the comments submitted to IDEQ, McFarland has proposed paving even more area and using a street sweeper to keep the dust down in the paved areas.

"Keep in mind," said Lonning, "that even if LP, McFarland and the others stopped operations today and did not operate ever again, Sandpoint would still violate the PM-10 limits. The biggest piece of the puzzel is not industry, but Sandpoint itself, with its wood smoke and street dust." As an example, those computer models show that Lake Pre-Mix contributes less than a half-ton of the 600 tons of particulates put into the air each year in the Sandpoint area.

There is hope. (The fat lady has yet to sing.)

In early August after a meeting of everyone involved, "we came away with a consensus that people working together can get something done," said Lafrenz. "The cost of doing nothing is a lot more than the cost of working together to jointly solve these problems.

"The IDEQ is willing to sit down and listen to our thoughts and answer our questions," said Les Lonning. "I feel encouraged that they are *Continued on page 8*

Kitchen & Bath Cabinets

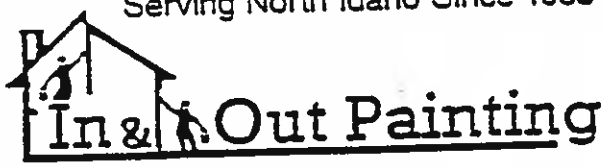
Sales & Installation, Computer-Aided Design

The Kitchen & Bath Center

205 Cedar St. Sandpoint

265-9083

Serving North Idaho Since 1983



North Idaho's Painting Professionals

Residential, Custom and Commercial

We Do Pressure Washing • Insured

521 1/2 Church • Sandpoint

263-2817

Member

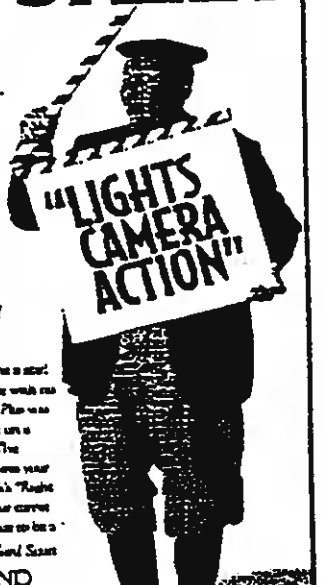
CARPET SALE!

NO Money Down

NO Interest

NO Payments For 6 Months

Plus a Chance to Star with Willard Scott on TV



MOHAWK BRAND Excellence

Sale Good Through 9/26/94

401 Triangle Dr. Located by Bonner Mall in Ponderay

263-5138

Member

IDEQ *from page 4...*

willing to have another meeting with us after the comment period."

A more recent meeting on August 18 was attended by local businesses, chamber representatives, IDEQ officials and state legislators.

"It is still unclear what will happen to the four businesses that are being permitted," said Shawn Keough of the Chamber of Commerce, who described the meeting as informative and positive. "There is a great deal of data for the IDEQ to wade through. It may take a month or more. There is the potential for a variety of things to happen." We'll just have to wait and see.

The question is: Can we realistically meet the PM-10 requirements 365 days a year?

"Yes, I think so," replied Dan Redline, air quality analyst for the IDEQ office in Coeur d'Alene, "windy dust storms notwithstanding since they are a regional issue. I would really like to see a requirement that new homes not be allowed to have older-type wood stoves installed." Since Idaho is one of a small handful of states with no restrictions on wood stoves, many second-rate wood-burners that could not be sold elsewhere are being dumped on our market. If voluntary use of good quality stoves does not happen soon, no doubt it will be forced upon us.

The issue of air pollution in Sandpoint, it seems, affects us all in more ways than would first appear. ■

Join Us...

... And help make the building industry strong!

For information on joining, call a member.

Adams Construction • Albeni Falls Building Supply • Albright & Thurston, Inc. • Alpine Lumber • Atlas Building Center • Baker Construction & Development • Bellomy Excavating & Pipeline • Blackfoot Construction, Inc. • Bonner County Association of Realtors • Bonner County Daily Bee • C & R Home Interiors • C & S Construction • Cedar Street Electric • Colin Construction • Columbia Paint & Coatings • Contor Design • CTM Concrete Pumping • The Custom Builders • DEG Construction • DNA Enterprises • Earth Energy Systems • Edgewater Resort • First American Title Co. • First Security Bank • Fredricksen-McDonough Electric, Inc. • Fix it Fitz • Gem State Plumbing & Heating • Herrmann Construction • The Home Crafters • Homestake Construction • Idaho Electric • Idaho Roofing • In & Out Painting • Interstate Concrete & Asphalt • James Carhart & Associates • J & P's Backhoe and Small Tractor Service • Mark Johnson Excavating • Kaniksu Realty • Karli's TV & Appliance • La Duca Drywall • Lake Pre-Mix Concrete • Lakeshore Builders, Inc. • Larry's Plumbing • Merrell & Windju, Chartered • Mountain Communications, Inc. • Mountain View Construction • Northern Lights, Inc. • North Idaho Insurance • Oak Creek Construction • Pacific Power & Light • The Paint Bucket • Panhandle Realty • Panhandle State Bank • Pend Oreille Printers • Platinum Flooring • Priest River Glass, Inc. • Quenzer Building • Reader Construction • Rasor & Associates Drafting Service • S & H Insulation • S & S Construction • S & W Precision Framers • Sandpoint Building Supply • Sandpoint Furniture • Sandpoint Garage Doors, Inc • Sandpoint Title Insurance • Sandpoint Windows & Doors • Second Avenue Pizza • Royal Shields Jr. Architect • Sunshine Builders • Talache Construction • Timberlodge of Idaho • Tomahawk Construction • Tucker Excavation & Pipeline • Wakeley & Key Construction • Washington Water Power • WestOne Bank • Wingets Cabinets ■

C & R Home Interiors

Member

Now with 2 Locations to Serve You!

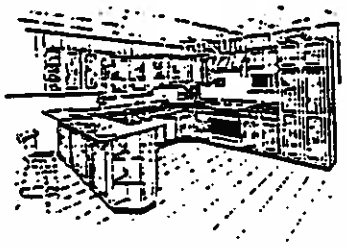
Priest River
Timberline Ctr
448-2443

or

Sandpoint
Bonner Mall
263-8819

COUNTERTOPS

- Solid Surfacing
- Laminate
- Tile
- Preform



CABINETS

- Custom Computer Designs
- FREE Field Measurements
- 3 Cabinet Lines to Choose

Horizons
Huntwood
Dewils

ALL NEW...
Light Fixtures by Seagull Lighting

C & R

1-800-828-7139
FAX 448-2605

DeWils

HYDRA

FOOTBALL QUIZ

QUESTION?
Where do you go for the best TV football viewing, the best Game Food, the best Happy Hour prices, plus fun giveaways and a good time?

ANSWER...
Pick the right one:

☐ Uptown
☐ Downtown
☆ The Hydra

You Score! Touchdown!!

The Hydra Restaurant & Bar
115 Lake Street • 263-7123
Monday Night Football - Hydra Happy Hour
4:00 P.M. to close

September 19

Permitting: What could happen?

Local businesses face possible shut-downs

The process of permitting our wood and concrete businesses is well under way. There is no turning back. If the proposed wording in the permits becomes law the entire building industry in North Idaho could suffer under yearly quotas. Just ask the local business people involved:

The wording of the permit "would severely limit our capabilities," said Frank Steenvoorden, operations manager of Louisiana-Pacific in Sandpoint. "You either run a business or you don't. You can't run a business for only six months—or two months—out of a year." Steenvoorden said that one hundred people are employed at the Sandpoint facility with another hundred at mills in Priest River and Chilco depending on the operation.

"Even if I paved my entire lot and had a man with a dust pan sweeping up behind the trucks, I would still be blamed for the problem," said Larry Peak, manager of Interstate Concrete and Asphalt. "They want to limit my summertime business to a fixed number of yards of asphalt—even though they say the problem exists in the winter when I'm not operating at all."

Lafrenz, owner of Lake Pre-Mix Concrete, said he hopes that "before it's done, the wording in the permit can be changed to raise the limits on the amount of concrete that can be produced so that we can serve the market area. As it stands now we're not too far off today from the yearly limit they would like to impose."

If the permits—as they stand—were in effect today, some of these businesses would be getting ready to close their doors for the remainder of the year. Without vital raw materials, the home building industry could soon grind to a halt. Bringing concrete and lumber in from distant locations may not be an option either, since pollution from trucks is also a factor.

At the present time, Sandpoint is classified as a "non-attainment area" by the IDEQ. If the committee of local businesses and citizenry cannot get the problem under control, there is always the threat of even greater regulation imposed by Federal and state authorities. If Sandpoint should ever be classed as a "serious non-attainment area" we could see limits imposed upon new businesses trying to move into the area. ■

FROM BUILDER'S RISK TO TOOL & EQUIPMENT,

WE'VE GOT YOU COVERED!

Total Insurance Protection for Residential Contractors, Subcontractors and Remodelers

Member

- Builder's Risk • General Liability
- Workers' Compensation (where available)
- Commercial Package Policy • Commercial Automobile • Umbrella • Tenant Occupied Dwelling • Electronic Data Processing Policy • Installation Floater • Tool & Equipment • Trade-in/Unsold Dwelling
- Purchase Under Contract • Model Home
- Model Home Contents

NORTH IDAHO INSURANCE

102 SUPERIOR
P.O. BOX 248
SANDPOINT
IDAHO 83864-0248

263-2194

HOME BUILDERS INSURANCE PROGRAM®

Endorsed by the Idaho Building Contractors Association

PURE WATER NEWS

NEWSLETTER OF THE SANDPOINT PUBLIC WORKS DEPARTMENT

Winter 1995

WHAT'S INSIDE

▲ Public Notice. This quarterly notice to customers is required because water treatment plants aren't up to code. *Page 2.*

▲ Update on Water Treatment Plants. A consultant explores options for upgrades on water plants. *Page 3.*

▲ PPM & PPB. Just how small are these measurements of particulates in drinking water? *Page 3.*

▲ Q & A Section. Common questions on drinking water are addressed by the Water Department. *Page 4.*

QUICK FACTS:

✔ Sandpoint's system produced 833 million gallons of water in 1993.

✔ Water from the Little Sand Creek plant has an average temperature of 5.09 degrees Celsius.

PHONE NUMBERS

City Hall and Mayor Ron Chaney: 263-3310

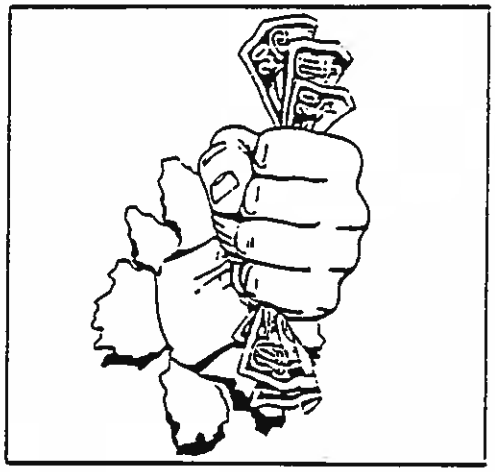
Public Works Department: 263-3407

DEQ Drinking Water Program: 208/769-1422

Wood Stove Buyout

Trade in your wood stove for either $1,200 or $500

You can trade in your old wood stove and receive credit toward a new heat system while helping clear the air in Sandpoint. The City of Sandpoint has received $67,000 from the Environmental Protection Agency (EPA) to assist homeowners in replacing older, non-EPA certified wood stoves.



As you may have learned in reports from the local media, Sandpoint has been declared a "non-attainment area" for air pollution. Three sources of air pollution have been identified that need to be reduced to comply with standards in the federal Clean Air Act. One is dust from winter road sanding. The Sandpoint Independent Highway District and area industries are working toward using a different sanding material that should decrease the amount of blowing dust.

A second major polluter identified by the EPA and the Division of Environmental Quality (DEQ) is wood smoke from non-EPA-certified wood stoves. The grant money received from the EPA and DEQ will go towards switching 85 homes from non-EPA certified wood stoves to either gas or oil, or EPA-certified wood stoves or pellet stoves. Funds will be awarded on a first-come, first-served basis. How does the program work?

Follow these simple steps:

1. Contact the Public Works Department at 263-3407 to determine your eligibility. To be eligibile:
   - You must reside within the City of Sandpoint.
   - Your wood stove must be non-EPA certified.
   - Your wood stove must be your sole or primary source of heat.

2. Fill out the application available at the Public Works Department on the second floor at City Hall, Main and Second in Sandpoint.

3. Contact a dealer to purchase a new heating system.

4. Have the heating system installed. The homeowner will receive either $1,200 for a gas or oil heating system installation or $500 for a pellet or EPA wood stove installation.

Act now because only 35 households will be granted $1,200 for switching to gas or oil, and 50 households will receive $500 for switching to an EPA-certified wood stove.

If more than 35 households wish to switch to gas or oil, then they can receive $500 for that option.

Bonner County Daily Bee

We all must do our part to clear the air

The front page of the Daily Bee has been filled with news about our community's air quality or lack of. The Department of Environmental Quality (DEQ) has been measuring particulate matter in the air since 1987, by placing a monitor on the roof of the downtown post office.

As a result of this monitoring, the cities of Sandpoint, Kootenai, Ponderay and other parts of the county have been designated within the non-attainment area.

Non-attainment essentially means that the monitor was registering more particulate matter than is deemed healthy by EPA standards during a 24-hour period. PM 10 refers to particles smaller than 10 microns. The period at the end of this sentence is about 500 microns wide.

Non-attainment days usually occurred in January, when wood burning is at its highest.

When breaking things down, industry actually contributes a small percentage of the air particulate problem. Essentially, fugitive road dust and wood smoke are the most significant contributors to our air quality problem.

While wood smoke has inherently evoked memories of home and hearth, it is actually a major contributor of our modern siege of bad air, especially on days when an inversion layer exists and there is little or no air movement.

Smoke is smoke and whether it comes from tobacco or wood, it is composed of many small particles of carbon compounds. These small pieces of organic matter are called particulate sources of air pollution and population exposure and their research found the major sources of cancer risk from particulate air pollution came from motor vehicles and wood stoves.

Most of the time, if air movement is good, the smoke will leave the area and rise to a higher atmosphere. But, during those times of temperature inversion, the wood smoke hangs close to the ground and enters neighbors' yards and houses, schools and hospitals. Wood smoke particles are so tiny that they remain suspended for long periods of time and readily penetrate into buildings with incoming cold air, even in "air tight" buildings.

VALERIE OLSON

Health beat

The populations most at risk are infants, children, pregnant women, senior citizens, cigarette smokers and ex-smokers, and all those suffering from allergies, asthma, bronchitis, emphysema, pneumonia, or any other heart or lung illness.

Basically, this community needs to reduce winter particulate emissions by about 40 percent to comply with national standards. The DEQ has reviewed a number of strategies to improve air quality and the ones that have been selected

2-P Radio spots

RADIO COPY

PUBLIC SERVICE ANNOUNCEMENT

NON-CERTIFIED WOOD STOVE CHANGE OUT PROGRAM

IF YOU LIVE IN THE CITY OF SANDPOINT AND YOUR PRIMARY SOURCE OF HEAT IS A WOOD STOVE, THE FOLLOWING INFORMATION IS IMPORTANT TO YOU. TO HELP REDUCE THE WOOD SMOKE AIR POLLUTION IN AND AROUND SANDPOINT, THE EPA HAS PROVIDED GRANT FUNDS FOR SANDPOINT RESIDENTS TO CHANGE OUT THEIR NON-CERTIFIED WOOD STOVE FOR NATURAL GAS HEAT, OR AN EPA CERTIFIED WOOD OR PELLET STOVE. IF YOU QUALIFY, YOU MAY RECEIVE UP TO TWELVE HUNDRED DOLLARS ($1,200.00) FOR A NEW GAS FURNACE OR SPACE HEATER, OR FIVE HUNDRED DOLLARS ($500.00) FOR AN EPA CERTIFIED WOOD BURNING APPLIANCE. THE GRANT MONEY IS AVAILABLE ONLY TO THOSE RESIDENTS LIVING WITHIN THE CITY OF SANDPOINT AND WILL BE AWARDED ON A FIRST-COME, FIRST-SERVE BASIS. ADDITIONAL FINANCIAL ASSISTANCE MAY ALSO BE AVAILABLE TO ELIGIBLE APPLICANTS.* FOR COMPLETE PROGRAM DETAILS, CALL 263-3407 OR STOP BY THE PUBLIC WORKS DEPARTMENT AT SANDPOINT CITY HALL.

* The first 20 people trading out their non-certified wood stove for an EPA certified Pellet Stove will be eligible to receive one ton of wood stove pellets free donated by Lignetics of Idaho.

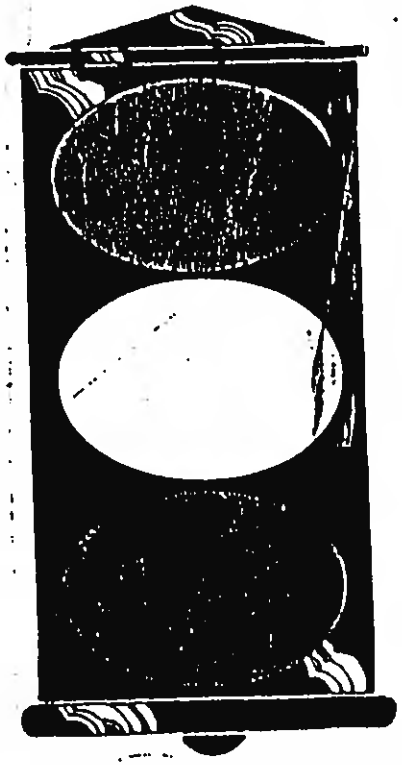
Done: Put this where you think it will work the best.

Bonner County Daily Bee

WWP
Oct. 15, 18, 19
26, 27, 30.

RED LIGHT, GREEN LIGHT

BONNER COUNTY VOLUNTARY CURTAILMENT AIR QUALITY PROGRAM



ANNOUNCEMENT CRITERIA

CONDITION RED:
If the estimated previous 24 hour PM_{10} concentration is greater than 100 $\mu g/m^3$ (75+ PSI), and stagnation conditions may persist for 12 hours, an air pollution alert is called. All outdoor open burning is prohibited and any existing open burning shall be extinguished by noon. Wood stove use should be stopped unless it is the sole source of heat. No restrictions apply to pellet stove use.

CONDITION YELLOW:
If the estimated previous 24 hour PM_{10} concentration is from 70 to 100 $\mu g/m^3$ (61-75 PSI), and stagnation conditions may persist for 12 hours, then all outdoor open burning is prohibited and any existing open burning shall be extinguished by noon. Please reduce any wood stove use unless it is the sole source of heat. No restrictions apply to pellet stove use.

CONDITION GREEN:
If the estimated previous 24 hour PM_{10} concentration is less than 70 $\mu g/m^3$ (0-60 PSI), no burning restrictions will be called.

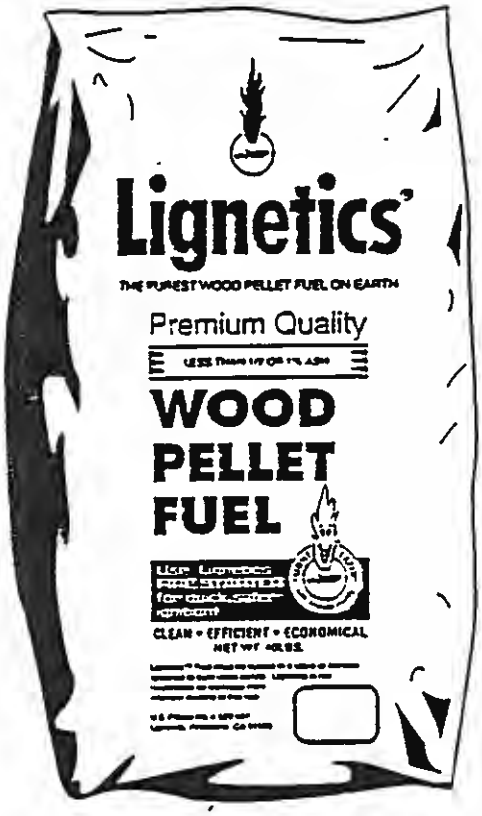
Please be aware of these air quality stages and act accordingly and responsibly.
Thank You.

CITY OF SANDPOINT
Idaho Division of Environmental Quality

Help clean Sandpoint's air!

more significant regulations

Free Fuel*



* The first 20 people trading out their non-certified wood stove for an EPA certified Pellet Stove will be eligible to receive **1 TON OF WOOD STOVE PELLETS FREE** donated by **Lignetics** of Idaho.

Upon receipt of your grant money you may pick up your one ton of pellets at the Co-Op Supply on 502 Church St. Be sure to have your certificate of completion with you for verification.

EPA GRANTS AVAILABLE

The EPA has grant money still available to help residents of the city of Sandpoint, a clean air "non-attainment" area, replace their older non-certified wood stoves, with clean burning natural gas stoves, fireplaces or furnaces, or EPA certified wood-burning devices. Grants up to $500 are available to qualified residents for this purpose. For more information call (208) 263-3407 or stop by the Public Works Dept., Sandpoint City Hall.

Bring this ad to any of the participating dealers listed below and receive an additional 10% off the purchase price of your new pellet stove.

Casey's Custom Hearth & Stove Shoppe.....265-2281
The Log House.....263-4913
Mountain Spa & Stove.....263-0582
Stove Corral.....263-1541

CITY OF SANDPOINT

Idaho Division of Environmental Quality

Help clean Sandpoint's air!

North America's #1 Value in Wood Sawdust Pellets

Clean up the air in Sandpoint.

EPA GRANTS AVAILABLE

The EPA has grant money available to help residents of the city of Sandpoint, a clean air "non-attainment" area replace their older, non-certified wood stoves with clean-burning natural gas stoves, fireplaces or furnaces, or EPA certified wood-burning devices. Grants up to $1200 are available to qualified residents for this purpose.

LET THE EPA HELP PAY FOR YOUR SWITCH TO A CLEANER HEAT SOURCE!

EPA grant money is available on a first come, first served basis, so don't wait!

For more information call (208) 263-3407 or stop by the Public Works Department, Sandpoint City Hall.

CITY OF SANDPOINT

Idaho Division of Environmental Quality

Help clean Sandpoint's air!

Bonner County Daily Bee

For Immediate Release
February 21, 1995

Contact: Lisa Moore
Phone: 263-2161

PRESS RELEASE

The Sandpoint Air Quality Advisory Committee will hold its monthly meeting at 4:30pm on February 28, 1995 at Sandpoint Community Hall.

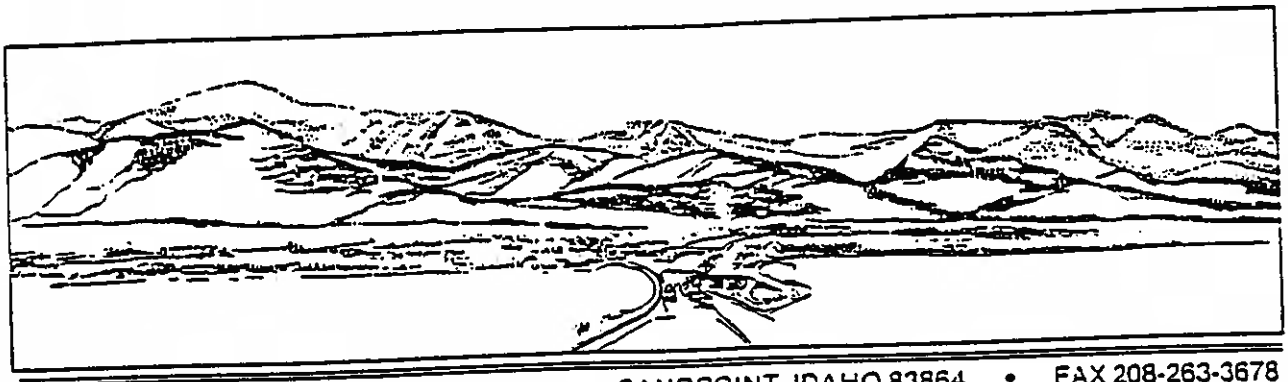
The agenda for this meeting will include reports from the Fugitive Road Dust, Ordinance, Public Awareness and Wood Stove/Smoke sub-committees.

The Advisory Committee is responsible for implementing the area's air quality plan.

The public is invited and encouraged to attend.

APPENDIX F

F-4: CITY OF SANDPOINT MANDATORY CURTAILMENT ORDINANCE



CITY OF SANDPOINT • CITY HALL • SANDPOINT, IDAHO 83864 • FAX 208-263-3678

February 24, 1995

RECEIVED
FEB 27 1995
Coeur d'Alene Field Office

Dan Redline
Air Quality Analyst
Idaho Department of Health and Welfare
Division of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, ID 83814-2648

RE: Solid Fuel Heating Appliance Ordinance

Dear Dan:

At the direction of City Clerk Helen Newton, a copy of City of Sandpoint Ordinance Number 965 is being provided to you. The subject ordinance was adopted by the Sandpoint City Council at their regular meeting on February 21, 1995. A copy of the ordinance is enclosed for your review.

This ordinance establishes criteria for solid fuel heating devices and establishes air quality designations and alert criteria. The ordinance also provides for public notification in the event of an air quality alert and prohibits certain types of burning and a burn-down period. Additionally, the ordinance provides criteria for exemptions and a permit process and addresses minimum standards for clean burning devices.

Should you have any questions regarding this material, please contact City Clerk Helen Newton at (208) 263-3310.

Very truly yours,

CITY OF SANDPOINT

Gloria Schauwecker
Deputy Clerk

enc.

RECEIVED
MAR 27 1995
Div. of Environmental Quality
Community Programs

ORDINANCE NO. 965

AN ORDINANCE OF THE CITY OF SANDPOINT, BONNER COUNTY, IDAHO, A MUNICIPAL CORPORATION OF THE STATE OF IDAHO, ESTABLISHING A SOLID FUEL HEATING APPLIANCE ORDINANCE IN THE CITY OF SANDPOINT, BONNER COUNTY, IDAHO; ESTABLISHING AN AIR QUALITY DESIGNATION AND ALERT CRITERIA; PROVIDING FOR PUBLIC NOTIFICATION OF AIR QUALITY ALERTS; PROHIBITING CERTAIN TYPES OF BURNING DURING AN AIR QUALITY ALERT; PROVIDING FOR A THREE-HOUR BURN DOWN PERIOD; PROVIDING FOR EXEMPTIONS TO THE AIR QUALITY ALERT PROVISIONS; PROVIDING DUE PROCESS FOR DENIAL OF PERMIT OR EXEMPTION; PROVIDING FOR MINIMUM STANDARDS FOR CLEAN BURNING APPLIANCES; AND, PROVIDING FOR THE PUBLICATION OF THIS ORDINANCE.

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SANDPOINT, BONNER COUNTY, IDAHO:

SECTION 1
DEFINITIONS

AIR POLLUTION: THE PRESENCE IN THE OUTDOOR ATMOSPHERE OF ANY CONTAMINANT OR COMBINATIONS THEREOF IN SUCH QUALITY OR OF SUCH NATURE AND DURATION AND UNDER SUCH CONDITIONS AS WOULD BE INJURIOUS TO HUMAN HEALTH OR WELFARE, TO ANIMAL OR PLANT LIFE, OR TO PROPERTY, OR TO INTERFERE UNREASONABLY WITH THE ENJOYMENT OF LIFE OR PROPERTY.

BUILDING: ANY STRUCTURE, DWELLING, OFFICE, INDUSTRIAL PLANT, GARAGE, OR BARN, WHETHER PUBLICLY OR PRIVATELY OWNED OR ANY OTHER STRUCTURE AS DEFINED BY THE UNIFORM BUILDING CODE AS ADOPTED BY TITLE 8 CHAPTER 1 OF THE SANDPOINT CODE.

BURN DOWN: THAT PERIOD OF TIME FOLLOWING AN AIR POLLUTION ALERT REQUIRED FOR THE CESSATION OF COMBUSTION WITHIN ANY SOLID FUEL HEATING APPLIANCE OR ANY OUTDOOR FIRES OR BURNING OR INCINERATION INCLUDED WITHIN THIS ORDINANCE.

CLEAN BURNING APPLIANCE: A SOLID FUEL HEATING APPLIANCE THAT HAS EPA PHASE II APPROVAL AND HAS BEEN PLACED ON THE LIST OF APPROVED CLEAN BURNING APPLIANCES MAINTAINED BY THE CITY BUILDING INSPECTOR.

ECONOMIC HARDSHIP: FIFTY PERCENT (50%) OR LESS OF SANDPOINT'S MEDIAN INCOME AS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.

HEAT OUTPUT: THE BTU/HOUR OUTPUT OF A SOLID FUEL HEATING APPLIANCE MEASURED UNDER TESTING CRITERIA AS ADOPTED BY THE CITY BUILDING DEPARTMENT.

OPEN BURNING: THE COMBUSTION OF ANY MATERIAL NOT CONTAINED IN A HEATING APPLIANCE OR INCINERATOR.

PARTICULATE MATTER: GAS-BORNE PARTICLES RESULTING FROM INCOMPLETE COMBUSTION, CONSISTING PREDOMINATELY, BUT NOT EXCLUSIVELY, OF CARBON AND OTHER COMBUSTIBLE MATTER.

REFUSE: ALL SOLID WASTES, GARBAGE AND RUBBISH, INCLUDING, BUT NOT LIMITED TO, CARDBOARD, PLASTIC, RUBBER, STYROFOAM, PETROLEUM PRODUCTS, FOOD STUFF, CHRISTMAS TREES, YARD DEBRIS OR CHEMICALLY TREATED WOOD.

REFUSE INCINERATOR: ANY DEVICE DESIGNED OR OPERATED TO REDUCE THE VOLUME OF REFUSE. NATURAL GAS-FIRED PATHOLOGICAL INCINERATORS ARE EXCLUDED.

SOLE SOURCE: ONE OR MORE SOLID FUEL HEATING DEVICES WHICH CONSTITUTE THE ONLY SOURCE OF HEAT IN A BUILDING FOR THE PURPOSE OF SPACE HEATING. NO SOLID FUEL HEATING DEVICE(S) SHALL BE THE SOLE SOURCE OF HEAT IF THE BUILDING IS EQUIPPED WITH A PERMANENTLY INSTALLED FURNACE OR HEATING SYSTEM DESIGNED TO HEAT THE BUILDING THAT IS CONNECTED OR UNCONNECTED FROM ITS ENERGY SOURCE, UTILIZING OIL, NATURAL GAS, ELECTRICITY OR PROPANE.

SOLID FUEL: NON-LIQUID COMBUSTIBLE MATERIAL INCLUDING WOOD, COAL, PRESSED LOGS, PELLET FUEL, BUT EXCLUDING ITEMS DEFINED HEREIN AS REFUSE.

SOLID FUEL HEATING APPLIANCE: AN ENCLOSED DEVICE DESIGNED FOR SOLID FUEL COMBUSTION THAT IS EPA PHASE-TWO APPROVED. EXPLICITLY EXCLUDED ARE FURNACES, BOILERS, COOK STOVES, MASONRY HEATERS AND OPEN FIRE PLACES.

WEIGHTED AVERAGE: THE WEIGHTED AVERAGE OF THE TEST RESULTS OF THE DISTRIBUTION OF THE HEATING NEEDS IN THE CITY OF SANDPOINT AS CALCULATED BY THE BUILDING DEPARTMENT.

WORKING DAY: MONDAY THROUGH FRIDAY.

SECTION 2
AIR QUALITY DESIGNATIONS AND ALERT CRITERIA

A. THE QUALITY OF SANDPOINT'S AIR SHALL BE DETERMINED BY MONITORING POLLUTANT LEVELS WITH EQUIPMENT AND METHODS APPROVED BY THE IDAHO STATE AIR QUALITY BUREAU.

B. THE QUALITY OF SANDPOINT'S AIR SHALL BE DESIGNATED ACCORDING TO THE FOLLOWING TABLE "PM10" INDICATES PARTICULATE MATTER WITH AN AERODYNAMIC DIAMETER LESS THAN OR EQUAL TO 10 MICRON:

HEALTH EFFECT DESIGNATION	PM 10 CONCENTRATIONS 24-HOUR (UG/M3)
GOOD	0 - 50
MODERATE	51 - 150
UNHEALTHFUL	151 - 350
VERY UNHEALTHFUL	351 - 420
HAZARDOUS	>420

C. IN ORDER TO PREVENT THE EXISTENCE OF AIR QUALITY THAT IS UNHEALTHFUL, AN AIR POLLUTION "ALERT" WILL BE DECLARED WHENEVER THE IDAHO STATE AIR QUALITY BUREAU MEASURES LEVELS OF PM 10 CONCENTRATIONS EXCEEDING 100 MICROGRAMS PER CUBIC METER (UG/M') AND FORECASTS AIR STAGNATION AND CONDITIONS CONTINUING FOR AT LEAST TWENTY-FOUR (24) HOURS.

SECTION 3
PUBLIC NOTIFICATION

WHENEVER AIR POLLUTION ALERT CONDITIONS ARE MET, LOCAL PRINT, RADIO, AND TELEVISION NEWS MEDIA WILL BE NOTIFIED. ANNOUNCEMENTS OF THE EXISTENCE OF AN AIR POLLUTION "ALERT" WILL BE MADE BY THE NEWS MEDIA DURING REGULARLY SCHEDULED BROADCASTS AND IN ALL EDITIONS OF THE OFFICIAL NEWSPAPER OF THE CITY OF SANDPOINT.

SECTION 4
BURNING SOLID FUEL OR REFUSE

A. NO PERSON SHALL CAUSE OR ALLOW REFUSE OR COAL TO BE BURNED IN A SOLID FUEL HEATING APPLIANCE DESIGNED FOR WOOD FUEL.

B. NO PERSON SHALL CAUSE OR ALLOW A REFUSE INCINERATOR TO BE OPERATED CONTRARY TO DESIGN SPECIFICATIONS AND MANUFACTURERS' INSTRUCTIONS.

SECTION 5
AIR QUALITY ALERT - ADDITIONAL RESTRICTIONS

AT THE ONSET AND DURING THE PENDENCY OF A DECLARED AIR QUALITY "ALERT", THE FOLLOWING ADDITIONAL RESTRICTIONS SHALL APPLY:

A. NO PERSON SHALL CAUSE OR ALLOW, AFTER A THREE (3) HOUR "BURN DOWN" PERIOD, THE OPERATION OF A SOLID FUEL HEATING APPLIANCE OR OPEN FIRE PLACE, UNLESS AN EXEMPTION HAS BEEN GRANTED BY THE BUILDING DEPARTMENT.

B. NO PERSON SHALL CAUSE OR ALLOW THE OPERATION OF A SOLID WASTE INCINERATOR.

C. NO PERSON SHALL CAUSE OR ALLOW OPEN BURNING OF REFUSE.

SECTION 6
AIR QUALITY ALERT EXEMPTIONS

A. THE BUILDING DEPARTMENT SHALL GRANT EXEMPTIONS FROM THIS ORDINANCE IF IT IS DIRECTED BY THE BUILDING INSPECTOR OR HIS DESIGNATED REPRESENTATIVE THAT:

1. A SOLID FUEL HEATING APPLIANCE IS THE SOLE SOURCE OF HEAT FOR THE BUILDING IN WHICH IT IS SITUATED; OR;

2. USING ALTERNATIVE HEATING WOULD CAUSE AN UNREASONABLE ECONOMIC HARDSHIP; OR,

3. THE SOLID FUEL HEATING APPLIANCE IS LISTED BY THE BUILDING DEPARTMENT AS A CLEAN BURNING APPLIANCE.

B. ANY PERSON DENIED AN EXEMPTION UNDER THIS CHAPTER SHALL BE PROVIDED, AT THE OPTION OF THE APPLICANT FOR EXEMPTION, A HEARING BEFORE THE CITY COUNCIL AS PROVIDED FOR IN THIS CHAPTER.

C. ANY BUILDING CONSTRUCTED AFTER THE EFFECTIVE DATE OF THIS ORDINANCE SHALL NOT BE ELIGIBLE FOR AN EXEMPTION UNDER SUBSECTIONS 1 AND 2 ABOVE.

SECTION 7
SOLID FUEL HEATING APPLIANCE PERMITS

A. IT SHALL BE UNLAWFUL FOR ANY PERSON IN THE CITY OF SANDPOINT TO INSTALL A SOLID FUEL HEATING APPLIANCE IN ANY NEW OR EXISTING STRUCTURE UNTIL FIRST PROCURING FROM THE BUILDING DEPARTMENT A SOLID FUEL HEATING APPLIANCE PERMIT. PERMIT FEES SHALL BE SET BY RESOLUTION ADOPTED BY THE SANDPOINT CITY COUNCIL.

B. IT SHALL BE UNLAWFUL ON OR AFTER JULY 1, 1995, FOR ANY PERSON IN THE CITY OF SANDPOINT TO ADVERTISE FOR SALE, OFFER TO SELL, OR SELL, FOR INSTALLATION IN ANY NEW OR EXISTING BUILDING, OR TO INSTALL OR ALLOW TO BE INSTALLED IN ANY NEW OR EXISTING BUILDING, A SOLID FUEL HEATING APPLIANCE WHICH HAS NOT BEEN CERTIFIED AS CLEAN BURNING BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA).

SECTION 8
DENIAL OF PERMIT OR EXEMPTION

UPON SHOWING OF SUFFICIENT CAUSE TO BELIEVE THAT GROUNDS EXIST FOR DENIAL OF A PERMIT, OR EXEMPTION OF THE RULES AND REGULATIONS OF THE BUILDING DEPARTMENT, AS PROVIDED FOR IN THIS CHAPTER, THE

BUILDING INSPECTOR OR HIS DESIGNATED REPRESENTATIVE MAY DENY SAID PERMIT OR EXEMPTION BY:

A. NOTIFYING THE APPLICANT BY CERTIFIED MAIL, PERSONAL SERVICE, OR SUBSTITUTED SERVICE OF THE GROUNDS FOR SAID DENIAL AND OF THE APPLICANTS OPPORTUNITY TO APPEAL SAID DENIAL TO THE SANDPOINT CITY COUNCIL.

B. FAILURE OF A PERSON TO ACTUALLY RECEIVE A NOTICE SENT OR SERVED SHALL NOT INVALIDATE THE DENIAL.

C. THE APPLICANT, UPON RECEIVING NOTICE OF THE DENIAL, MAY APPEAL SAID DENIAL BY MAKING APPLICATION FOR A HEARING BEFORE THE SANDPOINT CITY COUNCIL WITHIN TEN (10) WORKING DAYS OF RECEIPT OF ABOVE NOTICE.

SECTION 9
DENIAL HEARING AND DETERMINATION BY THE CITY COUNCIL

THE HEARING SHALL BE BEFORE THE SANDPOINT CITY COUNCIL. AT SUCH HEARING THE APPLICANT MAY PRESENT EVIDENCE, CALL WITNESSES AND BE REPRESENTED BY COUNSEL. WITHIN TEN (10) WORKING DAYS AFTER THE DATE OF THE HEARING, THE CITY COUNCIL SHALL EITHER:

A. UPHOLD THE DENIAL BY THE BUILDING INSPECTOR OR HIS DESIGNATED REPRESENTATIVE; OR,

B. ALLOW THE ISSUANCE OF THE PERMIT OR EXEMPTION WITH MODIFICATIONS OR CONDITIONS AS THE COUNCIL MAY IMPOSE, SUCH MODIFICATIONS OR CONDITIONS TO BE REASONABLY RELATED TO THE USE OF THE PERMIT OR EXEMPTION.

SECTION 10
APPEAL OF DECISION OF THE BOARD

THE DECISION OF THE CITY COUNCIL ON A DENIAL SHALL BE FINAL AND CONCLUSIVE. APPEAL FROM A DECISION OF THE COUNCIL MUST BE MADE TO THE DISTRICT COURT FOR BONNER COUNTY.

SECTION 11
MINIMUM STANDARDS FOR CLEAN BURNING APPLIANCES

A. IN NO EVENT SHALL THE STANDARDS FOR CLEAN BURNING SOLID FUEL HEATING APPLIANCES ALLOW A WEIGHTED AVERAGE PARTICULATE EMISSION GREATER THAN:

1. FOR A NEW CLEAN BURNING SOLID FUEL HEATING APPLIANCE WITH A MINIMUM HEAT OUTPUT OF LESS THAN 40,000 BTU PER HOUR WHEN TESTED PURSUANT TO PROCEDURES APPROVED BY THE BUILDING DEPARTMENT:

a. 7.5 GRAMS PER HOUR FOR A NON-CATALYTIC SOLID FUEL HEATING APPLIANCE.

b. 4.1 GRAMS PER HOUR FOR A CATALYTIC SOLID FUEL HEATING APPLIANCE.

2. CLEAN BURNING SOLID FUEL HEATING APPLIANCES WITH A MINIMUM HEAT OUTPUT OF GREATER THAN 40,000 BTU PER HOUR SHALL NOT EXCEED AN AVERAGE PARTICULATE EMISSION STANDARD EQUAL TO THE SUM OF 8.0 GRAMS PER HOUR PLUS 0.2 GRAMS PER HOUR FOR EACH THOUSAND BTU PER HOUR HEAT OUTPUT.

B. THE BUILDING DEPARTMENT SHALL MAINTAIN A LIST OF APPLIANCES CERTIFIED TO BE CLEAN BURNING.

SECTION 12
REPEAL OF PRIOR ORDINANCES AND CODE SECTIONS IN CONFLICT

ANY AND ALL PRIOR AND EXISTING ORDINANCES AND CODE SECTIONS OF THE REVISED MUNICIPAL CODE OF THE CITY OF SANDPOINT IN CONFLICT HEREWITH BE AND ARE HEREBY REPEALED.

SECTION 13
SEVERABILITY

IF ANY PORTION OF THIS CHAPTER IS HELD INVALID, IT IS THE INTENT OF THE CITY OF SANDPOINT THAT SUCH PART SHALL BE DEEMED SEVERABLE AND THE INVALIDITY SHALL NOT AFFECT THE REMAINING PORTIONS OF THIS CHAPTER.

THIS ORDINANCE SHALL BE IN FULL FORCE AND EFFECT UPON ITS PUBLICATION ACCORDING TO LAW IN THE BONNER COUNTY DAILY BEE, THE NEWSPAPER OF GENERAL DISTRIBUTION IN BONNER COUNTY, IDAHO, AND HEREBY DECLARED TO BE THE OFFICIAL NEWSPAPER FOR THE PUBLICATION OF THIS ORDINANCE.

ADOPTED this 21st day of February, 1995.

Ronald Chaney

Ronald Chaney, Mayor

ATTEST:

Helen M. Newton

Helen M. Newton, City Clerk

No.: 95-06
Date: February 21, 1995

RESOLUTION
OF THE CITY COUNCIL
CITY OF SANDPOINT

TITLE: SOLID FUEL HEATING APPLIANCE PERMIT FEES

WHEREAS: The City of Sandpoint has adopted a solid fuel heating appliance ordinance which provides for the establishment of certain fees to be set by resolution adopted by the city council.

NOW, THEREFORE, BE IT RESOLVED THAT: The City Council of the City of Sandpoint hereby adopts the following fee schedule for solid fuel heating appliance permit fees:

For the initial installation of a solid fuel heating appliance . . . . . $ 22.00

For the installation, relocation or replacement of each solid fuel heating appliance vent which was not included in the initial installation of the appliance . . . $ 6.50

For each appliance or piece of equipment regulated but not classed in other appliance categories or for which no other fee is listed in the applicable code . . . . $ 9.50

BE IT FURTHER RESOLVED THAT: Said permit fees shall become effective immediately upon publication of the solid fuel heating appliance ordinance.

Ronald G. Chaney, Mayor

ATTEST:

Helen M. Newton, City Clerk

CITY COUNCIL MEMBERS	YES	NO	ABSTAIN	ABSENT
(1) Miller - Motion	X			
(2) Hanson - Second	X			
(3) Vandenberg		X		
(4) Sawyer	X			
(5) Johnson	X			
(6) Staglund	X			

APPENDIX G: PUBLIC INVOLVEMENT

HEALTH AND WELFARE HEARING TAKEN ON 6/13/95 SANDPOINT, IDAHO

PAGE 1 TO PAGE 35

CLEARWATER REPORTING OF IDAHO

(208) 743-2748\FAX (208) 746-5186

CONDENSED TRANSCRIPT AND CONCORDANCE
PREPARED BY: CLEARWATER REPORTING OF IDAHO

CLEARWATER REPORTING OF WASHINGTON AND IDAHO
P. O. BOX 696
631 MAIN STREET
LEWISTON, ID 83501
Phone: (208) 743-2748
FAX: (208) 746-5186

Page 1

BEFORE THE DEPARTMENT OF HEALTH AND WELFARE
STATE OF IDAHO

PUBLIC COMMENT PERIOD)
FOR THE REVISED SANDPOINT AREA)
PARTICULATE MATTER (PM-10) AIR)
QUALITY IMPROVMENT PLAN)

Taken at the Federal Building
1500 Highway 2, Room 103
Sandpoint, Idaho
Tuesday, Juen 13, 1995 - 7:00 p.m.

PUBLIC HEARING

Page 2

I N D E X

	Page:
Appearances	3
Opening Statement of Hearing Officer	4
Statement by Dan Redline on behalf of the Department of Health and Welfare, Division of Environmental Quality	6
Statement by David Sawyer	14
Statement by Paul Franz	21

Reported by Craig M. Hodges, CSR, Official Court Reporter and Notary Public, States of Idaho and Washington, residing in Hayden Lake, Idaho.

Page 3

A P P E A R A N C E S

PURSUANT TO NOTICE, there appeared before CRAIG M. HODGES, CSR, a Notary public, at the Federal Building, 1500 Highway 2, Room 103, Sandpoint, Idaho, at the hour of 7:08 p.m., Tuesday, June 13, 1995, the general public concerning a hearing on the Public Comment Period for the Revised Sandpoint Area Particulate Matter (PM-10) Air Quality Improvement Plan.

Mr. Stephen M. Ayers, Hearing Officer, presided over the public Hearing.

Mr. Dan Redline appeared on behalf of the Department of Health and Welfare, Division of Environmental Quality.

The public hearing was reported in stenograph by the Notary Public, Craig M. Hodges, CSR, for the firm of Clearwater Reporting, 631 Main Street, Lewiston, Idaho, and by him later transcribed.

Page 4

TUESDAY, JUNE 13, 1995

HEARING OFFICER AYERS: Let the record reflect that I am Steven Ayers, the designated Hearing Officer for the Department of Health and Welfare, Division of Environmental Quality. The hearing tonight is being recorded by Craig Hodges of Coeur d'Alene, Idaho. It is about 7:08 p.m. on the 13th day of June, 1995. And, of course, we are in the Federal Building in Sandpoint, Idaho. This is the time and place set to receive oral and written comments on the revision to the State Implementation Plan. The revision we will be dealing with is with a new chapter on the Sandpoint area particulate matter PM-10, Air Quality Improvement Plan. For the audience's information, the State Implementation Plan is a plan required by Federal Law to be developed and implemented by the 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.

Page 5

[1] I will accept written statements or documents
[2] at the hearing this evening, if relevant and signed
[3] by the persons presenting them. The materials will
[4] be included as exhibits in the record, which I will
[5] transmit to the Division of Environmental Quality,
[6] North Idaho Regional Office following the close of
[7] the public comment period.
[8] Let the record show that affidavits are on
[9] file regarding publication of the legal notice of the
[10] opportunity for public comment at least 30 days prior
[11] to the close of the scheduled comment period as
[12] specified in Title 40, Code of Federal Regulations,
[13] Section 51.102.(d). Such publication was made in the
[14] Bonner County Daily Bee on May 25, 1995. Such
[15] publication included notice of this public hearing.
[16] This publication was timely made and other necessary
[17] notice requirements have been met.
[18] As an informal proceeding, there is no right
[19] to cross-examine a person offering a comment; nor is
[20] there a right to counsel or subpoena. No objections
[21] or procedures of a technically legal nature will be
[22] received. As the Hearing Officer, I am the sole
[23] regulator of the course of the presentations,
[24] including, but not limited to, a determination that
[25] the comments are outside the scope of the rules or

Page 6

[1] that comments are unduly repetitious.
[2] I'm not here to answer questions or to explain
[3] any part of the proposed plan, although I myself
[4] might ask questions to further explore or amplify the
[5] information presented.
[6] All those interested parties attending the
[7] proceedings are asked to sign in on the roster by the
[8] entrance, including a desire, if any, to make an oral
[9] presentation.
[10] I ask that you try to limit your comments to
[11] five minutes. After a brief statement by the
[12] Division of Environmental Quality representative,
[13] which will summarize the information upon which the
[14] proposed action is based, each person will be given
[15] an opportunity to speak at least once prior to any
[16] person being heard a second time. I will remind you
[17] that this hearing is on the proposed revision and
[18] that only comments concerning that topic may be
[19] considered.
[20] At this time, the Division of Environmental
[21] Qualify statement will be read into the record,
[22] followed by the oral presentations.
[23] DAN REDLINE: And like I said, there is a copy
[24] of this – my statement in the little blue handout
[25] that was provided if you want to follow along.

Page 7

[1] Mr. Hearing Officer, ladies and gentlemen, my
[2] name is Dan Redline. I am an Air Quality Analyst
[3] with the Idaho Department of Health and Welfare,
[4] Division of Environmental Quality for the North Idaho
[5] Regional Office in Coeur d'Alene.
[6] The hearing to night is for the revised
[7] Sandpoint Air Quality Improvement Plan. In addition
[8] to this evening's public hearing, a separate public
[9] hearing is scheduled tomorrow evening for the
[10] proposed operating permits. My testimony will
[11] briefly outline, one, the history of events which
[12] have triggered this plan, the Department's actions
[13] leading to this hearing, and how the Department will
[14] respond to the comments received at this hearing.
[15] In July 1987, the U.S. Environmental
[16] Protection Agency adopted ambient air quality
[17] standards for small airborne particles less than or
[18] equal to ten microns in diameter, known as PM-10.
[19] The State of Idaho later adopted these
[20] health-based standards. The standard that we are
[21] concerned with tonight is the 24-hour standard for
[22] PM-10, which is established at 150 micrograms per
[23] cubic meter. This standard was set by the EPA to
[24] protect human health and provide for a margin of
[25] safety.

Page 8

[1] Ambient monitoring conducted by the Department
[2] has shown that the Sandpoint area has periodically
[3] exceeded the 24-hour ambient standard for PM-10. And
[4] as a result, the Sandpoint area was designated a
[5] nonattainment for PM-10. A map of the nonattainment
[6] boundaries is available in the draft document. There
[7] is also a copy of the map in your – in the handout
[8] and there is one on the wall provided, as well.
[9] When an area is designated nonattainment for
[10] one or more of the criteria pollutants identified by
[11] the National Ambient Air Quality Standard, the Clean
[12] Air Act Amendments of 1990 require that states adopt
[13] and submit a state implementation plan to the EPA. A
[14] state implementation plan, or SIP, must improve air
[15] quality in the nonattainment area by the applicable
[16] date set by the Clean Air Act Amendments, and also
[17] demonstrate the air quality standard will be
[18] maintained into the future under the guidance of the
[19] plan.
[20] It is the Department's goal to meet all
[21] requirements set forth by the Clean Air Act
[22] Amendments for improving air quality in nonattainment
[23] areas while minimizing any associated impact on the
[24] local community structure and its economic vitality.
[25] The Division of Environmental Quality has

Page 9

[1] conducted several scientific investigations to
[2] determine the major sources of PM-10 in the Sandpoint
[3] area. This comprehensive investigation work, which
[4] includes chemical analysis of ambient samples,
[5] computerized modeling of source impacts, detailed
[6] analysis of meterological conditions, and an
[7] inventory of sources producing PM-10 emissions, is
[8] summarized in the draft plan presented here.
[9] The results from each of the investigative
[10] techniques were evaluated and used by DEQ to identify
[11] the major sources causing the air quality problems in
[12] the Sandpoint area. DEQ identified emissions from
[13] paved roads during winter and emissions from
[14] residential wood burning as the two largest culpable
[15] sources. DEQ also identified PM-10 emissions from
[16] industrial sources as potentially significant
[17] contributors to the air quality problem. A
[18] comprehensive control strategy was developed based on
[19] these source impacts.
[20] The control strategy was submitted and adopted
[21] by the State in May 1993 after having gone through
[22] the required public review process. The original
[23] control strategy was later criticized by EPA, the
[24] affected industrial facilities and communities
[25] leaders for several deficiencies. After reviewing

Page 10

[1] their comments, the DEQ decided that revisions to the
[2] original emission inventory and control strategy were
[3] required.
[4] To further complicate this situation, EPA
[5] proposed that the Sandpoint area be reclassified from
[6] a moderate to a serious nonattainment area due to
[7] continued measured violations of the 24-hour PM-10
[8] standard. A reclassification to serious would
[9] require the development and implementation of
[10] additional control measures. After consultation with
[11] local community leaders and the EPA, an action plan
[12] was developed to prevent the Sandpoint area from
[13] "going serious." The adoption of this revised
[14] control strategy is part of that action plan.
[15] The control strategy clude several control
[16] measures which have already been implemented locally.
[17] These control measures include programs to reduce
[18] emissions from residential wood burning and fugitive
[19] road dust during the winter season. For example, the
[20] City of Sandpoint recently adopted an ordinance to
[21] implement a mandatory wood burning curtailment
[22] program.
[23] The City has also successfully managed a
[24] federal grant designed to replace old uncertified
[25] wood stoves, and in 1994 adopted an ordinance which

Page 11

[1] set specific standards for the type of anti-skid or
[2] sanding material allowed within the City of
[3] Sandpoint. This material standard ordinance is
[4] further supported by the Sandpoint Independent
[5] Highway District and the Idaho Department of
[6] Transportation.
[7] The road departments have also implemented
[8] other control measures which include an aggressive
[9] street cleaning program, and using liquid deicer an
[10] an alternative material. These control measures have
[11] further reduced emissions from paved roads,
[12] especially during the winter.
[13] Local industries contributed significantly to
[14] the success of these control measures in the
[15] Sandpoint area. For the industrial sources located
[16] within the Sandpoint area, the control strategy has
[17] proposed action requiring the issuance and
[18] modification of air quality operating permits. The
[19] operating permits will establish enforceable emission
[20] limits for four local industries. As mentioned
[21] earlier, a separate comment period and hearing is
[22] available to receive comments specific to the
[23] operating permit requirements.
[24] The Department is very interested in receiving
[25] comments from the public on the revised control

Page 12

[1] strategy and plan. No one should feel that they must
[2] have detailed technical knowledge of the plan in
[3] order to provide useful comments. Many of the rules
[4] and plans developed by the Department are modified
[5] prior to final issuance based – because of
[6] significant comments by concerned citizens. The
[7] Department takes public input very seriously and your
[8] comments are always appreciated.
[9] Oral comments present at this hearing or
[10] written comments mailed to the Department are
[11] welcome. Following this hearing and after receiving
[12] the Hearing Officer's report and public comments, the
[13] Department will review all the comments, make the
[14] appropriate revisions and prepare a final document
[15] for inclusion in the State Implementation Plan for
[16] air quality. This revised plan will then be
[17] submitted to the Environmental Protection Agency for
[18] its consideration.
[19] The public comment period closes on Friday,
[20] June 23rd, 1995. To be considered, all written
[21] comments submitted to DEQ must be postmarked no later
[22] than June 23rd, 1995. Comments submitted by
[23] facsimile or FAX will be accepted up to the deadline.
[24] Copies of the draft revised plan are available for
[25] public review at the Sandpoint City Hall, Bonner

[1] County Courthouse, and the East Bonner County Library
[2] and at the DEQ Regional Office in Coeur d'Alene.
[3] I have brought a copy of the document from the
[4] Coeur d'Alene office here if anybody cares to review
[5] it while we are at the hearing tonight, and like I
[6] said, there is two copies at the Bonner County
[7] Library, one that can be checked out overnight and
[8] one to stay there as reference.
[9] Thanks.
[10] HEARING OFFICER AYERS: All right. To begin,
[11] I will call upon persons in order who indicated on
[12] the roster a wish to be heard. Since these
[13] proceedings are being recorded, it is important, of
[14] course, that we get your comments on the record and,
[15] therefore, we will ask that you come forward and
[16] either stand or sit in one of these chairs to make
[17] your comments so that you are near the Court
[18] Reporter.
[19] Also, I ask that before you start your
[20] presentation that you will give your name and spell
[21] your last name for the record.
[22] Now, the first individual who has indicated
[23] they desire to speak, I can't read their name. It
[24] looks like David, and you live on Euclid in
[25] Sandpoint.

[1] SAWYER: Yes.
[2] HEARING OFFICER AYERS: Okay.
[3] MR. SAWYER: So I can just sit here, that is
[4] fine?
[5] HEARING OFFICER AYERS: Sure.
[6] MR. SAWYER: My name is David Sawyer,
[7] S-A-W-Y-E-R.
[8] I am a City Councilman from Sandpoint.
[9] Although I do not speak for the City officially this
[10] evening, I am speaking as a private citizen.
[11] I am also a former Board Member of the Clean
[12] Air Coalition in Bonner County.
[13] The first comment I have is just some general
[14] concerns about process. Some of the literature that
[15] I received as a Council Member indicated that the
[16] comment period began on May 25th. Having contacted
[17] all of the listed locations where the plan was meant
[18] to be available, it was not available until the 2nd
[19] of June. Whether or not there is loss significant
[20] enough to see that the public comment period to a
[21] degree was compromised, I just make note of that.
[22] And the dates in the local newspaper and some
[23] of the dates in the letters were at least confusing,
[24] there being two different nights where there were
[25] comments being allowed on two different permits may

[1] have made it confusing for the public to know where
[2] to be at what night.
[3] And, also, in the SIP itself it says that all
[4] the committee members, and I a committee member, were
[5] going to receive a copy of the plan. I never
[6] received a copy of the plan in the mail nor through
[7] the City. I received one tonight through the
[8] Chamber's Information Officer for this topic.
[9] I'm going to kind of reference just some pagee
[10] numbers in the plan and try and make my comments real
[11] quick as a result.
[12] On page four of the SIP, quote, "Particulate
[13] concentrations associated with the winter season need
[14] to be reduced by 21 percent to achieve the air
[15] quality standards."
[16] It would – since in the original draft a year
[17] ago that figure was 40 percent, it would be nice for
[18] there to be a little bit of background in terms of
[19] why that number has changed so significantly. I am
[20] sure there is good reason for it, but it's a
[21] significant change and difficult to know exactly why
[22] that has happened.
[23] In reviewing sections that discuss the
[24] modeling and the resulted projections of emissions
[25] and current levels of emissions, I wasn't able to

[1] find anywhere any information about what the
[2] emissions levels would be in and around the point
[3] sources that have been identified in the report,
[4] mainly the industrial sources that will have permits
[5] for them.
[6] It would be nice again if in the plan the
[7] public could be clear that in and around those point
[8] sources, which aren't intense emission sources, that
[9] the levels indeed are achieving a standard. Clearly,
[10] they are achieving the standard because this is the
[11] plan that is being – that is going to be approved by
[12] EPA, but it would be nice to have a little bit more
[13] text discussion of that issue, because I know that
[14] some citizens have raised that kind of concern and
[15] what is happening just outside the boundary of some
[16] of these point sources. So some graphs or charts
[17] would be real helpful.
[18] Table 3-03 is probably one of the most
[19] important tables in the document. It shows the 1993
[20] and 1997 emission rates. I think that this table
[21] needs to be explained in greater detail. It appears
[22] as though the standards for emission levels are
[23] increasing significantly over the four year period
[24] from 1993 to 1997. And in discussions I had earlier
[25] today with Dan Redline, it's quite clear that that is

Page 17

not necessarily the case. There are reasons why these numbers appear to indicate an increase in emissions. And it can make the public feel as if, gee, we are supposed to be restricting the level of PM-10 emission, does this table indicate that we are increasing things. So it's just a question is this a clear table, can this easily be misread by the public.

And in reference to that table I would also like to suggest that a table like table 4-05 be made for all of the industrial sources – I'm not sure if I'm being clear here, but a dispersion model results for uncontrolled and controlled emission strategies. It would be nice to see that table have all of the different sources, industrial sources in them to see how they play out in the uncontrolled and controlled dispersion model results.

Bear with me for a second here.

On page 513 there is discussion of the permitting strategy in this case, the Louisiana Pacific Sandpoint plant, and there is a phrase – there is a statement here, "The first phase permit will be effective from the date of issuance until the date when LP completes implementation of the additional controls."

Page 18

On the next page it goes on to state that, "Those additional controls will have to come into place by July 1st, 1996."

The reason I mention that is that in another place in the plan, I can't find it right now, it mentions that the industrial sources will have the ability to delay for a time, and that's until July 1st, 1996, to implement their additional control strategies.

I have – I feel fairly confident that there is probably a very good reason for needing that delay time for the industries to implement whatever construction or cost measures they are going to have to deal with.

The comment that I would like to make is that the taxpayers are already having to pay immediately for the changes in this plan. As a City Councilman I have passed a number of ordinances over the last year, year and a half that relate to increased costs to the taxpayer in order to move forward with this plan.

I would only ask the question whether or not it's fair. And if it is, that is fine, but is it fair for the taxpayers to begin paying almost immediately before even the adoption of this plan.

Page 19

And for the industry sources to be allowed extra time to be able to factor in costs, et cetera, et cetera. I wasn't allowed to go and levy special taxes to be able to implement any of this plan. We had to just go ahead and start doing it.

So just a question there about fair play. And maybe again, if there is more background to how that occurred, what the problems are that industry is facing, there wouldn't be the feeling when you read through the document that it is unfair.

And that's all that I have.

Thank you.

HEARING OFFICER AYERS: Thank you.

DAN REDLINE: Thank you.

MR. SAWYER: Oh, I'm sorry, there is one other thing. Dan and I talked about this today. One of the things that is, I think, is really sorely missing in the plan right now is a description of what types of measures will happen if something in the plan goes awry. If industry, for whatever reason, isn't able to implement their additional control measures.

If the ordinances that the City of Sandpoint has passed do not achieve tested results that are at the standard or below the standard, what happens from

Page 20

the EPA level. What happens from DEQ, because I think that one of the reasons why we have been in a very long process with this plan is because that hasn't been clearly stated to everybody involved. This is the kind of a core document that industry citizens in DEQ are all looking at, what is going to happen to depending on attainment, I think needs to be mentioned in here so we are all starting at the same point when this plan is adopted. And if down the road six months or eight months something happens, everybody can point back to the plan and say, awh, this is what it said was going to happen, and everybody knew that was going to occur.

I know as a City Councilman I think that would help to have that strategy laid out in this document, so I have one thing to refer to, I know what is coming down the pike, if anything, happens.

That was it.

Thank you.

DAN REDLINE: Thanks.

HEARING OFFICER AYERS: Thank you.

Monica Van Posen, did you want to testify?

MS. VAN POSEN: I left a – no, not at this time, no.

Thank you.

[1] HEARING OFFICER AYERS: Okay.
[2] Paul Franz.
[3] MR. FRANZ: I didn't think I would be up so
[4] soon.
[5] My name is Paul Franz, F-R-A-N-Z.
[6] First off, I'd like to compliment DEQ staff.
[7] After spending the last two days pouring over some of
[8] the numbers, just a portion of the numbers that
[9] impact my job I have a new respect for the amount of
[10] technical analysis that went into that plan. There
[11] are just months and months of personnel times there.
[12] Again, a compliment for all the technical
[13] effort that really went into it.
[14] The changes I noted that are in the plan this
[15] time around show that good sense can win out when
[16] both the citizens and government are willing to sit
[17] down and at a nuts and bolt level take care of the
[18] problem. I have to compliment the citizens and the
[19] DEQ For standing up and taking the bull by the horns
[20] and solving the problem.
[21] The problem that the plan targets, two of the
[22] main problems, looking at some of the graphs, the two
[23] main problems are wood stove smoke and fugitive dust
[24] from sanding sand. It attacks those two problems
[25] with common sense solutions that have been

[1] implemented. They are implementable and they have
[2] been implemented this past winter, including
[3] better – using better anti-skid material and less of
[4] it. Using liquid deicers. Purchasing a new sweeper
[5] through a grand program, and using it. In coming up
[6] with a way of using it that made it effective.
[7] Implementing of a certified wood stove ordinance.
[8] And rather – very quickly, implementing a
[9] replacement program for older wood stoves, as well as
[10] a curtailment of wood stove use during poor whether
[11] conditions.
[12] In addition, the downtown city streets are
[13] going to be paved. Just bid today. That was part of
[14] an air quality improvement program. So that the City
[15] of Sandpoint has made tremendous strides in the last
[16] year towards taking control of their air quality and
[17] doing something about it.
[18] These solutions are succeeding because it's
[19] Sandpoint solution and not Boise's solution and not
[20] Washington D.C.'s solution.
[21] I was glad to see that a new base year of 1993
[22] was used in the plan. I think it's good to use the
[23] most recent information that changes some of the
[24] control strategy requirements. Like one of the
[25] previous speakers pointed out it went from 40 down to

[1] a requirement of dropping to 21 percent, primarily, I
[2] believe, because the base year was changed to the
[3] most recent year that good information was available
[4] for.
[5] Some of the flexibility of the plan adds for
[6] my business. It allows us time to finance and
[7] complete capital improvement projects, some of which
[8] we have no control over. The equipment purchases are
[9] six months out from the day we order, so some of that
[10] flexibility phase one, phase two gives us that
[11] flexibility, and I am glad to see the plan included
[12] it.
[13] Those are the balance of my comments.
[14] DAN REDLINE: Thank you.
[15] MR. FRANZ: Thank you.
[16] HEARING OFFICER AYERS: I don't have the other
[17] sign up sheet.
[18] Oh, is there – is this it?
[19] DAN REDLINE: I am not sure what that, that is
[20] a –
[21] HEARING OFFICER AYERS: Michele Dawson, did
[22] you –
[23] MR. DAWSON: Michael.
[24] HEARING OFFICER AYERS: I am sorry.
[25] MR. DAWSON: No, that is a DK. Stands for

[1] don't know.
[2] HEARING OFFICER AYERS: Okay.
[3] MR. DAWSON: I am waiting to see how the –
[4] the realm of public opinion flows.
[5] So, no, I – I don't at this present time have
[6] any comments to make.
[7] HEARING OFFICER AYERS: Anyone else desire to
[8] be heard that hasn't been heard yet?
[9] Does anyone desire to be heard a second time?
[10] DAN REDLINE: We can –
[11] HEARING OFFICER AYERS: Why don't we leave the
[12] hearing open for another 30 minutes or so in case
[13] somebody wants to –
[14] DAN REDLINE: I would be willing to open up
[15] for general questions, too, and maybe anybody would
[16] want to respond so I – the comment was raised about
[17] 40 percent versus 21 percent.
[18] And I did look into that, and one difference
[19] there is that in the old document we referred to 40
[20] percent reduction and emissions, and in the new SIP
[21] we referred to a 21 percent reduction in the ambient
[22] concentration. So it's a difference of talking about
[23] emission reductions that are necessary versus the
[24] ambient concentration, going from the ambient
[25] concentration of 190,150 versus the total amount of

Page 25

[1] PM-10 emissions being removed from the air shed,
[2] which was I think the 40 percent referred to in the
[3] old document.
[4] Any other general questions?
[5] A VOICE: Now?
[6] DAN REDLINE: Sure. I'll try and answer as
[7] best I can.
[8] A VOICE: Is this signed into law yet or not?
[9] DAN REDLINE: Pardon?
[10] A VOICE: Is this signed into law? I mean,
[11] everybody has to – like the wood burning deal, is
[12] there going to be fines for the people who don't?
[13] DAN REDLINE: The ordinances are now in effect
[14] that – they are passed and adopted by the City of
[15] Sandpoint. So the ordinances, the mandatory wood
[16] burning ordinance is in effect and the anti-skid
[17] ordinance by the City of Sandpoint are in effect.
[18] And the anti-skid materials are also adopted by
[19] resolution by the Independent Highway District, as
[20] well.
[21] A VOICE: In other words, it's passed and
[22] done, see?
[23] DAN REDLINE: And that's – that's part of the
[24] requirements of the – of – well, we presented a –
[25] basically the same plan in 1993 to meet the deadlines

Page 26

[1] that were set forth in 199 – that we had to deal
[2] with at that time. And that that this control
[3] strategy was basically outlined in that plan in 1993.
[4] So we have been working from that control strategy
[5] and made some minor revisions that we incorporated in
[6] the – in the plan that we are dealing with tonight.
[7] A VOICE: Am I correct like 98 percent of
[8] pollution comes from sources other than industry, and
[9] less than two percent comes from industry, the
[10] full –
[11] DAN REDLINE: Well, there is in – the
[12] document provides an emission inventory, and it will
[13] show the – what are the sources of emissions both on
[14] the annual basis and on a wintertime basis. And we
[15] will provide that breakdown of where the sources of
[16] emissions by the different categories.
[17] Then we also try to present how those PM-10
[18] sources affect the ambient air quality in that they
[19] affect the ambient air quality to different degrees
[20] in different locations. Naturally, if you're next to
[21] a particular source that impact is going to be
[22] higher. The farther away you get from the source the
[23] impact will drop off. So if you are right in a
[24] residential area where there is a lot of people
[25] burning wood stoves, your impact from wood stoves is

Page 27

[1] going to be higher than it's going to be from – from
[2] an industrial facility that is two miles away. But
[3] if you are in a neighborhood that is right adjacent
[4] to an industrial facility or impact from the
[5] industrial facility, that is just going to be higher
[6] than from wood burning stoves that are potentially in
[7] another part of town.
[8] So the impacts vary depending upon time and
[9] location and the area in the – and the area that we
[10] are looking at. So it's not a yes or no type of
[11] answer, unfortunately.
[12] A VOICE: I am just going by the paper.
[13] DAN REDLINE: Okay.
[14] A VOICE: Now, for this wood burning ordinance
[15] that is in effect, could you give us a brief synopsis
[16] on that? I know some people are somewhat confused on
[17] this. I mean, there is – I am not exactly sure, I
[18] haven't read it exactly, but would you give us a
[19] brief synopsis on that so I could –
[20] If you're living in town, you have a wood
[21] burning stove, and it's your sole source of heat. I
[22] mean, they are not going to be – I mean, how is that
[23] – does that work –
[24] DAN REDLINE: Okay.
[25] A VOICE: – versus with the options that the

Page 28

[1] grants provide for people on that.
[2] DAN REDLINE: All right. The ordinance is
[3] designed to prevent elevated and concentrations of
[4] PM-10 from occurring. It's a preventive measure. So
[5] we have designed it so that as we monitor, and it's
[6] based on episodic events that when you have bad air
[7] quality days or bad weather conditions that lead to
[8] bad air quality days, we monitor the air quality, we
[9] monitor the weather conditions. As the air quality
[10] starts to – if we see it starting to degrade, we
[11] will call a yellow condition, which is a voluntary
[12] reduction in use of wood stoves.
[13] If those – if the PM-10 concentrations
[14] continue to rise, then it's – and it goes past our
[15] trigger level, then we switch to a mandatory program
[16] saying that all people that use an uncertified wood
[17] stove that are not sole – that is, that is not their
[18] sole source of heat, you know, that they are not
[19] allowed to burn that wood stove and they are allowed
[20] a certain amount of time to burn down their stove and
[21] stop burning their wood stove and switch over to
[22] their other sources of heat.
[23] A VOICE: So what you're saying is that if
[24] you – for some reason, if you live in the City of
[25] Sandpoint and you didn't have electric or gas heat,

Page 29

[1] you had a noncertified wood stove, you could continue
[2] to burn it.
[3] DAN REDLINE: You could apply for an
[4] exemption.
[5] A VOICE: You could.
[6] DAN REDLINE: You need to do that through the
[7] City to apply for an emption. And there are – it
[8] specifies what those exemptions are if you're a
[9] source, and I think there is also a financial level
[10] and that – and I can't remember all the other
[11] details, but there are exceptions allowed.
[12] The other exceptions are people with certified
[13] wood stoves, clean burning wood stoves do not have to
[14] stop burning during a red or yellow period.
[15] A VOICE: And that's only in this area here,
[16] it's not all of Bonner County, right?
[17] DAN REDLINE: Right.
[18] A VOICE: Some people have been confused, it's
[19] all of Bonner County.
[20] DAN REDLINE: It's a City of Sandpoint
[21] ordinance, so it applies only to –
[22] A VOICE: And there is a grant program. I
[23] assume it's still in effect?
[24] DAN REDLINE: There was a grant program that
[25] was designed to provide financial grants to people

Page 30

[1] wishing to replace their uncertified wood stove. And
[2] that was eligible to the residences of the City of
[3] Sandpoint.
[4] A VOICE: So they could go ahead like and call
[5] up Pacific or something like that.
[6] DAN REDLINE: Right.
[7] A VOICE: They turn it in and they got X
[8] amount of dollars to purchase an alternative source
[9] of certified wood stove or nauralal gas or something
[10] like that.
[11] DAN REDLINE: Right. We have – based on a
[12] limited amount of money, we had a limited number of
[13] grants that we could provide.
[14] And my understanding is that all of those
[15] grants have been signed up for, and so we have got
[16] them all accounted for, basically, in that grant
[17] replacement program.
[18] There is also – the State has made some
[19] modifications to its state – that – the tax program
[20] that provides for a tax deduction for replacing an
[21] old uncertified wood stove, taking it to a recycler
[22] and then upgrading to a new wood stove or a natural
[23] gas system. And they get a tax deduction for that.
[24] Any other general questions?
[25] A VOICE: Dan, is the burning in Rathdrum

Page 31

[1] addressed in the SIP at all?
[2] DAN REDLINE: The –
[3] A VOICE: In this plan?
[4] DAN REDLINE: The agricultural field burning?
[5] A VOICE: Yeah.
[6] DAN REDLINE: No.
[7] A VOICE: What –
[8] DAN REDLINE: What we are primarily focused on
[9] is dealing with the wintertime problem with this
[10] plan. And we recognize that there is a – there
[11] is – there is fall exceedences that we are faced
[12] with dealing with, and that's part of this whole
[13] comprehensive action plan that we outlined with EPA
[14] in trying to figure out how to deal with those fall
[15] exceedences that are caused by sources outside of the
[16] nonattainment area.
[17] A VOICE: You do consider that then?
[18] I mean, you know –
[19] DAN REDLINE: Yes.
[20] A VOICE: Okay. You said we violated so many
[21] times, that is considered. So this – the smoke came
[22] in, do you –
[23] DAN REDLINE: We – we look at the situation
[24] and if its forest fires or other –
[25] A VOICE: So you discount, or are we in that

Page 32

[1] number, was that considered? You know, you –
[2] Okay. You said we violated so many times.
[3] DAN REDLINE: Right.
[4] A VOICE: That was considered?
[5] DAN REDLINE: We – we look at those events on
[6] a case-by-case basis. And if we meet the criteria
[7] that EPA has set forth for special, or what they call
[8] exceptional events, we apply for the – that kind of
[9] exemption for those.
[10] A VOICE: Okay.
[11] DAN REDLINE: The EPA recently has been less
[12] willing to provide those exemptions.
[13] A VOICE: My feeling on this whole situation
[14] is just another Federal Government, or bureaucracy
[15] telling me that I can't do something. That's what I
[16] feel.
[17] Now, like on your wood burning stuff, there is
[18] a lot of people that can't afford to take and get
[19] their stoves changed. A lot of people can't afford
[20] electric or gas, can't – they are not even where
[21] there is gas, but it's going to spread from Sandpoint
[22] to the outlying areas after a while. I think that
[23] it's just like a cancer.
[24] I agree the clean air, great, but 17 times in
[25] nine years, is that what you said was – it went

[1] over? That's not too many times.
[2] DAN REDLINE: Thank you for your comment.
[3] Do you want to take a break or –
[4] HEARING OFFICER AYERS: I think we will take a
[5] recess for about 20 minutes just in case there is
[6] some latecomers. You are welcome to stay or to leave
[7] as you choose.
[8] So we will just take a recess and reconvene
[9] about five after 8:00.
[10] *(RECESS TAKEN)*
[11] –oOo–
[12] HEARING OFFICER AYERS: I think we will
[13] reconvene.
[14] It's now about 8:05 p.m.
[15] Does anyone else desire to be heard with
[16] regard to the revision?
[17] Seeing no one indicating they want to testify
[18] in regard to the matter, I'll go ahead and make the
[19] closing statement on this hearing.
[20] This hearing having been called and commenced
[21] at 7:08 p.m. and it is now about 8:05 p.m. and it is
[22] now closed.
[23] The record, together with the exhibits, will
[24] be transmitted by me to the Division of Environmental
[25] Quality, North Idaho Regional Office.

[1] The Oral comments presented at this hearing
[2] and any written comments that might be received by
[3] the deadline of June 23rd will be reviewed and
[4] considered by the Hearing Officer and by the Division
[5] of Environmental Quality.
[6] Comments postmarked after June 23, 1995, will
[7] not be accepted.
[8] A statement of final action will be made
[9] available to the public.
[10] This proceeding is now adjourned.
[11] DAN REDLINE: Thank you all for coming
[12] tonight.
[13] HEARING OFFICER AYERS: Thank you.
[14] –oOo–
[15]
[16]
[17]
[18]
[19]
[20]
[21]
[22]
[23]
[24]
[25]

[1] C E R T I F I C A T E
[2]
[3] STATE OF IDAHO)
[4] County of Kootenai)
[5]
[6] I, CRAIG M. HODGES, CSR, Official Court
Reporter and Notary Public for the State of Idaho,
[7] residing in Hayden Lake, Idaho, do hereby certify;
[8] That I was duly authorized to and did report
the public hearing in the above-entitled cause;
[9]
That the foregoing pages of this public
[10] hearing constitute a true and accurate transcription
of my stenotype notes of the proceedings.
[11]
I further certify that I am not an attorney
[12] nor counsel of any of the parties; nor a relative or
employee of any attorney or counsel connected with
[13] the action, nor financially interested in the action.
[14] IN WITNESS WHEREOF, I have hereunto set my
hand and seal on this 19th day of June, 1995.
[15]
[16]
[17]
[18]
[19]
[20]
CRAIG M. HODDGES, CSR
[21] Official Court Reporter
Notary Public, States of
[22] Idaho and Washington
residing in Hayden Lake, Idaho
[23] My commission expires: 1-4-97
[24]
[25]

Look-See Concordance Report

- - -

UNIQUE WORDS: 980
TOTAL OCCURRENCES: 2,458
NOISE WORDS: 385
TOTAL WORDS IN FILE: 6,130

- - -

SINGLE FILE CONCORDANCE

- - -

CASE SENSITIVE

- - -

NOISE WORD LIST(S): NOISE.NOI

- - -

COVER PAGES = 3

- - -

INCLUDES ALL TEXT OCCURRENCES

- - -

DATES OFF

- - -

IGNORES PURE NUMBERS

- - -

POSSESSIVE FORMS OFF

- - -

MAXIMUM TRACKED OCCURRENCE THRESHOLD: 50

– 1 –

1-4-97 [1]
35:23
13th [1]
4:8
19th [1]
35:14
1st [2]
18:3, 8

– 2 –

23rd [3]
12:20, 22; 34:3
24-hour [3]
7:21; 8:3; 10:7
25th [1]
14:16
2nd [1]
14:18

– 3 –

3-03 [1]
16:18

– 4 –

4-05 [1]
17:10

– 7 –

7:08 [2]
4:8; 33:21

– 8 –

8:00 [1]
33:9
8:05 [2]
33:14, 21

– A –

ability [1]
18:7
able [4]
15:25; 19:2, 4, 21
above-entitled [1]
35:8
accept [1]
5:1
accepted [2]
12:23; 34:7
accounted [1]
30:16
accurate [1]
35:10
achieve [2]
15:14; 19:24
achieving [2]
16:9, 10
Act [3]
8:12, 16, 21 ..
action [8]
6:14; 10:11, 14; 11:17; 31:13; 34:8; 35:13
actions [1]
7:12
addition [2]
7:7; 22:12
additional [5]
10:10; 17:25; 18:2, 8; 19:21
addressed [1]
31:1
adds [1]
23:5
adjacent [1]
27:3
adjourned [1]
34:10
adopt [1]
8:12
adopted [8]
7:16, 19; 9:20; 10:20, 25; 20:9; 25:14, 18
adoption [2]
10:13; 18:25
affect [2]
26:18, 19
affected [1]
9:24
affidavits [1]
5:8
afford [2]
32:18, 19
Agency [2]
7:16; 12:17
aggressive [1]
11:8
agree [1]
32:24
agricultural [1]
31:4
Air [9]
4:16, 21; 7:2, 7; 8:11, 12, 16, 21; 14:12
air [19]
7:16; 8:14, 17, 22; 9:11, 17; 11:18; 12:16; 15:14; 22:14, 16; 25:1; 26:18, 19; 28:6, 8, 9; 32:24
airborne [1]
7:17
allowed [7]
11:2; 14:25; 19:1, 3; 28:19; 29:11
allows [1]
23:6
alternative [2]
11:10; 30:8
Ambient [3]
4:21; 8:1, 11
ambient [8]
7:16; 8:3; 9:4; 24:21, 24; 26:18, 19
Amendments [3]
8:12, 16, 22
amount [5]
21:9; 24:25; 28:20; 30:8, 12
amplify [1]
6:4
analysis [3]
9:4, 6; 21:10
Analyst [1]
7:2
annual [1]
26:14
answer [3]
6:2; 25:6; 27:11
anti-skid [4]
11:1; 22:3; 25:16, 18
anybody [2]
13:4; 24:15
anywhere [1]
16:1
appear [1]
17:2
appears [1]
16:21
applicable [1]
8:15
applies [1]
29:21
apply [3]
29:3, 7; 32:8
appreciated [1]
12:8
appropriate [1]
12:14
approved [1]
16:11
area [17]
4:15; 8:2, 4, 9, 15; 9:3, 12; 10:5, 6, 12; 11:15, 16; 26:24; 27:9; 29:15; 31:16
areas [2]
8:23; 32:22
aren't [1]
16:8
arguments [1]
4:23
associated [2]
8:23; 15:13
assume [1]
29:23
attacks [1]
21:24
attainment [1]
20:7
attending [1]
6:6
attorney [2]
35:11, 12
audience [1]
4:18
authorized [1]
35:8
available [7]
8:6; 11:22; 12:24; 14:18; 23:3; 34:9
awh [1]
20:12
awry [1]
19:20
AYERS [16]
4:2; 13:10; 14:2, 5; 19:13; 20:21; 21:1; 23:16, 21, 24; 24:2 7, 11; 33:4, 12; 34:13
Ayers [1]
4:3

– B –

background [2]
15:18; 19:7
balance [1]
23:13
base [2]
22:21; 23:2
based [5]
6:14; 9:18; 12:5; 28:6; 30:11
basically [3]
25:25; 26:3; 30:16
basis [3]
26:14; 32:6
Bear [1]
17:18
Bee [1]
5:14
believe [1]
23:2
bid [1]
22:13
bit [2]
15:18; 16:12
blue [1]
6:24
Board [1]
14:11
Boise [1]
22:19
bolt [1]
21:17
Bonner [7]
5:14; 12:25; 13:1, 6; 14:12; 29:16, 19
boundaries [1]
8:6
boundary [1]
16:15
break [1]
33:3
breakdown [1]
26:15
brief [3]
6:11; 27:15, 19
briefly [1]
7:11
Building [1]
4:10
bull [1]
21:19
bureaucracy [1]
32:14

burn [3]
28:19, 20; 29:2
burning [15]
9:14; 10:18, 21; 25:11, 16; 26:25; 27:6, 14, 21; 28:21; 29:13, 14; 30:25; 31:4; 32:17
business [1]
23:6

– C –

call [4]
13:11; 28:11; 30:4; 32:7
cancer [1]
32:23
capital [1]
23:7
care [1]
21:17
cares [1]
13:4
case [4]
17:1, 20; 24:12; 33:5
case-by-case [1]
32:6
categories [1]
26:16
caused [1]
31:15
certified [3]
22:7; 29:12; 30:9
certify [2]
35:7, 11
cetera [2]
19:2
chairs [1]
13:16
Chamber [1]
15:8
change [1]
15:21
changed [3]
15:19; 23:2; 32:19
changes [3]
18:17; 21:14; 22:23
chapter [1]
4:15
charts [1]
16:16
checked [1]
13:7
chemical [1]
9:4
choose [1]
33:7
citizen [1]
14:10
citizens [5]
12:6; 16:14; 20:6; 21:16, 18
City [17]
10:20, 23; 11:2; 12:25; 14:8, 9; 15:7; 18:17; 19:23; 20:14; 22:14; 25:14, 17; 28:24; 29:7, 20; 30:2
city [1]
22:12
Clean [3]
8:16, 21; 14:11
clean [2]
29:13; 32:24
cleaning [1]
11:9
clear [4]
16:7, 25; 17:7, 12
Clearn [1]
8:11
closed [1]
33:22
closes [1]
12:19
closing [1]
33:19
clubs [1]
10:15
Coalition [1]
14:12
Code [1]
5:12
Coeur [4]
4:7; 7:5; 13:2, 4
coming [3]
20:17; 22:5; 34:11
commenced [1]
33:20
comment [12]
5:7, 10, 11, 19; 11:21; 12:19; 14:13, 16, 20; 18:15; 24:16; 33:2
Comments [2]
12:22; 34:6
comments [25]
4:13; 5:25; 6:1, 10, 18; 7:14; 10:1; 11:22, 25; 12:3, 6, 8, 9, 10, 12, 13, 21; 13:14, 17; 14:25; 15:10; 23:13; 24:6; 34:1, 2
commission [1]
35:23
committee [2]
15:4
common [1]
21:25
communities [1]
9:24
community [2]
8:24; 10:11
complete [1]
23:7
completes [1]
17:24
complicate [1]
10:4
compliment [3]
21:6, 12, 18
comprehensive [3]
9:3, 18; 31:13
compromised [1]
14:21
computerized [1]
9:5
concentration [3]
24:22, 24, 25
concentrations [3]
15:13; 28:3, 13
concern [1]
16:14
concerned [2]
7:21; 12:6
concerning [1]
6:18
concerns [1]
14:14
condition [1]
28:11
conditions [4]
9:6; 22:11; 28:7, 9
conducted [2]
8:1; 9:1
confident [1]
18:10
confused [2]
27:16; 29:18
confusing [2]
14:23; 15:1
connected [1]
35:12
consider [1]
31:17
consideration [2]
4:25; 12:18
considered [6]
6:19; 12:20; 31:21; 32:1, 4; 34:4
constitute [1]
35:10
construction [1]
18:13
consultation [1]
10:10
contacted [1]
14:16
continue [2]
28:14; 29:1
continued [1]
10:7
contributed [1]
11:13
contributors [1]
9:17
control [21]
9:18, 20, 23; 10:2, 10, 14, 15, 17; 11:8, 10, 14, 16, 25; 18:8; 19:22; 22:16, 24; 23:8; 26:2, 4
controlled [2]
17:13, 16
controls [2]
17:25; 18:2
Copies [1]
12:24
copies [1]
13:6
copy [5]
6:23; 8:7; 13:3; 15:5, 6
core [1]
20:5
cost [1]
18:13
costs [2]
18:19; 19:2
Council [1]
14:15
Councilman [3]
14:8; 18:17; 20:14
counsel [3]
5:20; 35:12
County [8]
5:14; 13:1, 6; 14:12; 29:16, 19; 35:4
course [3]
4:10; 5:23; 13:14
Court [3]
13:17; 35:6, 21
Courthouse [1]
13:1
CRAIG [2]
35:6, 20
Craig [1]
4:6
criteria [2]
8:10; 32:6
criticized [1]
9:23
cross-examine [1]
5:19
CSR [2]
35:6, 20
cubic [1]
7:23
culpable [1]
9:14
current [1]
15:25
curtailment [2]
10:21; 22:10

– D –

d'Alene [4]
4:7; 7:5; 13:2, 4
D.C. [1]
22:20
Daily [1]
5:14
DAN [33]
6:23; 19:14; 20:20; 23:14, 19; 24:10, 14; 25:6, 9, 13, 23; 26:11; 27:13, 24; 28:2; 29:3, 6, 17, 20, 24; 30:6, 11; 31:2, 4, 6, 8, 19, 23; 32:3, 5, 11; 33:2; 34:11
Dan [4]
7:2; 16:25; 19:16; 30:25
date [3]
8:16; 17:23, 24
dates [2]
14:22, 23
David [2]
13:24; 14:6
DAWSON [3]
23:23, 25; 24:3
Dawson [1]
23:21
day [3]
4:8; 23:9; 35:14
days [4]
5:10; 21:7; 28:7, 8
deadline [2]
12:23; 34:3
deadlines [1]
25:25
deal [4]
18:14; 25:11; 26:1; 31:14
dealing [4]
4:14; 26:6; 31:9, 12
decided [1]
10:1
deduction [2]
30:20, 23
deficiencies [1]
9:25
degrade [1]
28:10
degree [1]
14:21

degrees [1]
26:19
deicer [1]
11:9
deicers [1]
22:4
delay [2]
18:7, 11
demonstrate [1]
8:17
Department [13]
4:4, 25; 7:3, 12, 13; 8:1, 20; 11:5, 24; 12:4, 7, 10, 13
departments [1]
11:7
depending [2]
20:7; 27:8
DEQ [10]
9:10, 12, 15; 10:1; 12:21; 13:2; 20:1, 6; 21:6, 19
description [1]
19:18
designated [3]
4:3; 8:4, 9
designed [4]
10:24; 28:3, 5; 29:25
desire [5]
6:8; 13:23; 24:7, 9; 33:15
detail [1]
16:21
detailed [2]
9:5; 12:2
details [1]
29:11
determination [1]
5:24
determine [1]
9:2
developed [4]
4:20; 9:18; 10:12; 12:4
development [1]
10:9
diameter [1]
7:18
difference [2]
24:18, 22
difficult [1]
15:21
discount [1]
31:25
discuss [1]
15:23
discussion [2]
16:13; 17:19
discussions [1]
16:24
dispersion [2]
17:12, 17
District [2]
11:5; 25:19
Division [8]
4:5; 5:5; 6:12, 20; 7:4; 8:25; 33:24; 34:4
DK [1]
23:25
document [10]
8:6; 12:14; 13:3; 16:19; 19:10; 20:5, 15; 24:19; 25:3; 26:12
documents [1]
5:1
dollars [1]
30:8
downtown [1]
22:12
draft [4]
8:6; 9:8; 12:24; 15:16
drop [1]
26:23
dropping [1]
23:1
due [1]
10:6
duly [1]
35:8
dust [2]
10:19; 21:23

– E –

easily [1]
17:7
East [1]
13:1
economic [1]
8:24
effect [5]
25:13, 16, 17; 27:15; 29:23
effective [2]
17:23; 22:6
effort [1]
21:13
eight [1]
20:10
electric [2]
28:25; 32:20
elevated [1]
28:3
eligible [1]
30:2
emission [9]
10:2; 11:19; 16:8, 20, 22; 17:5, 13; 24:23; 26:12
emissions [14]
9:7, 12, 13, 15; 10:18; 11:11; 15:24, 25; 16:2; 17:3; 24:20; 25:1; 26:13, 16
employee [1]
35:12
emption [1]
29:7
enforceable [1]
11:19
entrance [1]
6:8
Environmental [10]
4:5; 5:5; 6:12, 20; 7:4, 15; 8:25; 12:17; 33:24; 34:5
EPA [10]
7:23; 8:13; 9:23; 10:4, 11; 16:12; 20:1; 31:13; 32:7, 11
episodic [1]
28:6
equal [1]
7:18
equipment [1]
23:8
establish [1]
11:19
established [1]
7:22
et [2]
19:2
Euclid [1]
13:24
evaluated [1]
9:10
evening [4]
5:2; 7:8, 9; 14:10
events [4]
7:11; 28:6; 32:5, 8
everybody [4]
20:4, 11, 13; 25:11
exactly [3]
15:21; 27:17, 18
example [1]
10:19
exceeded [1]
8:3
exceedences [2]
31:11, 15
exceptional [1]
32:8
exceptions [2]
29:11, 12
exemption [2]
29:4; 32:9
exemptions [2]
29:8; 32:12
exhibits [2]
5:4; 33:23
expires [1]
35:23
explain [1]
6:2
explained [1]
16:21
explore [1]
6:4
extra [1]
19:1

– F –

F-R-A-N-Z [1]
21:5
faced [1]
31:11
facilities [1]
9:24
facility [3]
27:2, 4, 5
facing [1]
19:9
facsimile [1]
12:23
factor [1]
19:2
facts [1]
4:23
fair [3]
18:23, 24; 19:6
fairly [1]
18:10
fall [2]
31:11, 14
FAX [1]
12:23
Federal [4]
4:10, 19; 5:12; 32:14
federal [1]
10:24
feel [4]
12:1; 17:3; 18:10; 32:16
feeling [2]
19:9; 32:13
field [1]
31:4
figure [2]
15:17; 31:14
file [1]
5:9
final [3]
12:5, 14; 34:8
finance [1]
23:6
financial [2]
29:9, 25
financially [1]
35:13
find [2]
16:1; 18:5
fine [2]
14:4; 18:23
fines [1]
25:12
fires [1]
31:24
First [1]
21:6
first [3]
13:22; 14:13; 17:22
five [2]
6:11; 33:9
flexibility [3]
23:5, 10, 11
flows [1]
24:4
focused [1]
31:8
follow [1]
6:25
followed [1]
6:22
Following [1]
12:11
following [1]
5:6
foregoing [1]
35:9
forest [1]
31:24
former [1]
14:11
forth [3]
8:21; 26:1; 32:7
forward [2]
13:15; 18:20
four [3]
11:20; 15:12; 16:23
FRANZ [2]
21:3; 23:15
Franz [2]
21:2, 5
Friday [1]
12:19
fugitive [2]
10:18; 21:23
full [1]
26:10
future [1]
8:18

– G –

gas [5]
28:25; 30:9, 23; 32:20, 21
gather [1]
4:22
gee [1]
17:4
gentlemen [1]
7:1
give [3]
13:20; 27:15, 18
given [1]
6:14
gives [1]
23:10
glad [2]
22:21; 23:11
goal [1]
8:20
goes [3]
18:1; 19:20; 28:14
Government [1]
32:14
government [1]
21:16
grand [1]
22:5
grant [4]
10:24; 29:22, 24; 30:16
grants [4]
28:1; 29:25; 30:13, 15
graphs [2]
16:16; 21:22
great [1]
32:24
greater [1]
16:21
guidance [1]
8:18

– H –

half [1]
18:19
Hall [1]
12:25
hand [1]
35:14
handout [2]
6:24; 8:7
happening [1]
16:15
happens [4]
19:25; 20:1, 11, 17
hasn't [2]
20:4; 24:8
haven't [1]
27:18
Hayden [2]
35:7, 22
Health [2]
4:4; 7:3
health [1]
7:24
health-based [1]
7:20
heard [6]
6:16; 13:12; 24:8, 9; 33:15
HEARING [16]
4:2; 13:10; 14:2, 5; 19:13; 20:21; 21:1; 23:16, 21, 24; 24:2, 7, 11; 33:4, 12; 34:13
Hearing [5]
4:3; 5:22; 7:1; 12:12; 34:4
hearing [19]
4:6; 5:2, 15; 6:17; 7:6, 8, 9, 13, 14; 11:21; 12:9, 11; 13:5; 24:12; 33:19, 20; 34:1; 35:8, 10
heat [4]
27:21; 28:18, 22, 25
help [1]
20:15
helpful [1]
16:17
hereby [1]
35:7
hereunto [1]
35:14
higher [3]
26:22; 27:1, 5
Highway [2]
11:5; 25:19
history [1]
7:11
HODDGES [1]
35:20
HODGES [1]
35:6
Hodges [1]
4:7
horns [1]
21:19
human [1]
7:24

– I –

I'd [1]
21:6
IDAHO [1]
35:3
Idaho [12]
4:7, 11; 5:6; 7:3, 4, 19; 11:5; 33:25; 35:6, 7, 22
identified [4]
8:10; 9:12, 15; 16:3
identify [1]
9:10
immediately [2]
18:16, 25
impact [6]
8:23; 21:9; 26:21, 23, 25; 27:4
impacts [3]
9:5, 19; 27:8
implement [5]
10:21; 18:8, 12; 19:4, 21
implementable [1]
22:1
Implementation [3]
4:14, 19; 12:15
implementation [4]
8:13, 14; 10:9; 17:24
implemented [5]
4:20; 10:16; 11:7; 22:1, 2
Implementing [1]
22:7
implementing [1]
22:8
important [2]
13:13; 16:19
improve [1]
8:14
Improvement [2]
4:16; 7:7
improvement [2]
22:14; 23:7
improving [1]
8:22
include [2]
10:17; 11:8
included [3]
5:4, 15; 23:11
includes [1]
9:4
inclusion [1]
12:15
incorporated [1]
26:5
increase [1]
17:2
increased [1]
18:19
increasing [2]
16:23; 17:6
Independent [2]
11:4; 25:19
indicate [2]
17:2, 5
indicated [3]
13:11, 22; 14:15
indicating [1]
33:17
individual [1]
13:22
industrial [10]
9:16, 24; 11:15; 16:4; 17:11, 15; 18:6; 27:2, 4, 5
industries [3]
11:13, 20; 18:12
industry [6]
19:1, 8, 20; 20:5; 26:8, 9
informal [1]
5:18
Information [1]
15:8
information [6]
4:18; 6:5, 13; 16:1; 22:23; 23:3
input [1]
12:7
intense [1]
16:8
interested [4]
4:23; 6:6; 11:24; 35:13
inventory [3]
9:7; 10:2; 26:12
investigation [1]
9:3
investigations [1]
9:1
investigative [1]
9:9
involved [1]
20:4
issuance [3]
11:17; 12:5; 17:23
issue [1]
16:13

– J –

job [1]
21:9
July [3]
7:15; 18:3, 7
JUNE [1]
4:1
June [7]
4:8; 12:20, 22; 14:19; 34:3, 6; 35:14

– K –

knowledge [1]
12:2
Kootenai [1]
35:4

– L –

ladies [1]
7:1
laid [1]
20:15
Lake [2]
35:7, 22
largest [1]
9:14
last [4]
13:21; 18:18; 21:7; 22:15
latecomers [1]
33:6
Law [1]
4:19
law [2]
25:8, 10
lead [1]
28:7
leaders [2]
9:25; 10:11
leading [1]
7:13
leave [2]
24:11; 33:6
legal [2]
5:9, 21
letters [1]
14:23
level [5]
17:4; 20:1; 21:17; 28:15; 29:9
levels [4]
15:25; 16:2, 9, 22
levy [1]
19:3
Library [2]
13:1, 7
limit [1]
6:10
limited [3]
5:24; 30:12
limits [1]
11:20
liquid [2]
11:9; 22:4
listed [1]
14:17
literature [1]
14:14
live [2]
13:24; 28:24
living [1]
27:20
Local [1]
11:13
local [4]
8:24; 10:11; 11:20; 14:22
locally [1]

10:16
located [1]
11:15
location [1]
27:9
locations [2]
14:17; 26:20
looks [1]
13:24
loss [1]
14:19
lot [3]
26:24; 32:18, 19
Louisiana [1]
17:20
LP [1]
17:24

– M –

mail [1]
15:6
mailed [1]
12:10
main [2]
21:22, 23
mainly [1]
16:4
maintained [1]
8:18
major [2]
9:2, 11
managed [1]
10:23
mandatory [3]
10:21; 25:15; 28:15
map [2]
8:5, 7
margin [1]
7:24
material [4]
11:2, 3, 10; 22:3
materials [2]
5:3; 25:18
matter [2]
4:16; 33:18
May [3]
5:14; 9:21; 14:16
mean [5]
25:10; 27:17, 22; 31:18
meant [1]
14:17
measure [1]
28:4
measured [1]
10:7
measures [9]
10:10, 16, 17; 11:8, 10, 14; 18:13; 19:19, 22
meet [4]
4:20; 8:20; 25:25; 32:6
Member [2]
14:11, 15
member [1]
15:4
members [1]
15:4
mention [1]
18:4
mentioned [2]
11:20; 20:8
mentions [1]
18:6
meter [1]
7:23
meterological [1]
9:6
Michael [1]
23:23
Michele [1]
23:21
micrograms [1]
7:22
microns [1]
7:18
miles [1]
27:2
minimizing [1]
8:23
minor [1]
26:5
minutes [3]
6:11; 24:12; 33:5
misread [1]
17:7
missing [1]
19:18
model [2]
17:12, 17
modeling [2]
9:5; 15:24
moderate [1]
10:6
modification [1]
11:18
modifications [1]
30:19
modified [1]
12:4
money [1]
30:12
Monica [1]
20:22
monitor [3]
28:5, 8, 9
monitoring [1]
8:1
months [5]
20:10; 21:11; 23:9
move [1]
18:20
MS [1]
20:23
myself [1]
6:3

– N –

name [6]
7:2; 13:20, 21, 23; 14:6; 21:5
National [2]
4:21; 8:11
natural [1]
30:22
naturalal [1]
30:9
Naturally [1]
26:20
nature [1]
5:21
needing [1]
18:11
needs [2]
16:21; 20:7
neighborhood [1]
27:3
newspaper [1]
14:22
nice [4]
15:17; 16:6, 12; 17:14
night [2]
7:6; 15:2
nights [1]
14:24
nine [1]
32:25
nonattainment [7]
8:5, 9, 15, 22; 10:6; 31:16
noncertified [1]
29:1
North [3]
5:6; 7:4; 33:25
Notary [2]
35:6, 21
note [1]
14:21
noted [1]
21:14
notes [1]
35:10
notice [3]
5:9, 15, 17
number [4]
15:19; 18:18; 30:12; 32:1
numbers [4]
15:10; 17:2; 21:8
nuts [1]
21:17

– O –

objections [1]
5:20
occur [1]
20:13
occurred [1]
19:8
occurring [1]
28:4
offering [1]
5:19
Office [4]
5:6; 7:5; 13:2; 33:25
office [1]
13:4
OFFICER [16]
4:2; 13:10; 14:2, 5; 19:13; 20:21; 21:1; 23:16, 21, 24; 24:2, 7, 11; 33:4, 12; 34:13
Officer [6]
4:4; 5:22; 7:1; 12:12; 15:8; 34:4
Official [2]
35:6, 21
officially [1]
14:9
Oh [2]
19:15; 23:18
Okay [8]
14:2; 21:1; 24:2; 27:13, 24; 31:20; 32:2, 10
old [4]
10:24; 24:19; 25:3; 30:21
older [1]
22:9
oOo [2]
33:11; 34:14
open [2]
24:12, 14
operating [4]
7:10; 11:18, 19, 23
opinion [1]
24:4
opportunity [2]
5:10; 6:15
options [1]
27:25
Oral [2]
12:9; 34:1
oral [3]
4:12; 6:8, 22
order [4]
12:3; 13:11; 18:20; 23:9
ordinance [9]
10:20, 25; 11:3; 22:7; 25:16, 17; 27:14; 28:2; 29:21
ordinances [4]
18:18; 19:23; 25:13, 15
original [3]
9:22; 10:2; 15:16
outline [1]
7:11
outlined [2]
26:3; 31:13
outlying [1]
32:22
outside [3]
5:25; 16:15; 31:15
overnight [1]
13:7

– P –

p.m. [4]
4:8; 33:14, 21
Pacific [2]
17:21; 30:5
page [3]
15:12; 17:19; 18:1
pagee [1]
15:9
pages [1]
35:9
paper [1]
27:12
Pardon [1]
25:9
part [6]
6:3; 10:14; 22:13; 25:23; 27:7; 31:12
particles [1]
7:17
Particulate [1]
15:12
particulate [1]
4:16
parties [2]
6:6; 35:12
passed [4]
18:18; 19:24; 25:14, 21
Paul [2]
21:2, 5
paved [3]
9:13; 11:11; 22:13
pay [1]

18:16
paying [1]
18:24
people [10]
25:12; 26:24; 27:16; 28:1, 16; 29:12, 18, 25; 32:18, 19
percent [10]
15:14, 17; 23:1; 24:17, 20, 21; 25:2; 26:7, 9
period [8]
5:7, 11; 11:21; 12:19; 14:16, 20; 16:23; 29:14
periodically [1]
8:2
permit [2]
11:23; 17:22
permits [5]
7:10; 11:18, 19; 14:25; 16:4
permitting [1]
17:20
person [3]
5:19; 6:14, 16
personnel [1]
21:11
persons [3]
4:24; 5:3; 13:11
phase [3]
17:22; 23:10
phrase [1]
17:21
pike [1]
20:17
place [3]
4:12; 18:3, 5
Plan [5]
4:14, 17, 19; 7:7; 12:15
plan [41]
4:19; 6:3; 7:12; 8:13, 14, 19; 9:8; 10:11, 14; 12:1, 2, 16, 24; 14:17; 15:5, 6, 10; 16:6, 11; 18:5, 17, 21, 25; 19:4, 18, 20; 20:3, 9, 11; 21:10, 14, 21; 22:22; 23:5, 11; 25:25; 26:3, 6; 31:3, 10, 13
plans [1]
12:4
plant [1]
17:21
play [2]
17:16; 19:6
PM-10 [14]
4:16; 7:18, 22; 8:3, 5; 9:2, 7, 15; 10:7; 17:5; 25:1; 26:17; 28:4, 13
point [5]
16:2, 7, 16; 20:9, 11
pointed [1]
22:25
pollutants [1]
8:10
pollution [1]
26:8
poor [1]
22:10
portion [1]
21:8
POSEN [1]
20:23
Posen [1]
20:22
postmarked [2]
12:21; 34:6
potentially [2]
9:16; 27:6
pouring [1]
21:7
prepare [1]
12:14
present [3]
12:9; 24:5; 26:17
presentation [2]
6:9; 13:20
presentations [2]
5:23; 6:22
presented [4]
6:5; 9:8; 25:24; 34:1
presenting [1]
5:3
prevent [2]
10:12; 28:3
preventive [1]
28:4
previous [1]
22:25
primarily [2]
23:1; 31:8
prior [3]
5:10; 6:15; 12:5
private [1]
14:10
problem [5]
9:17; 21:18, 20, 21; 31:9
problems [5]
9:11; 19:8; 21:22, 23, 24
procedures [1]
5:21
proceeding [3]
4:22; 5:18; 34:10
proceedings [3]
6:7; 13:13; 35:10
process [3]
9:22; 14:14; 20:3
producing [1]
9:7
program [10]
10:22; 11:9; 22:5, 9, 14; 28:15; 29:22, 24; 30:17, 19
programs [1]
10:17
projections [1]
15:24
projects [1]
23:7
proposed [6]
6:3, 14, 17; 7:10; 10:5; 11:17
protect [1]
7:24
Protection [2]
7:16; 12:17
provide [7]
7:24; 12:3; 26:15; 28:1; 29:25; 30:13; 32:12
provided [2]
6:25; 8:8
provides [2]
26:12; 30:20
Public [2]
35:6, 21
public [20]
5:7, 10, 15; 7:8; 9:22; 11:25; 12:7, 12, 19, 25; 14:20; 15:1; 16:7; 17:3, 8; 24:4; 34:9; 35:8, 9
publication [4]
5:9, 13, 15, 16
purchase [1]
30:8
purchases [1]
23:8
Purchasing [1]
22:4
purpose [1]
4:22

– Q –

Qualify [1]
6:21
Quality [12]
4:5, 16, 21; 5:5; 6:12; 7:2, 4, 7; 8:11, 25; 33:25; 34:5
quality [17]
7:16; 8:15, 17, 22; 9:11, 17; 11:18; 12:16; 15:15; 22:14, 16; 26:18, 19; 28:7, 8, 9
question [3]
17:6; 18:22; 19:6
questions [5]
6:2, 4; 24:15; 25:4; 30:24
quick [1]
15:11
quickly [1]
22:8
quote [1]
15:12

– R –

raised [2]
16:14; 24:16
rates [1]
16:20
Rathdrum [1]
30:25
read [4]
6:21; 13:23; 19:9; 27:18
real [2]
15:10; 16:17
realm [1]
24:4
reason [5]
15:20; 18:4, 11; 19:21; 28:24
reasons [2]
17:1; 20:2
receive [4]
4:12, 25; 11:22; 15:5
received [6]
5:22; 7:14; 14:15; 15:6, 7; 34:2
receiving [2]
11:24; 12:11
recent [2]
22:23; 23:3
recently [2]
10:20; 32:11
RECESS [1]
33:10
recess [2]
33:5, 8
reclassification [1]
10:8
reclassified [1]
10:5
recognize [1]
31:10
reconvene [2]
33:8, 13
record [7]
4:2; 5:4, 8; 6:21; 13:14, 21; 33:23
recorded [2]
4:6; 13:13
recycler [1]
30:21
red [1]
29:14
REDLINE [33]
6:23; 19:14; 20:20; 23:14, 19; 24:10, 14; 25:6, 9, 13, 23; 26:11; 27:13, 24; 28:2; 29:3, 6, 17, 20, 24; 30:6, 11; 31:2, 4, 6, 8, 19, 23; 32:3, 5, 11; 33:2; 34:11
Redline [2]
7:2; 16:25
reduce [1]
10:17
reduced [2]
11:11; 15:14
reduction [3]
24:20, 21; 28:12
reductions [1]
24:23
refer [1]
20:16
reference [3]
13:8; 15:9; 17:9
referred [3]
24:19, 21; 25:2
reflect [1]
4:2
regard [2]
33:16, 18
regarding [1]
5:9
Regional [4]
5:6; 7:5; 13:2; 33:25
Regulations [1]
5:12
regulator [1]
5:23
relate [1]
18:19
relative [2]
4:24; 35:12
relevant [1]
5:2
remember [1]
29:10
remind [1]
6:16
removed [1]
25:1
repetitious [1]
6:1
replace [2]
10:24; 30:1
replacement [2]
22:9; 30:17
replacing [1]
30:20
report [3]
12:12; 16:3; 35:8
Reporter [3]
13:18; 35:6, 21
representative [1]

6:12
require [2]
8:12; 10:9
required [3]
4:19; 9:22; 10:3
requirement [1]
23:1
requirements [5]
5:17; 8:21; 11:23; 22:24; 25:24
requiring [1]
11:17
residences [1]
30:2
residential [3]
9:14; 10:18; 26:24
residing [2]
35:7, 22
resolution [1]
25:19
respect [1]
21:9
respond [2]
7:14; 24:16
restricting [1]
17:4
result [2]
8:4; 15:11
resulted [1]
15:24
results [4]
9:9; 17:12, 17; 19:24
review [4]
9:22; 12:13, 25; 13:4
reviewed [1]
34:3
reviewing [2]
9:25; 15:23
revised [5]
7:6; 10:13; 11:25; 12:16, 24
revision [4]
4:13, 14; 6:17; 33:16
revisions [4]
4:24; 10:1; 12:14; 26:5
Right [4]
29:17; 30:6, 11; 32:3
right [9]
5:18, 20; 13:10; 18:5; 19:18; 26:23; 27:3; 28:2; 29:16
rise [1]
28:14
road [3]
10:19; 11:7; 20:10
roads [2]
9:13; 11:11
roster [2]
6:7; 13:12
rules [2]
5:25; 12:3

– S –

S-A-W-Y-E-R [1]
14:7
safety [1]
7:25
samples [1]
9:4
sand [1]
21:24
sanding [2]
11:2; 21:24
Sandpoint [27]
4:11, 15; 7:7; 8:2, 4; 9:2, 12; 10:5, 12, 20; 11:3, 4, 15, 16; 12:25; 13:25; 14:8; 17:21; 19:23; 22:15, 19; 25:15, 17; 28:25; 29:20; 30:3; 32:21
SAWYER [4]
14:1, 3, 6; 19:15
Sawyer [1]
14:6
saying [2]
28:16, 23
scheduled [2]
5:11; 7:9
scientific [1]
9:1
scope [1]
5:25
seal [1]
35:14
season [2]
10:19; 15:13
second [3]
6:16; 17:18; 24:9
Section [1]
5:13
sections [1]
15:23
sense [2]
21:15, 25
separate [2]
7:8; 11:21
serious [3]
10:6, 8, 13
seriously [1]
12:7
shed [1]
25:1
sheet [1]
23:17
show [3]
5:8; 21:15; 26:13
shows [1]
16:19
sign [2]
6:7; 23:17
signed [4]
5:2; 25:8, 10; 30:15
significant [4]
9:16; 12:6; 14:19; 15:21
significantly [3]
11:13; 15:19; 16:23
SIP [5]
8:14; 15:3, 12; 24:20; 31:1
sit [3]
13:16; 14:3; 21:16
situation [3]
10:4; 31:23; 32:13
six [2]
20:10; 23:9
smoke [2]
21:23; 31:21
sole [4]
5:22; 27:21; 28:17, 18
solution [3]
22:19, 20
solutions [2]
21:25; 22:18
solving [1]
21:20
somebody [1]
24:13
somewhat [1]
27:16
sorely [1]
19:18
sorry [2]
19:15; 23:24
source [8]
9:5, 19; 26:21, 22; 27:21; 28:18; 29:9; 30:8
sources [22]
9:2, 7, 11, 15, 16; 11:15; 16:3, 4, 8, 16; 17:11, 15; 18:6; 19:1; 26:8, 13, 15, 18; 28:22; 31:15
speak [3]
6:15; 13:23; 14:9
speakers [1]
22:25
speaking [1]
14:10
special [2]
19:3; 32:7
specific [2]
11:1, 22
specified [1]
5:12
specifies [1]
29:8
spell [1]
13:20
spending [1]
21:7
spread [1]
32:21
staff [1]
21:6
stand [1]
13:16
Standard [1]
8:11
standard [11]
7:20, 21, 23; 8:3, 17; 10:8; 11:3; 16:9, 10; 19:25
Standards [1]
4:21
standards [5]
7:17, 20; 11:1; 15:15; 16:22
standing [1]
21:19
Stands [1]
23:25
start [2]
13:19; 19:5
starting [2]
20:8; 28:10
starts [1]
28:10
STATE [1]
35:3
State [8]
4:13, 18, 20; 7:19; 9:21; 12:15; 30:18; 35:6
state [4]
8:13, 14; 18:1; 30:19
stated [1]
20:4
statement [6]
6:11, 21, 24; 17:22; 33:19; 34:8
statements [1]
5:1
States [1]
35:21
states [1]
8:12
stay [2]
13:8; 33:6
stenotype [1]
35:10
Steven [1]
4:3
stop [2]
28:21; 29:14
stove [13]
21:23; 22:7, 10; 27:21; 28:17, 19, 20, 21; 29:1; 30:1, 9, 21, 22
stoves [9]
10:25; 22:9; 26:25; 27:6; 28:12; 29:13; 32:19
strategies [2]
17:13; 18:9
strategy [13]
9:18, 20, 23; 10:2, 14, 15; 11:16; 12:1; 17:20; 20:15; 22:24; 26:3, 4
street [1]
11:9
streets [1]
22:12
strides [1]
22:15
structure [1]
8:24
stuff [1]
32:17
submit [1]
8:13
submitted [4]
9:20; 12:17, 21, 22
subpoena [1]
5:20
succeeding [1]
22:18
success [1]
11:14
successfully [1]
10:23
suggest [1]
17:10
summarize [1]
6:13
summarized [1]
9:8
supported [1]
11:4
supposed [1]
17:4
sweeper [1]
22:4
switch [2]
28:15, 21
synopsis [2]
27:15, 19
system [1]
30:23

– T –

Table [1]
16:18
table [7]
16:20; 17:5, 7, 9, 10, 14
tables [1]

16:19
takes [1]
12:7
talked [1]
19:16
talking [1]
24:22
targets [1]
21:21
tax [3]
30:19, 20, 23
taxes [1]
19:3
taxpayer [1]
18:20
taxpayers [2]
18:16, 24
technical [3]
12:2; 21:10, 12
technically [1]
5:21
techniques [1]
9:10
telling [1]
32:15
ten [1]
7:18
terms [1]
15:18
tested [1]
19:24
testify [2]
20:22; 33:17
testimony [1]
7:10
text [1]
16:13
Thank [11]
19:12, 13, 14; 20:19, 21, 25; 23:14, 15; 33:2; 34:11, 13
Thanks [2]
13:9; 20:20
timely [1]
5:16
times [5]
21:11; 31:21; 32:2, 24; 33:1
Title [1]
5:12
tomorrow [1]
7:9
tonight [6]
4:6; 7:21; 13:5; 15:7; 26:6; 34:12
topic [2]
6:18; 15:8
total [1]
24:25
towards [1]
22:16
town [2]
27:7, 20
transcription [1]
35:10
transmit [1]
5:5
transmitted [1]
33:24
Transportation [1]
11:6
tremendous [1]
22:15
trigger [1]
28:15
triggered [1]
7:12
true [1]
35:10
TUESDAY [1]
4:1
type [2]
11:1; 27:10
types [1]
19:19

– U –

U.S. [1]
7:15
uncertified [4]
10:24; 28:16; 30:1, 21
uncontrolled [2]
17:13, 16
understanding [1]
30:14
unduly [1]
6:1
unfair [1]
19:10
unfortunately [1]
27:11
upgrading [1]
30:22
useful [1]
12:3

– V –

VAN [1]
20:23
Van [1]
20:22
vary [1]
27:8
versus [4]
24:17, 23, 25; 27:25
views [1]
4:23
violated [2]
31:20; 32:2
violations [1]
10:7
vitality [1]
8:24
VOICE [25]
25:5, 8, 10, 21; 26:7; 27:12, 14, 25; 28:23; 29:5, 15, 18, 22; 30:4, 7, 25; 31:3, 5, 7, 17, 20, 25; 32:4, 10, 13
voluntary [1]
28:11

– W –

waiting [1]
24:3
wall [1]
8:8
wants [1]
24:13
Washington [2]
22:20; 35:22
weather [2]
28:7, 9
welcome [2]
12:11; 33:6
Welfare [2]
4:4; 7:3
WHEREOF [1]
35:14
willing [3]
21:16; 24:14; 32:12
win [1]
21:15
winter [5]
9:13; 10:19; 11:12; 15:13; 22:2
wintertime [2]
26:14; 31:9
wish [1]
13:12
wishing [1]
30:1
WITNESS [1]
35:14
wood [27]
9:14; 10:18, 21, 25; 21:23; 22:7, 9, 10; 25:11, 15; 26:25; 27:6, 14, 20; 28:12, 16, 19, 21; 29:1, 13; 30:1, 9, 21, 22; 32:17
words [1]
25:21
work [2]
9:3; 27:23
working [1]
26:4
wouldn't [1]
19:9
written [5]
4:13; 5:1; 12:10, 20; 34:2

– Y –

Yeah [1]
31:5
year [8]
15:16; 16:23; 18:19; 22:16, 21; 23:2, 3
years [1]
32:25
yellow [2]
28:11; 29:14

PUBLIC HEARING HANDOUT

Sandpoint Area Particulate Matter (PM_{10})
Air Quality Improvement Plan

June 13, 1995
Sandpoint Federal Building

- Public Notice for Hearing
- DEQ Hearing Statement
- Plan Summary
- Map of Nonattainment Area Boundaries
- What is PM_{10}?

IDAHO DEPARTMENT
OF HEALTH AND WELFARE

DIVISION OF
ENVIRONMENTAL QUALITY

1410 North Hilton, Boise, ID 83706-1255, (208) 334-0502

Philip E. Batt, Governor

NOTICE OF INTENT TO AMEND A STATE PLAN FOR PARTICULATE MATTER (PM-10) AIR QUALITY IMPROVEMENT IN THE SANDPOINT NONATTAINMENT AREA

The State of Idaho, Department of Health and Welfare, Division of Environmental Quality (DEQ), will hold a public hearing on June 13, 1995 at 7:00 p.m. in the Sandpoint Federal Building, 1500 Highway 2, Room 103, Sandpoint, Idaho. The purpose of the meeting is to receive public comment on an amended state plan for particulate matter (PM-10) air quality improvement in the Sandpoint area. The Department has also scheduled a written public comment period from May 25, 1995 through June 23, 1995.

The purpose of the hearing and the comment period is to receive public input on revising the referenced state plan. This plan identifies residential wood burning and fugitive road dust as the primary sources of PM-10 pollution and local industrial facilities as secondary sources of PM-10 pollution in the Sandpoint nonattainment area. These sources have contributed to violations of the state and federal ambient air quality standards for PM-10. The plan identifies control measures to reduce emissions from these sources and describes how these control measures will be implemented by the responsible agencies. The plan demonstrates that implementation of the control measures will improve air quality in order to meet the ambient air quality standard for PM-10, as well as maintain the ambient standard into the future.

Written comments will be accepted by the Department between May 25 and June 23, 1995 by mail or at the public hearing. Documents postmarked after June 23, 1995 will not be accepted. Written comments will be received by DEQ at the following address:

Department of Health and Welfare
Division of Environmental Quality
Attn: Dan Redline
2110 Ironwood Parkway
Coeur d'Alene, Idaho 83814
(208) 769-1422

Copies of the proposed amendments are available at the above address, Sandpoint City Hall, Bonner County Courthouse, and East Bonner County Library in Sandpoint. If you have any questions, contact Dan Redline or Ed Tulloch at the North Idaho Regional Office in Coeur d'Alene at 769-1422.

Public Comment Period
for the Revised Sandpoint Area
Particulate Matter (PM_{10}) Air Quality Improvement Plan

PUBLIC HEARING STATEMENT

Mr. Hearing Officer, Ladies and Gentleman, my name is Dan Redline. I am an Air Quality Analyst with the Idaho Department of Health and Welfare, Division of Environmental Quality for the North Idaho Regional Office in Coeur d'Alene. The hearing tonight is for the revised Sandpoint Air Quality Improvement Plan. In addition to this evening's public hearing, a separate public hearing is scheduled tomorrow evening for the proposed operating permits. My testimony will briefly outline (1) the history of the events which have triggered this plan, (2) the Department's actions leading to this hearing, and (3) how the Department will respond to the comments received at this hearing.

In July 1987, the U.S. Environmental Protection Agency (EPA) adopted ambient air quality standards for small airborne particles less than or equal to 10 microns in diameter, known as PM_{10}. The State of Idaho later adopted these health-based standards. The standard that we are concerned with tonight is the 24-hour standard for PM_{10}, which is established at 150 micrograms per cubic meter ($\mu g/m^3$). This standard was set by the EPA to protect human health and provide a margin of safety.

Ambient monitoring conducted by the Department has shown that the Sandpoint area has periodically exceeded the 24-hour ambient standard for PM_{10} and as a result, the Sandpoint area was designated a nonattainment area for PM_{10}. A map of the nonattainment boundaries is available in the draft document. When an area is designated nonattainment for one or more of the criteria pollutants identified by the National Ambient Air Quality Standard, the Clean Air Act Amendments (CAAA) of 1990 require that states adopt and submit a state implementation plan to the EPA. A state implementation plan (SIP) must improve air quality in the nonattainment area by the applicable date set by the CAAA and also demonstrate that the air quality standard will be maintained into the future under the guidance of the plan. It is the Department's goal to meet all the requirements set forth by the Clean Air Act Amendments for improving air quality in nonattainment areas while minimizing any associated impact on the local community structure and its economic vitality.

The Division of Environmental Quality (DEQ) has conducted several scientific investigations to determine the major sources of PM_{10} pollution in the Sandpoint area. This comprehensive investigative work, which includes chemical analysis of ambient samples, computerized modeling of source impacts, detailed analysis of meteorological conditions and an inventory of sources producing PM_{10} emissions, is summarized in the draft plan presented here.

The results from each of the investigative techniques were evaluated and used by DEQ to identify the major sources causing the air quality problems in the Sandpoint area. DEQ identified emissions from paved roads during the winter and emissions from residential wood burning as the two largest culpable sources. DEQ also identified PM_{10} emissions from industrial sources as potentially significant contributors to the air quality problem. A comprehensive control strategy was developed based on these source impacts.

The control strategy was submitted and adopted by the state in May 1993 after having gone through the required public review process. The original control strategy plan was later criticized by EPA, the affected industrial facilities and community leaders for several deficiencies. After reviewing their comments, DEQ decided that revisions to the original emission inventory and control strategy were required. To further complicate this situation, EPA proposed that the Sandpoint area be reclassified from a "moderate" to a "serious" nonattainment area due to continued measured exceedances of the 24-hour PM_{10} standard. A reclassification to serious would require the development and implementation of additional control measures. After consultation with local community leaders and the EPA, an action plan was developed to prevent the Sandpoint area from "going serious". The adoption of this revised control strategy is part of that action plan.

The control strategy includes several control measures which have already been implemented locally. These control measures include programs to reduce emissions from residential wood burning and fugitive road dust during the winter season. For example, the City of Sandpoint recently adopted an ordinance to implement a mandatory wood burning curtailment program. The City has also successfully managed a federal grant designed to replace old, uncertified wood stoves and in 1994, adopted an ordinance which sets specific standards for the type of anti-skid (sanding) material allowed within the City of Sandpoint. This material standard ordinance is further supported by the Sandpoint Independent Highway District and the Idaho Department of Transportation. The road departments have also implemented other control measures which include an aggressive street cleaning program and using liquid deicer as an alternative material. These control measures have further reduced emissions from paved roads especially during the winter. Local industries contributed significantly to the success of these control measures in the Sandpoint area. For the industrial sources located within Sandpoint area, the control strategy has proposed action requiring the issuance and modification of air quality operating permits. The operating permits will establish enforceable emission limits for four local industries. As mentioned earlier, a separate public comment period and hearing is available to receive comments specific to the operating permit requirements.

The Department is very interested in receiving comments from the public on the revised control strategy and plan. No one should feel that they must have detailed technical knowledge of the plan in order to provide useful comments. Many of the rules and plans developed by the Department are modified prior to final issuance because

of significant comments by concerned citizens. The Department takes public input very seriously and your comments are always appreciated.

Oral comments presented at this hearing, or written comments mailed to the Department are welcome. Following this hearing, and after receiving the Hearing Officers' report and public comments, the Department will review all the comments, make appropriate the revisions and prepare a final document for inclusion in the State Implementation Plan for air quality. This revised plan will then be submitted to the Environmental Protection Agency for its consideration.

The public comment period closes on Friday, June 23rd, 1995. To be considered, all written comments submitted to DEQ must be postmarked no later than June 23, 1995. Comments submitted by facsimile (FAX) will be accepted up to the deadline. Copies of the draft revised plan are available for public review at the Sandpoint City Hall, Bonner County Courthouse, East Bonner County Library and at the DEQ regional office in Coeur d'Alene.

SUMMARY

In 1987, the Sandpoint area was designated by the Environmental Protection Agency as nonattainment because it did not meet the 24 hour national and state ambient air quality standard for small particulates, known as PM_{10}. In response to this designation in May 1993, the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) developed a plan which outlined a strategy for implementing various control measures to reduce particulate emissions from local sources.

Problems were encountered in implementing the State Implementation Plan, which resulted in continued violations of the PM_{10} air quality standard. These violations had the potential to trigger other federal action that could result in the reclassification of the area from "moderate" to "serious". This potential reclassification prompted action at the local and state level which has resulted in major revisions of the original plan for the Sandpoint area. This revised plan is the product of continued effort at the local and state level to improve air quality in the Sandpoint area.

The Sandpoint area, with a 1990 population of 7,000, is located on the northwestern shore of Lake Pend Oreille in Idaho's Panhandle. The physical setting of the area results in the frequent occurrence of stagnant weather conditions in the winter. These conditions, combined with emissions from various sources, can contribute to a buildup of particulate pollutants which sometimes exceeds the PM_{10} national and state health standard.

The DEQ has been measuring PM_{10} air quality in the Sandpoint area since 1985, when it installed a monitor on the roof of the downtown post office. In the years following, exceedences of the PM_{10} standard were experienced, and sampling was accelerated from every sixth day to every other day during the winter. A meteorological tower was installed at the University of Idaho's Sandpoint Agricultural Experimental Station in 1991. The DEQ acquired the ability to directly measure PM_{10} in real-time with the installation of a Tapered Elemental Oscillating Micro-balance (TEOM) at the post office site in 1993.

An inventory of the sources of small particles, known as an emission inventory, was developed for the Sandpoint area. It revealed that during the winter season, the primary sources of PM_{10} emissions were residential wood burning and dust from paved roads treated with anti-skid (sanding) material. On an annual basis, industrial emissions also played a significant role. An evaluation of the level of PM_{10} emissions from all known source categories in the Sandpoint area, combined with the chemical analysis of actual particulate samples, confirmed wood combustion and fugitive dust as the primary sources contributing to the elevated PM_{10} concentrations.

Further evaluation of the industrial emissions was conducted in 1994 and 1995 to address some inconsistencies in the original emission inventory. The updated emission inventory for the industrial sources resulted in a more accurate analysis of the impacts associated with the

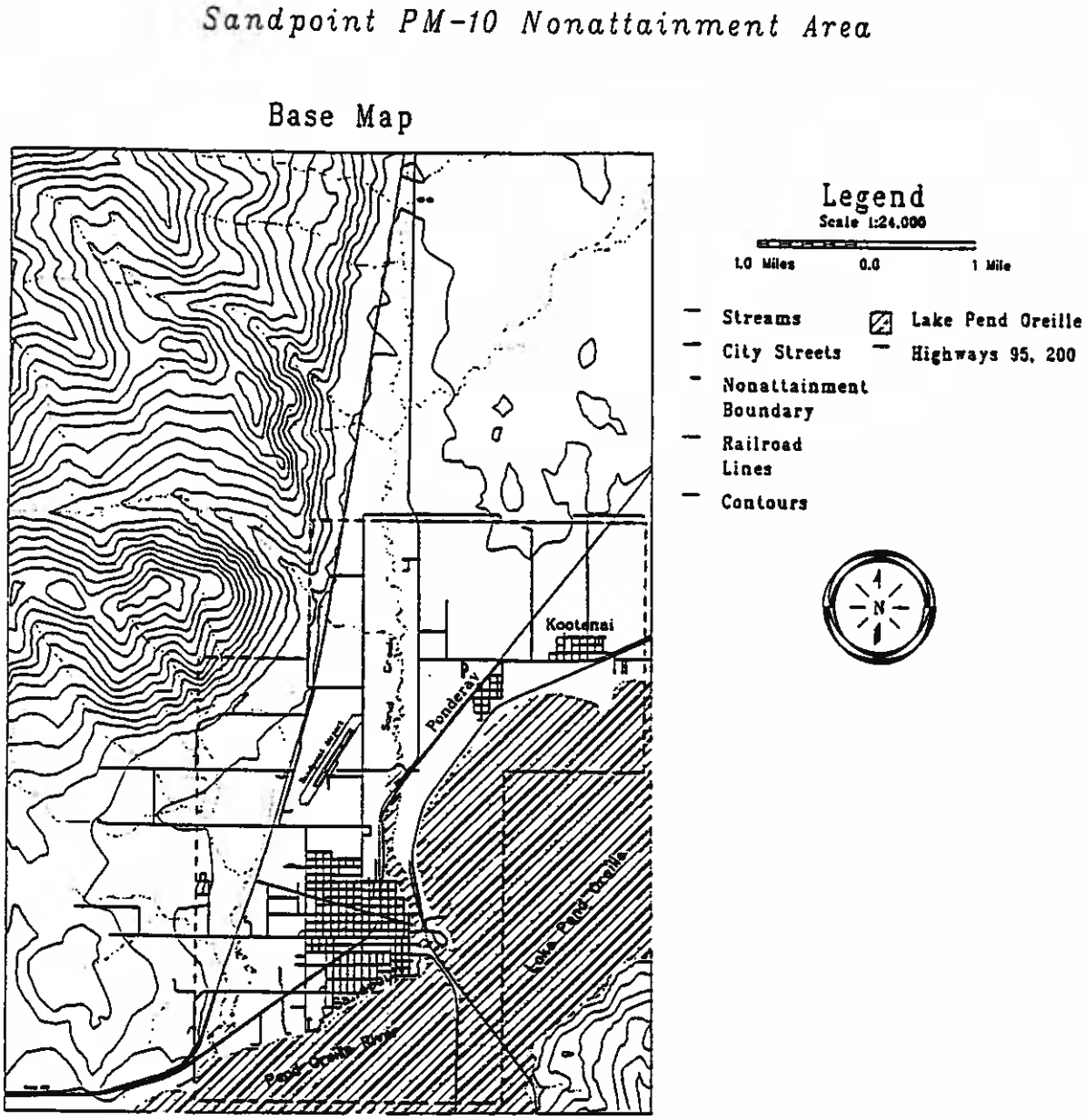
industrial sources. The improved emission inventory is the result of much time, devotion, and hard work from all involved staff - both DEQ and industry.

Projections of PM_{10} levels were developed for 1994 and 1997 using mathematical models. The results indicated that without further actions, the Sandpoint area would continue to experience exceedences of the PM_{10} air quality standard. Particulate concentrations associated with the winter season need to be reduced by 21% to achieve the air quality standards.

The DEQ reviewed numerous control measures with local officials to formulate a comprehensive control strategy acceptable to the community. The control measures that were initially selected focused on reductions in residential wood burning emissions through measures such as a public awareness program, a woodstove replacement program, and changes in winter road maintenance practices. The original strategy also included reductions from industrial emissions through the issuance of operating permits for the applicable industrial sources. This component of the control strategy (issuance of operating permits) became very controversial, primarily due to the inadequacies of the original emission inventory. Continued implementation of these programs should ensure maintenance of the standard through at least 1997.

The first section provides background on the plan, information on health effects, a description of the area, and a discussion of community involvement. Section II focuses on air quality status, including monitoring and meteorological data. Section III is an analysis of the problem, and includes the emission inventory and results of the modeling efforts. Section IV evaluates alternative control strategies and describes how they will be used to meet attainment. The report also details an implementation schedule and describes a contingency plan.

Figure I-01: Sandpoint PM10 Nonattainment Area



What is PM-10?

Particulates (small fine particles) can be a pollution problem and impair human health and comfort, climate, visibility, and vegetation. Effects of particulates on human health are directly related to their chemical composition and size. Small particles, referred to as PM-10 (*particulate matter* less than or equal to 10 microns in diameter or approximately 10 times smaller than the diameter of a human hair),are of greatest concern because they enter the body through the nose and mouth, and can go deep into the lungs.

PM-10 can cause breathing problems, lung tissue damage, even cancer, and aggravate existing lung and heart diseases. People most sensitive to the effects of PM-10 are children, the elderly smokers, and those with respiratory or heart diseases. Particulates pose a threat to human health for the following reasons:

- They may interfere with the respiratory tract;
- They may be toxic;
- They may carry toxic substances into the lungs.

The Federal standard for PM-10 is expressed in two ways: a 24 hour average and an annual average. The 24-hour standard is 150 micrograms per cubic meter of air. The annual standard is 50 micrograms per cubic meter of air.

A community may exceed the 24-hour standard once a year. If it exceeds the standard more often, it is considered out of compliance with the standard and becomes a *non-attainment area*. Values that exceed this standard have been measured more than once a year in the Sandpoint area. Because the standards have been exceeded a number of times, so Sandpoint and the surrounding area have been designated a non-attainment area.

As a result, the federal Clean Air Act requires an air quality or *State Implementation Plan* -- known as a SIP -- to improve air quality as soon as possible to meet national clean air standards. A SIP:

- May call for air-pollution controls on industrial facilities, wood stoves, road dust, agricultural practices, or any other significant source of PM-10 air pollution;
- Outlines programs to reduce air pollution levels and assigns local, state and federal government agencies to carry them out;
- Proposes timelines for each implementation activity, estimates cost, and identifies where money can be found to do the work.

Department of Health and Welfare
Division of Environmental Quality

For more information,
call 769-1422

AFFIDAVIT OF PUBLICATION

JUN 05 1995

DIV. OF ENVIRONMENTAL QUALITY
ADMINISTRATIVE OFFICE

State of Idaho

ss.

County of Bonner,

Pamela D. Johnson being first duly sworn on oath deposes and says that he/she is Bookkeeper of the Bonner County Daily Bee, a newspaper printed and published at Sandpoint, Bonner County, Idaho; that the said newspaper has been continuously and uninterruptedly published in said Bonner County during a period of 12 months prior to the first publication of the hereto attached notice of publication in the case of:

NOTICE OF INTENT TO AMEND

STATE PLAN (PM-10)

as it was published in the regular and entire issue of the said paper for a period of 1 day ~~consecutive weeks,~~ commencing on 25 day of May, 19 95 and ending on the 25 day of May, 19 95 and that said notice was published in said newspaper.

On this 25 day of May in the year of 1995, before me, a Notary Public, personally appeared Pamela D. Johnson, 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 he executed the same.

Carolyn R. Inge
Notary Public for Idaho

Residing at Sandpoint

My commission expires: 6/2000

NOTICE OF INTENT TO AMEND A STATE PLAN FOR PARTICULATE MATTER (PM-10) AIR QUALITY IMPROVEMENT IN THE SANDPOINT NONATTAINMENT AREA

The State of Idaho, Department of Health and Welfare, Division of Environmental Quality (DEQ), will hold a public hearing on June 13, 1995 at 7:00 p.m. in the Sandpoint, Federal Building, 1500 Highway 2, Room 103, Sandpoint, Idaho. The purpose of the meeting is to receive public comment on an amended state plan for particulate matter (PM-10) air quality improvement in the Sandpoint area. The Department has also scheduled a written public comment period from May 25, 1995 through June 23, 1995.

The purpose of the hearing and the comment period is to receive public input on revising the referenced state plan. This plan identifies residential wood burning and fugitive road dust as the primary sources of PM-10 pollution and local industrial facilities as secondary sources of PM-10 pollution in the Sandpoint nonattainment area. These sources have contributed to violations of the state and federal ambient air quality standards for PM-10. The plan identifies control measures to reduce emissions from these sources and describes how these control measures will be implemented by the responsible agencies. The plan demonstrates that implementation of the control measures will improve air quality in order to meet the ambient air quality standard for PM-10, as well as maintain the ambient standard into the future.

Written comments will be accepted by the Department between May 25 and June 23, 1995 by mail or at the public hearing. Documents postmarked after June 23, 1995 will not be accepted. Written comments will be received by DEQ at the following address: Department of Health and Welfare, Division of Environmental Quality, Attn.: Dan Redline, 2110 Ironwood Parkway, Coeur d'Alene, Idaho 83814, (208) 769-1422.

Copies of the proposed amendments are available at the above address, Sandpoint City Hall, Bonner County Courthouse, and East Bonner County Library in Sandpoint. If you have any questions, contact Dan Redline or Ed Tulloch at the North Idaho Regional Office in Coeur d'Alene at 769-1422.

SNP#6929 May 25, 1995

AFFIDAVIT OF PUBLICATION

ATE OF IDAHO,
County of Kootenai, } ss.

Keri Alexander being first duly sworn upon oath deposes and says:

1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press," a newspaper printed and published daily except Sunday in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The Legal Notice

of which the annexed is a printed copy, was published in the regular Thurs. issue of said newspaper for 1 ~~consecutive~~ day, commencing on the 25th day of May 1995, and ending on the 25th day of May 1995, and such publication was made as often during said period as said daily newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice.

Keri Alexander

Subscribed and sworn to before me this 25th day of May 1995

Roberta Manley
Notary Public for the State of Idaho, residing at Coeur d'Alene, Idaho.

ROBERTA MANLEY
My commission expires 2-5-99

NOTICE OF INTENT TO AMEND A STATE PLAN FOR PARTICULATE MATTER (PM-10) AIR QUALITY IMPROVEMENT IN THE SANDPOINT NONATTAINMENT AREA

The State of Idaho, Department of Health and Welfare, Division of Environmental Quality (DEQ), will hold a public hearing on June 13, 1995 at 7:00 p.m. in the Sandpoint Federal Building, 1500 Highway 2, Room 103, Sandpoint, Idaho. The purpose of the meeting is to receive public comment on an amended state plan for particulate matter (PM-10) air quality improvement in the Sandpoint area. The department has also scheduled a written public comment period from May 25, 1995 through June 23, 1995.

The purpose of the hearing and the comment period is to receive public input on revising the referenced state plan. This plan identifies residential wood burning and fugitive road dust as the primary sources of PM-10 pollution and local industrial facilities as secondary sources of PM-10 pollution in the Sandpoint nonattainment area. These sources have contributed to violations of the state and federal ambient air quality standards for PM-10. The plan identifies control measures to reduce emissions from these sources and describes how these control measures will be implemented by the responsible agencies. The plan demonstrates that implementation of the control measures will improve air quality in order to meet the ambient air quality standard for PM-10, as well as maintain the ambient standard into the future.

Written comments will be accepted by the Department between May 25 and June 23, 1995 by mail or at the public hearing. Documents postmarked after June 23, 1995 will not be accepted. Written comments will be received by DEQ at the following address:

Department of Health and Welfare
Division of Environmental Quality
Attn.: Dan Redline
2110 Ironwood Parkway
Coeur d'Alene, Idaho 83814
208) 769-1422.

Copies of the proposed amendments are available at the above address, Sandpoint City Hall, Bonner County Courthouse, and East Bonner County Library in Sandpoint. If you have any questions, contact Dan Redline or Ed Tulloch at the North Idaho Regional Office in Coeur d'Alene at 769-1422.

Legal 928
May 25, 1995

SIGN-IN ROSTER

JBLIC HEARING ON A REVISION TO THE
STATE IMPLEMENTATION PROGRAM

LOCATION: Sandpoint Federal Building

DATE: June 13, 1995

PROJECT: Sandpoint Area Particulate Matter (PM_{10})

Air Quality Improvement Plan

NAME (PLEASE PRINT)	MAILING ADDRESS	ORGANIZATION REPRESENTED (IF ANY)	DO YOU WISH TO TESTIFY?
LISA MOORE	P.O BOX 928 SANDPOINT, ID 83864	GREATER SANDPOINT CHAMBER OF COMMERCE	NO
HILDE KELLOGG	P.O. Box 1479 POST FALLS, ID		NO
ELMER Hamilton	Sandpoint Id		NO
Sawyer Daniel Sawyer	334 E. Cedar Sandpoint ID 83864	C.Dize	YES
LARRY PEAK	Box 405 SANDPOINT	"	NO
LANNY BECK	3905 39G Rd Sagle Id	INTERSTATE	NO
DONNA JOHNSON	815 OAK ST SANDPOINT ID	L-P	No
Monica VanFossen	P.O. BOX 363 Sandpoint Id	public	?
Patricia Bauer	PO Box 636 Sagle ID 83860		NO
Paul Fatuz	12190 Amethyst Hayden ID 83835		yes
RANDALL BOND	PO Box 571 PONDERAY ID	ICA	No

SIGN-IN ROSTER
JBLIC HEARING ON A REVISION TO THE
STATE IMPLEMENTATION PROGRAM

LOCATION: Sandpoint Federal Building

DATE: June 13, 1995

PROJECT: Sandpoint Area Particulate Matter (PM_{10})

Air Quality Improvement Plan

NAME (PLEASE PRINT)	MAILING ADDRESS	ORGANIZATION REPRESENTED (IF ANY)	DO YOU WISH TO TESTIFY?
Michael Dawson	1100 Upland Drive	ICA	DK

. UBLIC HEARING ON A REVISION TO TH.
STATE IMPLEMENTATION PROGRAM

LOCATION: Sandpoint Federal Building

DATE: June 13, 1995

PROJECT: Sandpoint Area Particulate Matter (PM_{10})

Air Quality Improvement Plan

NAME (PLEASE PRINT)	MAILING ADDRESS	ORGANIZATION REPRESENTED (IF ANY)	DO YOU WISH TO TESTIFY?
Caroline Lobsinger	P.O. Box 159 30 Church St.	BC Daily Bee	
JERRY SPRAY	P.O. Box 708 N. Boyer	L.P.	
[illegible]		Lake Pre. Mix	

Greater SANDPOINT
CHAMBER OF COMMERCE
SANDPOINT IDAHO USA

RECEIVED
JUN 13 1995
IDHW-DEQ
Coeur d'Alene Field Office

RECEIVED
JUN 16 1995
Div. of Environmental Quality
Community Programs

June 13, 1995

Cynthia Grafe, Air Quality Program Development Specialist
Department of Health and Welfare
Division of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706

Re: Revision of State Implementation Plan for Sandpoint, Idaho

Dear Ms. Grafe:

This letter is intended to express the Chamber's support for the revised State Implementation Plan (SIP) as proposed by the North Idaho Regional Office of the Idaho Division of Environmental Quality.

The Chamber, and many of its members, has been actively involved in our community's efforts to improve our air quality. We believe that this plan provides an excellent focus for these efforts and will enable us to bring our area back into attainment.

Finally, we will continue to be cooperative in the efforts to bring Sandpoint back into attainment status.

Thank you for your attention to this matter.

Sincerely,

Jonathan S. Coe
Executive Director

P.O. BOX 928 SANDPOINT, IDAHO 83864 208-263-2161 FAX 208-265-5289

Greater SANDPOINT
CHAMBER OF COMMERCE
SANDPOINT IDAHO USA

RECEIVED
JUN 13 1995
IDHW-DEQ
Coeur d'Alene Field Office

June 13, 1995

Cynthia Grafe, Air Quality Program Development Specialist
Department of Health and Welfare
Division of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706

Re: Tier II Operating Permits for Sandpoint, Idaho

Dear Ms. Grafe:

This letter is intended to express the Chamber's support in the issuance of Tier II Operating permits to: L.D. McFarland, Louisiana Pacific Corporation, Lake Pre-Mix and Interstate Concrete.

The continued efforts of these industries in attaining and maintaining satisfactory PM-10 emission levels speaks to their willingness in assisting the Sandpoint community

Thank you for your attention to this matter.

Sincerely,

Jonathan S. Coe
Executive Director

P.O. BOX 928 SANDPOINT, IDAHO 83864 208-263-2161 FAX 208-265-5289

PGE

RECEIVED

JUN 26 1995

Div. of Environmental Quality
Community Programs

PERKINS STON GATES & ELLIS
ATTORNEYS

June 23, 1995

Post-it® Fax Note 7671 | Date 6/26 | # of pages ▶ 9
To KRISHNA V. | From DAN REDLINE
Co./Dept. AQ PROT. | Co. NIRO
Phone # | Phone #
Fax # | Fax # LP COMMENTS

VIA FACSIMILE TO: 208\769-1404

Post-it® Fax Note 7671 | Date 6-23 | # of pages ▶ 9
To Dan Redline | From C. Timeblood
Co./Dept. | Co.
Phone # | Phone # 509/624-
Fax # | Fax # 2100

Department of Health and Welfare
Division of Environmental Quality
Attn: Dan Redline
2110 Ironwood Parkway
Coeur d'Alene, Idaho 83814

Re: Proposed Amendments to State Plan for Particulate Matter (PM-10)
Air Quality Improvement in the Sandpoint Nonattainment Area
May 1995 ("1995 SIP")

Dear Mr. Redline:

These comments are submitted on behalf of Louisiana-Pacific Corporation ("L-P"). As you know, L-P has a mill in Sandpoint. The 1995 SIP will affect not only the mill operations but also the community in which L-P conducts business and its employees live and work. L-P's concerns with the 1995 SIP are not limited to those issues which affect the mill directly. L-P is also very much concerned that the 1995 SIP result in attainment and maintenance of the ambient standard for PM-10. If the 1995 SIP is not accurate or complete, it is unlikely that implementation of the control strategy for PM-10 will lead to designation of Sandpoint as an attainment area as quickly as possible. This is L-P's goal and theses comments should be considered in that light.

L-P also has comments on the draft Tier II operating permit. Those were submitted in a separate letter and L-P personnel met with DEQ to discuss those. A supplemental comment letter should be provided to DEQ before the deadline for written comments on the Tier II operating permit. That letter will focus on the issues that appear to remain a concern to L-P following the meeting with DEQ.

A PARTNERSHIP INCLUDING A PROFESSIONAL CORPORATION
ANCHORAGE · COEUR D'ALENE · LOS ANGELES · PORTLAND · SEATTLE · TACOMA · WASHINGTON, D.C.
1400 SEAFIRST FINANCIAL CENTER 601 W. RIVERSIDE AVE. SPOKANE, WA 99201-0636 PHONE: (509) 624-2100 FACSIMILE: (509) 456-0146

IMPROVEMENTS IN THE SIP

The industrial source emission inventory has been greatly improved over the May 1993 "Sandpoint Area Particulate Matter (PM-10) Air Quality Improvement Plan" ("1993 SIP"). L-P's primary concern with the 1993 SIP was this inventory. It would appear that our efforts over the past year have produced an inventory of emissions from L-P's facility that are consistent with L-P's actual past practices and its anticipated future needs.

Another improvement from the 1993 SIP is the discussion of public involvement. This improvement in the SIP is a reflection of the improvement of DEQ and local efforts to involve the public. L-P has enjoyed working on the Citizens' Advisory Committee ("CAC") and intends to continue working as a member of the CAC until PM-10 attainment has been successfully demonstrated.

L-P also finds great improvement in the control strategy. The 1995 SIP, p. V-1, maintains the focus of the 1993 SIP: "Control strategies for the Sandpoint nonattainment area focus on residential wood combustion and fugitive road dust since ... these are the two predominant sources of PM-10 wintertime emissions. Industrial emissions are high near facility boundaries, and can play a significant role in certain parts of the nonattainment area." L-P also agrees that "the existing level of control at the Sandpoint industrial facilities is, at the very minimum, meeting RACT guidelines" and that "[m]ost of these controls are considered [BACT]." 1995 SIP, p. V-13. Three control measures are necessary for L-P under the 1995 SIP, p. V-14, to demonstrate attainment: 1) paving the remaining unpaved haul road; 2) constructing a four-sided truck bin load-out enclosure; and, 3) removing the end trim cyclone and, if necessary replacing the transfer cyclone with a larger cyclone. As L-P's comments on the Tier II operating permit demonstrate, L-P is ready to proceed with these activities.

AREAS OF CONTINUING CONCERN

General Comments

L-P's primary area of concern with the 1995 SIP is the modeling. From a purely technical perspective, L-P wants to ensure that appropriate modeling is performed as part of the 1995 SIP. From a practical perspective, inadequate modeling can lead to erroneous conclusions about the scope and nature of the PM-10 problems in Sandpoint. This, in turn, can produce control strategies that are inadequate for achieving attainment within the necessary period of time. If the 1995 SIP does not produce attainment by 1997, L-P, the rest of the Sandpoint community and DEQ will again be debating amendments to the SIP and the scope and cost-effectiveness of yet more controls on PM-10 sources. This is in no ones best interest.

On a conceptual level, some of the changes from the 1995 SIP are confusing. The 1995 SIP increases by more than 60% the estimated daily PM-10 emissions from "area sources"

(residential wood combustion and fugitive road dust) and by more than 30% the total PM-10 emissions in Sandpoint. 1995 SIP, p. III-5, and 1993 SIP, p. III-8. At the same time, however, the 1995 SIP reduces by 50% the estimated PM-10 emission reductions needed to achieve attainment. 1995 SIP, p. iv, and 1993 SIP, p. vii. It is not clear how the "primary" sources of PM-10 emissions can be higher than previously estimated while the PM-10 emission reductions necessary to achieve the ambient standard are lower than previously estimated.

The opposite conclusion appears to be reached in the 1995 SIP with regarding to industrial source emissions. The daily emission rates in the 1995 SIP, p. III-5, for industrial sources as a category are 30% less than estimated in the 1993 SIP, p. III-7. At the same time, however, the 1995 SIP, p. IV-13, concludes that a single industrial source, L-P, is the largest contributor to PM-10 nonattainment. It is not clear how a source category of PM-10 can be less than previously estimated while the impact of that category on ambient PM-10 concentrations is higher than previously estimated.

Specific Comments

The 1995 SIP no longer mentions the Hope monitoring station in the section entitled Ambient PM-10 Monitoring Network. 1995 SIP, pp. II-1 - II-2. If Hope is not an official State and Local Air Monitoring Site for PM-10 in Sandpoint, then it is unclear how it can be used as a valid measure of background PM-10 concentrations. 1995 SIP, p. IV-8.

The 1995 SIP, p. II-7, includes a discussion of the annual expected PM-10 exceedances for 1992, 1993 and 1994, but not 1995, 1996 and 1997. The expected exceedances over the next three years would appear to be very important in demonstrating attainment. The 1995 SIP should include these expected exceedances as part of the attainment demonstration.

The 1995 SIP catalogs past monitoring data and "exceptional events." The latter are not considered in determining attainment status. Table II-01 shows, in footnote 1, two such events in 1988 and 1989. The text, however, indicates "three fall values designated as exceptional events," including one on October 6, 1987. 1995 SIP, p. II-9. Either the text is in error or Table II-01 is in error. In addition, the 1993 SIP, Table II-01, indicates that there were 69 samples taken in 1987, while the 1995 SIP indicates that there were 70 samples taken in that year. Finally, the 1995 SIP includes data for 1992, 1993 and 1994 on Table II-01. The maximum concentration for that year (or apparently for any year monitored) is 473 ug/m3, but this is not designated as an exceptional event. The text explains that EPA refuses to recognize this as an exceptional event because "high wind events are a recurring phenomenon." 1995 SIP, p. II-17. Certainly the graphs on Figures II-01 and II-02 do not support this conclusion. If all data collected since 1987 is included on those Figures, the contrast would be even more stark. EPA does, on the other hand, recognize "forest fires" as an exceptional event which caused the September 6, 1988 exceedance. 1995 SIP, p. II-9. It seems inconsistent for EPA to consider forest fires as nonrecurring when the fire season is perhaps even more predictable that dust storms

The 1995 SIP adds a new discussion of "secondary aerosols" and "condensable" PM-10. Chemical analysis of PM-10 filters should allow DEQ to determine if either of these types of PM-10 are significant contributors to the nonattainment problem relative to PM-10 derived from dust and combustion residues. According to the 1995 SIP, p. III-1, this analysis "did not reveal significant contributions from secondary aerosols" while the SIP remains "focused on ... condensable sources of PM-10." Yet the 1995 SIP does not document that condensable PM-10 is significant. For example, Table IV-01, entitled CMB Modeling Results, does not mention condensable PM-10. It is not clear, then , why the 1995 SIP focuses on condensable PM-10.

The 1995 SIP, pp. III-3 - III-5, uses two different base years: 1993 for industrial sources and 1994 for area sources. Combining 1994 base year model results for area sources with 1993 base year model results for industrial sources may not provide a valid prediction from which to determine cost-effective control strategies. In addition, it is not clear from the 1995 SIP if DEQ ran the 1994 base year model for area sources using the new area source emission inventory. As noted above, the estimated area source emissions increased more than 60% from the 1993 SIP. If the 1994 base year modeling in the 1995 SIP is simply the old 1994 modeling from the 1993 SIP, then the 1995 SIP fails to take into account the improved emission inventory.

L-P was unable to find in the 1995 SIP the source of information for the daily emission rates in Table III-03. The rates in this Table for L-P's facility are 10 - 35% higher than the daily emission rates for L-P in Appendix B and in the recently proposed Tier II operating permit.

L-P's technical consultant performed a thorough review of Section IV of the 1995 SIP as well as the Appendices on dispersion modeling. A copy of the consultants comments and concerns are attached as Exhibit A. The original comment letter is being sent directly to DEQ for the agency's files. The key points raised by L-P's consultant are three-fold: 1) the 1995 SIP lacks of supporting data from which to review and comment upon the modeling; 2) modeling procedures were employed which are not representative of Sandpoint; and, 3) modeling procedures were used which are not consistent with EPA protocols. The net effect of these concerns is that L-P, and the rest of the affected public, has not had an opportunity to fully review and comment upon the 1995 SIP, and that control strategies based upon the modeling may not be adequate to actually reach attainment.

L-P was unable to find in the 1995 SIP the source of information for the hourly emission rates in Table IV-03 or the dispersion model results in Table IV-05. The hourly emission rates for L-P in Table IV-03 are not consistent with those in Appendix B or in Table III-03. It is not clear from either of the Tables or the associated text if these rates and model results are intended to represent the base year (1993) or projections for 1997, or if they are intended to incorporate the control strategies in Section V of the 1995 SIP. It is not clear from Table IV-05, the text or appendices how DEQ concludes that L-P's impact on nonattainment increases almost ten-fold from an "uncontrolled" to a "controlled" scenario.

Thank you for the opportunity to review and provide comments to the 1995 SIP. If you have an questions about L-P's comments, please call Jim Evensen at 208-772-6011.

Very truly yours,

PRESTON GATES & ELLIS

Craig S. Trueblood

cc: Lisa Kronberg, Deputy Attorney General
Phil Millam, EPA - Region 10
Jerry Spray, L-P - Sandpoint
Jim Evensen, L-P - Hayden Lake
Lauri Newton, L-P - Hayden Lake
Dennis McCormick, Tower Environmental

Tower Environmental, Inc.
12337 Jones Road, Suite 400
Houston, Texas 77070
(713) 894-9608 (phone)
(713) 894-9628 (fax)

June 23, 1995

Mr. James A. Evensen, P. E.
Environmental Manager
Louisiana-Pacific Corporation
P.O. Box 4000-98
Hayden Lake, Idaho 83835

RE: Comments on Revised Sandpoint Area PM10 Air Quality Improvement Plan

Dear Jim:

In accordance with your instructions, I reviewed the revised Sandpoint Area PM10 Air Quality Improvement Plan prepared by the state of Idaho Division of Environmental Quality (DEQ). This document (page IV-05) represents that the Louisiana-Pacific Corporation Sandpoint planer mill will be a major contributor to the PM-10 air quality problem in the Sandpoint area. The purpose of my review was to assess if the modeling performed by DEQ supports that conclusion and to assess if the modeling is representative of the Sandpoint facility and consistent with EPA protocols. Specific comments resulting from my review are offered below.

1. The report indicates that the maximum impacts from the L-P facility for the uncontrolled, controlled and interim scenarios are 7, 62 and 76 $\mu g/m^3$, respectively. The document offers no technical information in support of the above stated conclusion.

2. It is difficult to understand how L-P's contribution to the maximum impact in the controlled scenario modeling is 8.5 times greater than L-P's contribution to the maximum impact in the uncontrolled scenario modeling. The only difference between the two scenarios is that the controlled emissions from the facility are less than the uncontrolled emissions from the facility and plume dispersion characteristics are improved.

3. All fugitive emissions from the L-P property were uniformly distributed across a 402 meter by 402 meter area source. This grid is anchored near the southwest corner of the mill's property. However, more than 40 percent of the grid extends off the L-P property to the east (see attached plot). The air quality impact predictions in the SIP analysis cannot be considered representative since a significant portion of the emissions are improperly located.

4. Modeling using a 402 meter square area source ignores the fact that the operations that generate the fugitive emissions are geographically restricted in size and are generally located toward the center of the L-P property.

5. It appears that the dry kiln condensate particulates were modeled as fugitives. Modeling in this manner ignores many important phenomena associated with dry kilns at the L-P facility. Plume rise associated with thermal-induced buoyancy resulting from temperature contrasts between the kiln's plume and the ambient atmosphere is not considered as a result of using the area source algorithm. Emissions from dry kilns at the Sandpoint facility exit through discrete vents on top of the kiln that are strongly downwashed by adjacent buildings. The area source algorithm does not consider downwash.

6. The results of this modeling cannot be considered valid since more than 80 percent of L-P's fugitive emissions (approximately 38% of the total L-P emissions) are the dry kiln emissions that are not modeled properly.

7. The area source algorithm used for the modeling of LP's fugitive emissions is partially established on the same Cartesian coordinate grid system used for the receptor nodes. As a result, there are points in the modeling domain that serve as both source of emissions and receiver of emissions. One would wonder if the modeling predictions are valid since some of the sources and some of the receptors are collocated. The maximum impact reported in two of the three modeling scenarios in the SIP analysis is exactly at one of these points (see the attached plot).

8. The emission rates used for the modeling of L-P sources for both controlled and uncontrolled scenarios are identical even though L-P indicated that they would implement many projects to reduce emissions. I am also not able to correlate the fugitive emission rate used in the modeling to a fugitive emission rate documented in the Technical Analysis for Tier II Operating Permits.

9. I am uncertain whether the Spokane meteorological data set is representative of the Sandpoint area. The Spokane data set does not reflect Sandpoint's regional terrain features.

In summary, with the limited amount of technical information contained in the report, it is my opinion that the emissions from the L-P facility were not modeled in a representative fashion or in a manner consistent with EPA protocols. Therefore, any conclusions based upon this modeling are suspect. If you have any questions or comments, please call me at (713) 894-9608.

Sincerely,

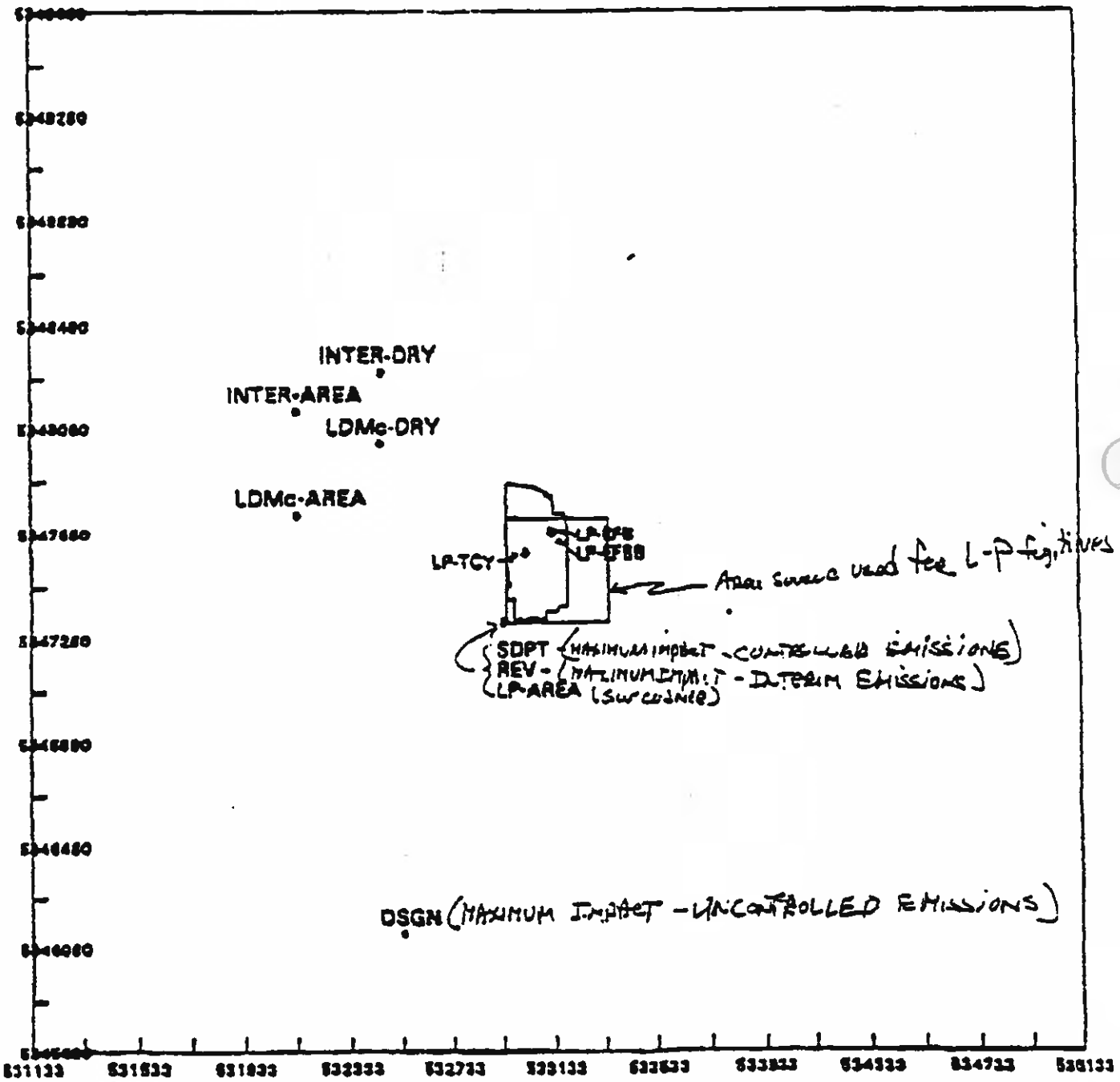
Dennis McCormick

Dennis McCormick
Managing Consultant

enclosure

Post-it® Fax Note 7671	Date 6/26	# of pages ▸ 1
To KRISHNA V.	From DAN REDLINE	
Co./Dept. AQ PROT.	Co. NIRO	
Phone #	Phone #	
Fax #	Fax # LP Comments	

** last page from previous fax



CERTIFICATION OF HEARING

HEARING ON AN AIR QUALITY PERMIT APPLICATION

APPLICANT:	L.D. McFarland Company, Lake Pre-Mix Concrete, Interstate Concrete & Asphalt, and Louisiana-Pacific Corp.
PROJECT:	Tier II Operating Permits
DOCKET #:	10AP-9502
HEARING DATE:	June 14, 1995
LOCATION:	Federal Building, Sandpoint, Idaho

The undersigned designated Hearing Officer for the Idaho Department of Health and Welfare, Division of Environmental Quality hereby certifies that on the 14th day of June, 1995, a public hearing was held on the above referenced permit application at the above stated location. The hearing commenced at approximately 7:08 p.m. and adjourned at approximately 8:10 p.m., after all persons in attendance who indicated a desire to speak and comment on the proposed permit were heard. There were no written exhibits submitted by persons in attendance.

According to affidavits on file, public notice of the hearing was given by publication in the Bonner County Bee on May 25, 1995 and in the Coeur d'Alene Press on May 25, 1995. Said publication of the notice of opportunity for public comment occurred at least thirty (30) days prior to the close of the scheduled comment period, as specified in Idaho Department of Health and Welfare Rules and Regulations, Rules for the Control of Air Pollution in Idaho, Section 16.01.01.209.01.C. Said publication included notice of the public hearing and notice that an information package contained the information submitted by the applicant, the Department of Environmental Quality's analysis and the proposed action was available for public review at locations specified in the publication. These publications were timely made and all other necessary notice requirements have been met.

DATED this 23rd day of June, 1995.

STEPHEN M. AYERS
Hearing Officer

DAN REDLINE	HEIDI L. FISHER
Co./Dept.	Co.
Phone #	Phone #
Fax # 769-1404	Fax #

CHILD AND FISHER
Attorneys at Law

Heidi L. Fisher

July 12, 1995

Dan Redline
Division of Environmental Quality
North Idaho Regional Office
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

RE: Implementation Plan for the Control of Air Pollution

Dear Mr. Redline:

I arrived at the hearing location at 6:55 p.m. and commenced the hearing at approximately 7:05 p.m..

At the commencement of the hearing, there were no persons in attendance besides myself, the court reporter and your representative, Ed Tulloch. After my opening comments and the Department's presentation, I recessed the hearing for 30 minutes to allow an opportunity for latecomers to arrive.

I adjourned the meeting at approximately 7:45 p.m. after no one appeared during the recess.

Mr. Tulloch will be providing you with the empty sign in roster. Of course, there are no written exhibits.

If the certification of hearing is deficient in form or content, please advise me and I will augment the certification with any additional necessary information.

Once again, I look forward to being of service to you in the future. My statement of services will follow on our regular billing cycle, on or about August 15, 1995.

Very truly yours,

Heidi L. Fisher

Heidi L. Fisher

HLF:vh

Suite 301, Wigwam Building
105 North Fourth Street
Coeur d'Alene, Idaho 83814
Telephone: (208) 667-4571

G:\WP\380-10 C:\CF\WORD\LETTER

07-13-1995 01:41PM

P.01

CERTIFICATION OF HEARING

HEARING ON IMPLEMENTATION PLAN FOR THE CONTROL OF AIR POLLUTION

SUBJECT: REVISED CONTINGENCY MEASURES IN THE SANDPOINT AND PINEHURST PARTICULATE MATTER (PM-10) AIR QUALITY IMPROVEMENT PLAN
HEARING DATE: July 10, 1995
LOCATION: Lake City Senior Center
1377 Lakewood Drive
Coeur d'Alene, Idaho

The undersigned designated Hearing Officer for the Idaho Department of Health and Welfare, Division of Environmental Quality hereby certifies that on the 10th day of July, 1995, public hearing was had on the proposed amendments to the State Implementation plan concerning contingency measures for the Sandpoint and Pinehurst Particulate Matter (PM-10) Air Quality Improvement Plans. The hearing commenced at approximately 7:05 p.m. and adjourned at approximately 7:45 p.m. No persons appeared in attendance who indicated a desire to speak and comment on the proposed amendments, after the Hearing Officer's opening comments and the Department's presentation. No written exhibits were submitted at the hearing.

According to the affidavits on file, public notice of the hearing was given by publication in the following newspapers on June 10, 1995: The Idaho Statesman, the Spokesman-Review and the Bonner County Daily Bee. Said publications of the notice of opportunity for public comment occurred at least thirty (30) days prior to the close of the scheduled public comment period. Said publications included notice of the public hearing and notice that copies of the proposed revisions were available for public review at locations specified in the publication. These publications were timely made and all other necessary notice requirements have been met.

DATED this 13 day of July, 1995.

Heidi L. Fisher
Hearing Officer

ORIGINAL

BEFORE THE DEPARTMENT OF HEALTH AND WELFARE

STATE OF IDAHO

PUBLIC COMMENT PERIOD FOR THE)
REVISED CONTINGENCY MEASURES)
IN THE SANDPOINT AND PINEHURST)
PARTICULATE MATTER (PM-10) AIR)
QUALITY IMPROVEMENT PLAN)

Taken at the Lake City Senior Center
1916 Lakewood Drive
Coeur d'Alene, Idaho
Monday, July 10, 1995 - 7:05 p.m.

PUBLIC HEARING

1 I N D E X

2 PAGE:

3 Appearances 3

4 Opening Statement of Hearing Officer . . . 4

5 Statement by Ed Tulloch 6

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24 Reported by Craig M. Hodges, CSR, Freelance Court Reporter and Notary Public, States of Idaho and

25 Washington, residing in Hayden Lake, Idaho.

1 A P P E A R A N C E S

2

3 PURSUANT TO NOTICE, there appeared before
4 CRAIG M. HODGES, CSR, a Notary public, at the Lake
5 City Senior Center, 1916 Lakewood Drive, Coeur
6 d'Alene, Idaho, at the hour of 7:05 p.m., Monday,
7 July 10, 1995, the general public concerning a
8 hearing on the Public Comment Period for the Revised
9 Contingency Measures in the Sandpoint and Pinehurst
10 Particulate Matter (PM-10) Air Quality Improvement
11 Plan.
12 Ms. Heidi Fisher, Hearing Officer, presided
13 over the public hearing.
14 Mr. Ed Tulloch appeared on behalf of the
15 Department of Health and Welfare.
16 The public hearing was reported in stenograph
17 by the Notary Public, Craig M. Hodges, CSR, for the
18 firm of Clearwater Reporting, 631 Main Street,
19 Lewiston, Idaho, and by him later transcribed.
20
21
22
23
24
25

1 MONDAY, JULY 10, 1995

2 HEARING OFFICER FISHER: Let the record show
3 that I am Heidi Fisher, the dssignated Hearing
4 Officer for the Department of Health and Welfare,
5 Division of Environmental Quality.
6 This hearing is being recorded by Clearwater
7 Reporting of Lewiston, Idaho. It is 7:05 p.m. on the
8 10th day of July 1995.
9 We are in the Lake City Senior Center in Coeur
10 d'Alene, Idaho. This is the time and place set to
11 receive oral and written comments on the revisions to
12 the State Implementation Plan. The revisions we will
13 be dealing with are the contingency measures for the
14 Sandpoint and Pinehurst Area Particulate Matter
15 (PM-10) Air Quality Improvement Plans.
16 For the audience's information, the State
17 Implementation Plan is a plan required by Federal law
18 that the State must develop and implement to show how
19 it will meet and protect National Ambient Air Quality
20 Standards. The purpose of this proceeding is to
21 gather the facts, views or arguments from all
22 interested persons relative to the revisions so that
23 they may receive consideration by the Department.
24 I will accept written statements or documents
25 at the hearing this evening, if relevant and signed

1 by the persons presenting them. The materials will
2 be included as exhibits in the record, which I will
3 transmit to the Division of Environmental Quality,
4 North Idaho Regional Office following the close of
5 the public comment period.
6 Let the record show that affidavits are on
7 file regarding publication of the legal notice of the
8 opportunity for public comment at least 30 days prior
9 to the close of the scheduled comment period. This
10 publication was timely made and other necessary
11 notice requirements have been met.
12 As an informal proceeding, there is no right
13 to cross-examine a person offering a comment, nor is
14 there a right to counsel or subpoena. No objections
15 or procedures of a technically legal nature will be
16 received. As the Hearing Officer, I am sole
17 regulator of the course of the presentations,
18 including, but not limited to, a determination that
19 the comments are outside the scope of the rules or
20 that comments are unduly repetitious.
21 I am not here to answer questions or to
22 explain any part of the proposed revisions, although
23 I myself, might ask questions to further explore or
24 amplify the information presented.
25 All those interested parties attending this

1 proceeding are asked to sign in on the roster by the
2 entrance, indicating a desire, if any, to make an
3 oral presentation. I ask that you try to limit your
4 comments to five minutes. After a brief statement by
5 the Division of Environmental Quality representative,
6 which will summarize the information upon which the
7 proposed action is based, each person will be given
8 an opportunity to speak at least once prior to any
9 person being heard a second time. I will remind you
10 that this hearing is on the proposed revision and
11 that only comments concerning that topic may be
12 considered.
13 At this time, the Division of Environmental
14 Quality statement will be read into the record,
15 followed by the oral presentations.
16 Mr. Tulloch.
17 MR. TULLOCH: Ms. Hearing Officer, ladies and
18 gentlemen, my name is Ed Tulloch. I am the
19 Monitoring and Technical Support Supervisor with the
20 Idaho Department of Health and Welfare, Division of
21 Environmental Quality for the North Idaho Regional
22 Office in Coeur d'Alene.
23 The purpose of the hearing tonight is to
24 receive comments on the revised contingency measures
25 for two PM-10 nonattainment areas: Sandpoint and

1 Pinehurst. My testimony will briefly outline, one,
2 the history of the events which have triggered these
3 revisions, and, two, the Department's actions leading
4 to this hearing, and, three, how the Department will
5 respond to the comments received at this hearing.
6 In July of 1987, the U.S. Environmental
7 Protection Agency adopted ambient air quality
8 standards for small airborne particles less than or
9 equal to ten microns in diameter known as PM-10. The
10 State of Idaho later adopted these health-based
11 standards. The standard that we are concerned with
12 tonight is the 24-hour standard for particulate
13 matter, PM-10, which is established as 150 micrograms
14 per cubic meter. This air quality standard was set
15 by the EPA to protect human health and provide a
16 margin of safety.
17 Ambient monitoring conducted by the Department
18 has shown that the Sandpoint and Pinehurst areas have
19 periodically exceeded the 24-hour ambient standard
20 for PM-10, and as a result these areas were
21 designated as nonattainment areas for PM-10. Maps of
22 the nonattainment boundaries are available in the
23 corresponding documents for each area. When an area
24 is designated nonattainment for one or more of the
25 criteria pollutants identified by the National

1 Ambient Air Quality Standard, the Clean Air Act
2 requires that states adopt and submit a state
3 implementation plan to the EPA. A state
4 implementation plan must improve area quality in the
5 nonattainment area by the applicable date set by the
6 Act, and also demonstrate that the air quality
7 standard will be maintained into the future under the
8 guidance of the plan. It is the Department's goal to
9 meet all the requirements set forth by the Clean Air
10 Act for improving air quality in nonattainment areas
11 while minimizing any associated impact on the local
12 community structure and its economic vitality.
13 One of the many requirements of the Clean Air
14 Act is that SIP's include contingency measures for
15 each area. Contingency measures must provide for
16 additional emission reductions as a safety net to the
17 attainment strategy. The contingency measures must
18 be equivalent to at least 25 percent of the emission
19 reductions required to achieve attainment. To
20 expedite their effectiveness, the Clean Air Act
21 requires that the contingency measures are fully
22 adopted by the States and ready to take effect when
23 needed. Some states may decide to build the
24 contingency measures into the control strategy as
25 overcontrol in that the contingency measures are

1 already in effect, thereby further reducing emissions
2 from the significant sources. This is the approach
3 DEQ has proposed for the Pinehurst and Sandpoint
4 areas.
5 The Division of Environmental Quality has
6 conducted several scientific investigations to
7 determine the major sources of PM-10 pollution in
8 each of the nonattainment areas. This comprehensive
9 investigative work, which includes chemical analysis
10 of ambient samples, computerized modeling of source
11 impacts, detailed analysis of meteorological
12 conditions, and an inventory of sources producing
13 PM-10 emissions, is summarized in the air quality
14 improvement plan for each area. The results from
15 each of the investigative techniques were evaluated
16 and used by DEQ to identify the major sources causing
17 the air quality problems in the Sandpoint and
18 Pinehurst areas. A comprehensive control strategy
19 for each area was developed based on these source
20 impacts. The contingency measures are part of the
21 comprehensive emission reduction strategies designed
22 for the two locations.
23 In the Sandpoint and Pinehurst plans, the
24 contingency measures will reduce emissions from
25 residential wood burning through various control

1 measures. A mandatory wood burning curtailment
2 program is the contingency measure in the Sandpoint
3 area. Overcontrol of wood burning emissions through
4 replacement programs, voluntary curtailment, and
5 other programs constitutes the contingency measure in
6 Pinehurst. The attainment plans for each area
7 demonstrate that implementation of additional control
8 measures will further improve air quality to meet the
9 ambient air quality standard for PM-10 as well as
10 maintain the ambient standard into the future.
11 The Department is very interested in receiving
12 comments from the public on the revised contingency
13 measures. No one should feel that they must have
14 detailed technical knowledge of the plan in order to
15 provide useful comments. Many of the rules and plans
16 developed by the Department are modified prior to the
17 final issuance because of significant comments by
18 concerned citizens. The Department takes public
19 input very seriously and your comments are always
20 appreciated.
21 Oral comments presented at this hearing, or
22 written comments mailed to the Department are
23 welcome. Following this hearing, and after receiving
24 the Hearing Officer's report and public comments, the
25 Department will review all the comments, make the

1 appropriate revisions and prepare a final document
2 for inclusion in the State Implementation Plan for
3 air quality. The adopted contingency measures will
4 then be submitted to the Environmental Protection
5 Agency for its consideration.
6 The public comment period closes on July 11th,
7 1995. To be considered, all written comments
8 submitted to DEQ must be received no later than 5:00
9 o'clock p.m., Mountain Standard Time, July 11th,
10 1995. Comments submitted by facsimile will be
11 accepted up to the deadline. Written comments should
12 be submitted to the following address: Cynthia
13 Grafe, Air Quality Program Development Specialist,
14 Department of Health and Welfare, Division of
15 Environmental Quality, 1410 North Hilton, Boise,
16 Idaho, 83706.
17 The phone number is (208) 334-5860, FAX (208)
18 334-4576.
19 Copies of the proposed revisions are available
20 for public review at the East Bonner County Library,
21 Pinehurst Kingston Library, the DEQ regional office
22 in Coeur d'Alene, and the DEQ office in Boise.
23 HEARING OFFICER FISHER: Thank you.
24 At this point in the hearing I would call upon
25 members of the audience to come forward and make

1 comments.
2 However, the record should show there are no
3 persons present in the hearing room at this time
4 other than Mr. Tulloch, myself and the Court
5 Reporter.
6 Nor has anyone signed the roster indicating a
7 desire to comment.
8 So at this time we will recess the hearing for
9 one/half hour, and reconvene at, it looks like 7:45
10 p.m. And at that time we will allow public comment,
11 if anyone appears to speak. Otherwise, we will
12 adjourn at that time.
13 Thank you.
14 (RECESS TAKEN)
15 --oOo--
16
17 HEARING OFFICER FISHER: This hearing having
18 been called, commenced at 7:05 p.m., it is now 7:45
19 p.m. The record should show that after -- during the
20 recess no one has appeared to comment. The roster
21 remains unsigned by anyone indicating a desire to
22 speak, and so the record is now closed, or excuse me,
23 the hearing is now closed.
24 The record, together with the exhibits, will
25 be transmitted by me to the Division of Environmental

Quality, North Idaho Regional Office.

The oral comments presented at this hearing, which there are none, but written comments received by the deadline of July 11th will be reviewed and considered by the Division of Environmental Quality. Comments received after 5:00 o'clock p.m. Mountain Standard Time time, July 11, 1995, will not be accepted. A statement of final action will be made available to the public.

This proceeding is now adjourned.

Thank you.

--oOo--

1 C E R T I F I C A T E

2

3 STATE OF IDAHO)

4 County of Kootenai)

5 I, CRAIG M. HODGES, CSR, Freelance Court Reporter and Notary Public for the State of Idaho,
6 residing in Hayden Lake, Idaho, do hereby certify:

7 That I was duly authorized to and did report the public hearing in the above-entitled cause;
8

9 That the foregoing pages of this public hearing constitute a true and accurate transcription of my stenotype notes of the proceedings.
10

11 I further certify that I am not an attorney nor counsel of any of the parties; nor a relative or employee of any attorney or counsel connected with
12 the action, nor financially interested in the action.

13 IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 12th day of July, 1995.
14

15

16

17

18

19

20 Craig M Hodges

21

22 CRAIG M. HODGES, CSR
Freelance Court Reporter
23 Notary Public, States of
Idaho and Washington
24 Residing in Hayden Lake, Idaho
My commission expires: 1/4/97
25

JUN 20 1995

Div. of Environmental Quality
Community Programs

FEDERAL TAX ID NO. 910420030

AFFIDAVIT OF PUBLICATION

STATE OF WASHINGTON
County of Spokane, ss.

Name: ID DEPT HLTH/WELFARE

Acct: 239478

P.O.: 10SP-9502

No. Lines: 96

Total Cost: $222.76

Log No: SU8

NOTICE OF INTENT TO AMEND A STATE PLAN REGARDING PARTICULATE MATTER (PM-10) AIR QUALITY IMPROVEMENT IN THE SANDPOINT NONATTAINMENT AREA AND PINEHURST NONATTAINMENT AREA

Notice is hereby given that the State of Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) has scheduled a public comment period from June 10 to July 11, 1995 and will conduct a public hearing on July 10, 1995 at 7:00 p.m. in the Lake City Senior Center, 1916 Lakewood Drive, Coeur d'Alene.

The purpose of the hearing and comment period is to receive comments from the public on revising Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho, Sandpoint PM-10 Air Quality Improvement Plan and Pinehurst PM-10 Air Quality Improvement Plan, to include contingency measures as required by the federal Clean Air Act (CAA). The contingency measures provide for additional emission reductions when applicable under the CAA provisions. The air quality improvement plans identify residential wood burning and fugitive road dust as the primary sources of PM-10 pollution. The Sandpoint plan also identifies industrial sources as primary sources of PM-10 pollution. These sources have contributed to violations of the state and federal ambient air quality standards for PM-10.

In the Sandpoint and Pinehurst plans, the contingency measures will reduce emissions from residential wood burning through various control measures. A mandatory wood burning curtailment program is the contingency measure in the Sandpoint area. Overcontrol of wood burning emissions through replacement programs, voluntary curtailment, and other programs constitutes the contingency measure in Pinehurst. These plan revisions demonstrate that implementation of additional control measures will further improve air quality to meet the ambient air quality standard for PM-10 as well as maintain the ambient standard into the future.

Written comments and data concerning this action are encouraged and will be accepted by DEQ until 5:00 P.M., MST, July 11, 1995. Comments transmitted by facsimile will be accepted up to the deadline. Written comments will be received at the following address:

Cynthia Grafe, Air Quality
Program Development Specialist
Department of Health and Welfare
Division of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706
Phone: (208) 334-5860
FAX: (208) 334-0576

Copies of the proposed revisions are available at the above address, or at the following locations:

Div. of Environmental Quality
North Idaho Regional Office
2110 Ironwood Parkway
Coeur d'Alene, ID 83814
East Bonner County Library
419 North Second Avenue
Sandpoint, ID 83864
Pinehurst Kingston Library
107 Main Street
Pinehurst, ID 83850

If you have any questions, please contact Dan Redline at the DEQ-North Idaho Regional Office 208-769-1422 or Cynthia Grafe. SU8

073059

I, Diane L. Thom
do solemnly swear that I am the Principal Clerk of the **SPOKESMAN-REVIEW**, a newspaper established and regularly published, once each day in the English language, in and of general circulation in the City of Spokane County, Washington; that said newspaper has been so established and regularly published and has had said general circulation continuously for more than six (6) months prior to the 23rd day of July, 1941; that said newspaper is printed in an office maintained at its place of publication in the City of Spokane, Washington; that said newspaper was approved and designated as a legal newspaper by order of the Superior Court of the State of Washington for Spokane County on the 23rd day of July, 1941, and that said order has not been revoked and is in full force and effect; that the notice attached hereto and which is a part of the proof of publication, was published in said newspaper one time(s), the publication having been made once each time on the following dates:

June 10, 1995

That said notice was published in the regular and entire issue of every number of the paper during the period of time of publication, and that the notices was published in the newspaper proper and not in a supplement.

Diane L. Thom

Subscribed and sworn to before me at the City of Spokane, this 13 day of June, 1995

ELIZABETH A. TAYLOR
NOTARY PUBLIC
Commission Expires
Aug. 5, 1996
STATE OF WASHINGTON

Elizabeth A. Taylor

Notary Public in and for the State of Washington, residing at Spokane, Wash.

Department of Health & Welfare

Doc# _____ Ret Doc# _____

Contract# _____ MPC# _____

PCA	Subobj	Amount

Approved _____

CP 6/20

	Initial	Date
Project Officer	CJ	6/22/95
Bureau Chief		
Asst. Admin.		

Check for appropriate codes

The Idaho Statesman

P.O. BOX 40, BOISE, IDAHO 83707

LEGAL ADVERTISING INVOICE

Amount Due
$60.60

Account Number	Identification
04765300	NOTICE OF INTENT...(Re: Air Pollution) Docket Number 10SP-9502 (Sandpoint/Pinehurst)

Ordered By	P.O. Number	Rate	Run Dates
Cynthia Grafe		NT	June 10, 1995

	Estimated Inches	Real Inches
Cynthia Grafe IDAHO DEPT. OF HEALTH & WELFARE/DEQ 1410 North Hilton Boise, Idaho 83706-1255		
	# Affidavits: 1	Legal Number: 2230

LEGAL NOTICE

NOTICE OF INTENT TO AMEND A STATE PLAN REGARDING PARTICULATE MATTER (PM-10) AIR QUALITY IMPROVEMENT IN THE SANDPOINT NONATTAINMENT AREA AND PINEHURST NONATTAINMENT AREA

Notice is hereby given that the State of Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) has scheduled a public comment period from June 10 to July 11, 1995 and will conduct a public hearing on July 10, 1995 at 7:00 p.m. in the Lake City Senior Center, 1916 Lakewood Drive, Coeur d'Alene.

The purpose of the hearing and comment period is to receive comments from the public on revising Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho, Sandpoint PM-10 Air Quality Improvement Plan and Pinehurst PM-10 Air Quality Improvement Plan, to include contingency measures as required by the federal Clean Air Act (CAA). The contingency measures provide for additional emission reductions when applicable under the CAA provisions. The air quality improvement plans identify residential wood burning and fugitive road dust as the primary sources of PM-10 pollution. The Sandpoint plan also identifies industrial sources as primary sources of PM-10 pollution. These sources have contributed to violations of the state and federal ambient air quality standards for PM-10.

In the Sandpoint and Pinehurst plans, the contingency measures will reduce emissions from residential wood burning through various control measures. A mandatory wood burning curtailment program is the contingency measure in the Sandpoint area. Overcontrol of wood burning emissions through replacement programs, voluntary curtailment, and other programs constitutes the contingency measure in Pinehurst. These plan revisions demonstrate that implementation of additional control measures will further improve air quality to meet the ambient air quality standard for PM-10 as well as maintain the ambient standard into the future.

Written comments and data concerning this action are encouraged and will be accepted by DEQ until 5:00 P.M., MST July 11, 1995. Comments transmitted by facsimile will be accepted up to the deadline. Written comments will be received at the following address:

LINDA PORTER, 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 ☐ consecutive daily ☒ single ☐ odd skip

insertion(s) beginning with the issue of JUNE 10, 19 95

and ending with the issue of JUNE 10, 19 95

Linda Porter

STATE OF IDAHO)
ss.
COUNTY OF ADA)

On this 12th day of JUNE in the year of 1995, before me, a Notary Public, personally appeared LINDA PORTER, 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.

Jane Madle

Notary Public for Idaho
Residing at Boise, Idaho
My commission expires: 5/97

RECEIVED

JUN 15 1995

Div. of Environmental Quality
Community Programs

Department of Health & Welfare

Doc#_____ Ret Doc# _____

Contract#_____ MPC# _____

PCA	Subobj	Amount

Approved_____

	Initial	Date
Project Officer	CG	6/22/95
Manager		
Bureau Chief		

Check for appropriate codes

JM Funds: Div: 9.64

APPLICANT: SandPoint Operating Permits DOCKET NUMBER: 10AP-9502

LOCATION: SandPoint Federal Building DATE: June ~~13~~ 14, 1995 7:00pm

PROJECT: Tier II Operating Permits for L.D. McFarland Co., Interstate Concrete & Asphalt, Lake Pre-Mix Co., and Louisiana-Pacific Corporation.

NAME (PLEASE PRINT)	MAILING ADDRESS	ORGANIZATION REPRESENTED (IF ANY)	DO YOU WISH TO TESTIFY? (YES/NO)
Ed Moore	P.O. Box 928 Sandpoint, ID 83864	Greater Sandpoint Chamber of Commerce	NO
Todd Brown	P.O. Box 670 Sandpoint ID 83864	L.D. McFarland	No
SJ Travis Byers	410 N Div St. Sandpoint Id	" "	No
Pat Bauer	PO Box 636 Sagle ID 83860		No
Walt Bauer	" " "	L.P.	YES
Aline Lobsinger	310 Church St Sandpoint ID 83864	Bonner Co. Daily Bee	No
Colleen Spickelmire	P.O. Box 1706 Sandpoint, ID.	Lignetics	YES
Barbara Murphy	visitor		
Steve LaFranz	P.O. Box 1356 Sandpoint, Id.	Lake Pre-Mix	No
Jerry Spray	P.O Box 249 808 N. Boyer Sandpt.	Louisiana Pacific	Yes
Pete Kelly	P.O. Box 249 808 N Boyer Sandpoint	L-P	Yes
Paul Franz	12190 Amethyst Hayden, ID 83835	Ice	Yes

APPLICANT: SandPoint Operating Permits DOCKET NUMBER: 10AP-9502

LOCATION: SandPoint Federal Building DATE: June ~~13~~ 14, 1995 7:00pm

PROJECT: Tier II Operating Permits for L.D. McFarland Co., Interstate Concrete & Asphalt, Lake Pre-Mix Co., and Louisiana-Pacific Corporation.

NAME (PLEASE PRINT)	MAILING ADDRESS	ORGANIZATION REPRESENTED (IF ANY)	DO YOU WISH TO TESTIFY? (YES/NO)
DWAYNE PARSONS	P.O. Box 1614 Sandpoint, ID 83864	PBCA	No
Monica Monica Van Fossen	PO. Box 363 Sandpoint ID	public	~~No~~ yes

APPLICANT: SandPoint Operating Permits DOCKET NUMBER: 10AP-9502

LOCATION: SandPoint Federal Building DATE: June 14, 1995 7:00pm

PROJECT: Tier II Operating Permits for L.D. McFarland Co., Interstate Concrete & Asphalt, Lake Pre-Mix Co., and Louisiana-Pacific Corporation.

NAME (PLEASE PRINT)	MAILING ADDRESS	ORGANIZATION REPRESENTED (IF ANY)	DO YOU WISH TO TESTIFY? (YES/NO)
FRED OMODT	PO Box 670 SDPT ID	LD McFARLAND	No

HEALTH AND WELFARE HEARING TAKEN ON 6/14/95 SANDPOINT, IDAHO

PAGE 1 TO PAGE 26

CLEARWATER REPORTING OF IDAHO

(208) 743-2748\FAX (208) 746-5186

CONDENSED TRANSCRIPT AND CONCORDANCE
PREPARED BY: CLEARWATER REPORTING OF IDAHO

CLEARWATER REPORTING OF WASHINGTON AND IDAHO
P. O. BOX 696
631 MAIN STREET
LEWISTON, ID 83501
Phone: (208) 743-2748
FAX: (208) 746-5186

BEFORE THE DEPARTMENT OF HEALTH AND WELFARE
STATE OF IDAHO

PUBLIC HEARING CONCERNING)
PROPOSED TIER II OPERATING PERMITS.)
SANDPOINT AREA PM-10 AIR QUALITY)
IMPROVEMENT PLAN)

Taken at the Federal Building
1500 Highway 2, Room 103
Sandpoint, Idaho
Wednesday, June 14 1995 - 7:09 p.m.

PUBLIC HEARING

INDEX

	PAGE:
Appearances	3
Opening Statement of Hearing Officer	4
Statement by Gary Reinbold on behalf of the Department of Health and Welfare, Division of Environmental Quality	6
Statement by Colleen Soicelmire on behalf of Lignetics of Idaho	22
Statement by Paul Franz on behalf of Interstate Concrete and Asphalt	23
Closing Statement of Hearing Officer	24

Reported by Byrl Cinnamon, CSR, Freelance Court Reporter and Notary Public, states of Idaho and Washington, residing in Hayden Lake, Idaho.

APPEARANCES

PURSUANT TO NOTICE, there appeared before BYRL CINNAMON, CSR, a Notary Public, at the Federal Building, 1500 Highway 2, Sandpoint, Idaho, at the hour of 7:09 p.m., Wednesday, June 14, 1995, the general public concerning a hearing on an Air Quality Permit Application.

Mr. Stephen M. Ayers, Hearing Officer, presided over the public hearing. Mr. Gary Reinbold appeared on behalf of the Department of Health and Welfare.

The public hearing was reported in stenograph by the Notary Public Byrl Cinnamon, CSR, for the firm of Clearwater Reporting, 631 Main Street, Lewiston, Idaho, and by him later transcribed.

HEARING OFFICER AYERS: I think we'll come to order now and commence with the hearing. Let the record show that my name is Steve Ayers, the designated hearing officer for the Idaho Department of Health and Welfare, Division of Environmental Quality. It is 7:09 p.m. on the 14th day of June, 1995. We are in the Federal Building, Room 103, in Sandpoint, Idaho. This is the time and place set to receive oral comments on the application and proposed permit to construct an air pollution emitting source relating to the proposed operating permits by L.D. McFarland Company, Lake Pre-Mix Concrete, Interstate Concrete and Asphalt, and Louisiana-Pacific. The purpose of this proceeding is to gather the facts, views, or arguments from all interested persons relative to the proposed application and permit so that they may receive consideration by the Department. I will accept written statements or documents at the hearing today if relevant and signed by the persons presenting them. The materials will be included as exhibits in the record, which will later be transmitted to the Idaho Department of Health and Welfare, Division of Environmental Quality custodian of records.

Page 5

[1] Let the record show that affidavits are on
[2] file regarding publication of the notice of the
[3] opportunity for public comment at least 30 days prior
[4] to the close of the scheduled comment period as
[5] specified in Idaho Department of Health and Welfare
[6] Rules and Regulations, Section 404.02. Such
[7] publication was made in the Coeur d'Alene Press and
[8] the Bonner County Bee on May 25, 1995. Such
[9] publication included notice of this public hearing.
[10] These publications were timely made, and other
[11] necessary notice requirements have been met.
[12] As an informal proceeding, there is no right
[13] to cross-examine a person offering a comment, nor is
[14] there a right to counsel or subpoena. No objections
[15] or procedures of a technically legal nature will be
[16] received. As the hearing officer, I am the sole
[17] regulator of the course of the presentations,
[18] including but not limited to a determination that the
[19] comments are outside the scope of the proposed air
[20] pollution permit or that comments are unduly
[21] repetitious. I am not here to answer questions or
[22] explain any part of the proposed permit although I,
[23] myself, might ask question to further explore or
[24] amplify the information presented.
[25] All those interested parties attending these

Page 6

[1] proceedings are asked to sign in on the roster by the
[2] entrance indicating a desire, if any, to make an oral
[3] presentation. I ask that you try to limit your
[4] comments to between five and ten minutes. After a
[5] brief statement prepared by the Department summarizing
[6] the application, the results of their analysis, and
[7] the proposed permit, each person will be given an
[8] opportunity to speak at least once prior to any person
[9] being heard a second time.
[10] I will remind you that this hearing is being
[11] – that this hearing is being recorded. And
[12] therefore I will ask that you come forward and stand
[13] or at least be seated so that the reporter can take
[14] your comments and also that everyone else in the room
[15] can hear you. Also, if you please refrain from
[16] expressing your approval or disapproval of the
[17] speakers' comments by applause or other means. This
[18] is disruptive to an orderly presentation of views and
[19] consumes time from the speakers.
[20] At this time the Department statement will
[21] be read into the record followed by the oral
[22] presentations. Mr. Reinbold.
[23] MR. REINBOLD: Thank you.
[24] Mr. Hearing Officer, ladies and gentlemen,
[25] my name is Gary Reinbold. I am an air quality analyst

Page 7

[1] for the Technical Services Bureau in Permits and
[2] Enforcement of the Division Environmental Quality in
[3] the Department of Health and Welfare. My testimony
[4] will briefly outline the scope of the Department's
[5] authority in drafting the proposed permits, our
[6] actions leading to this hearing, a brief summary of
[7] the content of the proposed permits, and how the
[8] Department will respond to the comments received at
[9] this hearing.
[10] The Division of Environmental Quality is
[11] charged by Idaho State statute to operate a program to
[12] issue air pollution permits. The purpose of this
[13] program is to safeguard Idaho's air quality and to
[14] limit and control emissions of air contaminants from
[15] sources. For this project DEQ developed a plan for
[16] the Sandpoint Nonattainment Area that addressed PM-10
[17] emissions from various activities and sources in the
[18] Sandpoint community including residential wood stoves,
[19] road sanding, and industrial facilities. The
[20] industrial facilities were required to receive
[21] operating permits under that plan according to
[22] emission and operation levels established in an
[23] earlier emission inventory. The industrial sources
[24] were contacted for the inventory data and were
[25] provided draft inventories for review prior to

Page 8

[1] inclusion in the SIP.
[2] The proposed plan underwent public comment
[3] and, when finalized, was submitted to EPA on May 14,
[4] 1993. The draft operating permits required by the
[5] May, 1993, attainment plan underwent public comment
[6] during July and August, 1994. As a result of the
[7] significant public comment from the affected
[8] industries and private citizens, DEQ decided to
[9] reexamine the emissions inventory for the industrial
[10] sources. DEQ's final action for the 1994 proposed
[11] permits was to issue the L.D. McFarland Company an
[12] operating permit prohibiting the use of their wigwam
[13] burner for burning woodwaste. The Clean Air Act
[14] imposes mandated deadlines for achieving milestones
[15] toward attainment of the ambient PM-10 standard for
[16] Sandpoint. These proposed permits respond to the
[17] mandated milestones.
[18] If these proposed permits are issued without
[19] major revisions, it is anticipated that EPA Region 10
[20] will approve the overall control strategy for the
[21] Sandpoint area, grant an extension of the attainment
[22] date for the PM-10 ambient air quality standard, and
[23] that Sandpoint will not be classified as a serious
[24] nonattainment area. The issuance of these operating
[25] permits is part of the Attainment Extension Request

Page 9

[1] for the Sandpoint PM-10 nonattainment area.
[2] The Extension Project required each of the
[3] four affected industrial facilities to submit site
[4] drawings, process and control equipment descriptions,
[5] and emission estimates that accurately reflected
[6] operations during 1993, and to predict or propose
[7] operation levels they expected or desired for 1996.
[8] The proposed permits incorporate this information, and
[9] DEQ modeled the revised emissions to demonstrate that
[10] the proposed control strategy demonstrates attainment
[11] of the PM-10 standard. The details of that plan and
[12] the modeling exercise are contained within the
[13] "Sandpoint Area Particulate Matter (PM-10) Air
[14] Quality Improvement Plan."
[15] This public hearing is intended to gain the
[16] public's views on the air quality aspects of the
[17] proposed permits. Your comments on suggested
[18] improvements, identification of omissions, or how the
[19] permits conform or do not conform to state or federal
[20] air quality regulations are the type of comments that
[21] are most helpful to us.
[22] The proposed permits at issue in this
[23] hearing deal with the creation of federally
[24] enforceable limitations on each of the four
[25] facilities' potential PM-10 emissions, if none

Page 10

[1] existed, or more accurate limitations if the facility
[2] already held a valid air pollution permit.
[3] The technical details of this project and
[4] review procedures have been available for public
[5] inspection at the Sandpoint and Coeur d'Alene public
[6] libraries, the Division of Environmental Quality
[7] region office in Coeur d'Alene, and at the central
[8] office in Boise. The availability of these materials
[9] was reported in a legal notice published on May 25,
[10] 1995, in the Bonner County Daily Bee and the Coeur
[11] d'Alene Press.
[12] Discussion of the proposed permit comments
[13] will be separated by facility. Each of the affected
[14] facilities had unique concerns, and all except
[15] Interstate Concrete and Asphalt and Lake Pre-Mix
[16] Concrete's operations were dissimilar.
[17] The principal pollutant of concern for this
[18] project is particulate matter with a nominal
[19] aerodynamic diameter of ten microns or less, commonly
[20] referred to as PM-10. Facilities that emit pollutants
[21] other than PM-10 will receive emission limits for
[22] those pollutants which include carbon monoxide,
[23] nitrogen oxides, volatile organic compounds, sulfur
[24] oxides, and particulate matter. These limits were set
[25] according to information presented to the Department

Page 11

[1] by the facilities.
[2] Lake Pre-Mix Concrete is currently located
[3] in downtown Sandpoint. The facility's operations
[4] presently are not addressed by any air pollution
[5] permits, and there is no legally recognized limit on
[6] its potential to emit. Due to the small size of the
[7] property where Lake Pre-Mix is located, even small
[8] amounts of fugitive particulate emissions caused
[9] concern. For these reasons Lake Pre-Mix's proposed
[10] permit includes an hourly limit on production capacity
[11] of 34 cubic yards of concrete and a daily limit of 270
[12] cubic yards of concrete at the facility's present
[13] location. The proposed permit also incorporates an
[14] increase in allowable daily production to 400 cubic
[15] yards of concrete, provided Lake Pre-Mix moves the
[16] facility to an approvable location with lower
[17] background PM-10 concentrations and abides by an
[18] equipment setback requirement.
[19] Lake Pre-Mix would have to comply with
[20] production and fugitive dust control record keeping
[21] requirements during operation, operate and maintain
[22] the control equipment that is currently in place at
[23] the facility, and apply a chemical dust suppressant at
[24] least monthly when operating during dry periods.
[25] Annual emissions at the present site will be

Page 12

[1] limited to .34 tons per year, PM-10. Annual emissions
[2] upon relocation will be limited to .51 tons per year,
[3] PM-10.
[4] L.D. McFarland Company's pole treating
[5] facility is not currently covered by any operating
[6] permits other than the Tier II operating permit issued
[7] December 13, 1994, that prohibits woodwaste combustion
[8] in the wigwam burner. When woodwaste combustion from
[9] the wigwam is discounted, L.D. McFarland's potential
[10] emissions decrease dramatically. The proposed permit
[11] covers operations for the entire facility and uses
[12] both throughput limitations based on the maximum
[13] capacity of the process equipment and hourly and
[14] annual emission limits related to the capacity of the
[15] process equipment. No additional restrictions on
[16] production are proposed.
[17] Proposed operation restrictions include a
[18] production limitation for the facility of 1,003,400
[19] cubic feet of treated poles per year, pole peeling
[20] operation of not more than 16 hours per day, and
[21] limits of 107,520 cubic feet per day and 33.55 million
[22] cubic feet per year on natural gas usage for the
[23] process boiler. Fugitive dust emissions will be
[24] controlled by a street sweeper for paved roads and by
[25] other approved methods for unpaved roads. The

Page 13

proposed permit contains record keeping requirements for daily production, fugitive dust control, natural gas consumption, and the amount of woodwaste hauled off site.

Annual emissions will be limited to the following amounts: for PM-10, 5.27 tons per year; for nitrogen oxides, 1.7 tons per year; for carbon monoxide, .35 tons per year; for volatile organic compounds, .064 tons per year; and for sulfur oxides, .01 tons per year.

Interstate Concrete and Asphalt's facility contains both a batch plant and a hot-mix asphalt plant. Retail sale of aggregate also occurs. No crushing activities occur on site. Interstate's hot-mix asphalt plant is currently covered by a Permit to Construct. No other emission source is currently covered by any permit requirements.

Interstate has proposed the installation of additional control equipment and enhanced control measures to limit their facility's PM-10 emissions in exchange for more flexible production allowances. The proposed control measures are referred to as contingency measures. The Department has reviewed the proposed measures and has structured the proposed permit to reflect the incorporation of the proposed

Page 14

controls.

The proposed control measures will be required to be in place by July 1, 1996, and include the following: increase dust suppression efforts on all unpaved roads; sweep paved roads and areas at least once a week; enclose six aggregate drop points at the concrete batch plant and asphalt plant; install minibaghouses on each cement weigh hopper at the concrete batch plant; install a baghouse system to control fugitive dust emissions from mixer truck loading.

The proposed permit will provide federally enforceable limitations on the entire facility's potential to emit PM-10. The permitted level of facility-wide emissions before July 1, 1996, will be: for PM-10, 7.4 tons per year; for total suspended particulates, or TSP, 1 ton per year. After installation of the contingency measures, for PM-10 it would be 3.12 tons per year and for TSP 1.2 tons per year.

The installation of the contingency measures will allow Interstate to increase the asphalt plant's current allowable production from 140 tons per hour and 121,000 tons per year to 200 tons per hour and 140,000 tons per year provided the asphalt plant

Page 15

performs a source test at the 200-tons-per-hour production rate and shows compliance with the allowable hourly PM-10 emission limit in the permit and the new source performance standard that applies to this hot-mix asphalt plant. This production increase was considered a Permit to Construct modification and was reviewed accordingly.

The concrete batch plant is viewed as a grandfathered source, and the allowable production reflects the level of production requested by Interstate in the inventory process. Permitted concrete production will be 75 cubic yards per hour, 1,400 cubic yards per day, and 70,000 cubic yards per year. The amount of aggregate sold will not be affected by the contingency measure requirements. Permitted levels will be 1,300 tons per day and 40,000 tons per year.

Record keeping requirements include the daily production levels of concrete and asphaltic concrete, daily natural gas consumption at the asphalt plant, and the daily amount of raw aggregate hauled off site. Specific information about the measures used to control fugitive dust emissions from unpaved roads would also be required. The proposed permit contains provisions requiring Interstate to conduct a

Page 16

performance test once every two years for the asphalt plant.

The Louisiana-Pacific Corporation, or L-P, operates a planer mill in Sandpoint. The mill receives green lumber from several area sawmills. The green lumber is dried in kilns and processed into dimensional lumber. Product waste is shipped to other facilities to produce other wood products. Hogged fuel for the woodwaste boiler is obtained from off-site sources.

L-P has requested contingency measure consideration similar to that of Interstate. L-P has proposed the installation of the following control measures: paving the remaining unpaved plant haul road; enclosing the truck bin loadout area where planer shavings and sawdust are loaded into haul trucks; removing the end trim saw cyclone from operation; completing enclosing the end coat painting operation area; and redirecting the vents for the two existing baghouses at the facility from horizontal to vertical.

Proposed operating requirements for the planer mill before installation of all the proposed contingency measures by July 1, 1996, include 20 hours per day and 120 hours per week of actual production-

[1] related operation of process sources that include the
[2] planer and cyclones; maximum production throughput of
[3] 143 million board feet, or 158,000 tons of finished
[4] lumber; production of 26,540 tons of woodwaste; and
[5] 56,000 tons of hogged fuel delivered on site. Upon
[6] installation of all of the proposed contingency
[7] measures, L-P's allowable annual production of
[8] dimensional lumber would increase to 200 million board
[9] feet, or 190,200 tons. The amount of allowable
[10] process woodwaste generated would increase to 37,150
[11] tons per year.
[12] Currently the woodwaste boiler is allowed to
[13] operate at a level of 68,500 pounds of steam per
[14] hour. This rate can be increased at anytime to a
[15] level of 75,000 pounds of steam per hour provided the
[16] boiler successfully completes a performance test which
[17] establishes compliance with the permitted PM-10
[18] emission limit of 6.1 pounds per hour and the state
[19] particulate matter grain loading standard.
[20] The proposed permitted annual emission
[21] limits before installation of contingency measures are
[22] for PM-10, 59.66 tons per year; for PM, 26.86 tons per
[23] year; for nitrogen oxides, 58.12 tons per year; for
[24] carbon monoxide, 202.8 tons per year; for volatile
[25] organic compounds, 28.24 tons per year; and for sulfur

[1] oxides, 3.038 tons per year.
[2] It is important to note that in the proposed
[3] permit only combustion sources are covered by total PM
[4] emission limits. After the installation of the
[5] proposed contingency measures, only the total
[6] allowable PM-10 emission limit would be altered, which
[7] would increase to 65.87 tons per year. Operation of
[8] the planer mill's process equipment would be allowed
[9] to increase operation to 24 hours per day, 7 days per
[10] week, and 52 weeks per year.
[11] The proposed permit contains monitoring
[12] requirements for the facility. The woodwaste boiler
[13] is required to have a continuous opacity monitoring
[14] system to be operated continuously while the woodwaste
[15] boiler is operational. L-P is required to record the
[16] maximum hourly and total daily steam production for
[17] the woodwaste boiler and submit this information to
[18] the Department in a semiannual report. Similar record
[19] keeping and reporting requirements would apply to the
[20] two natural gas backup boilers. Annual performance
[21] testing is proposed as a requirement for the woodwaste
[22] boiler.
[23] Monitoring of total weekly operating hours
[24] for the woodwaste cyclones and baghouse system during
[25] actual production would be required. Monthly

[1] woodwaste and finished lumber throughputs are to be
[2] monitored and reported by L-P. L-P would also be
[3] required to record information and maintain a log on
[4] the measures used to control fugitive dust emissions
[5] from unpaved roads.
[6] The Department is very interested in hearing
[7] comments about the proposed permits. No one should
[8] feel they must have a detailed technical knowledge of
[9] these documents in order to provide useful comments.
[10] Many of our permits are modified prior to final
[11] issuance because a citizen brought out some point he
[12] or she felt should not be overlooked. The Department
[13] takes public input very seriously, and your comments
[14] are appreciated.
[15] We are constrained in this hearing, however,
[16] to consider only comments relevant to the air quality
[17] permits, themselves. The air quality permitting
[18] process is limited to air quality topics only and
[19] cannot address other issues. The proposed permits do
[20] not release the Louisiana-Pacific Corporation,
[21] Interstate Concrete and Asphalt, L.D. McFarland
[22] Company, or Lake Pre-Mix Concrete from complying with
[23] all other applicable federal, state, and local
[24] requirements. Anything you think we might have
[25] overlooked, needlessly included, or something that

[1] should have been done differently according to the law
[2] are the types of comments most useful to us.
[3] The final decision on the proposed permits
[4] will be made within the confines of federal law, state
[5] statutes, and the Idaho air quality rules. The
[6] Department has clear discretion on many issues and is
[7] always interested to hear suggestions regarding the
[8] permits, possible omissions in the permits, or
[9] nonconformance of the permits to the air quality
[10] rules.
[11] Oral comments at this hearing or written
[12] comments mailed to the Department are welcome. Once
[13] the public comment period closes on June 23, 1995, at
[14] 5:00 o'clock p.m., Mountain Daylight Time, the
[15] Department will respond to all relevant comments in a
[16] public comment response package. This package will
[17] consist of the hearing transcript from this hearing,
[18] all written public comments received during the public
[19] comment period, the Hearing Officer's certification,
[20] and the final action taken on the permits. The
[21] Department can issue any or all of the permits, issue
[22] revised permits for any or all facilities, or revoke
[23] the permits for any or all facilities if there is a
[24] compelling reason to do so.
[25] In the event that any of the four proposed

Page 21

[1] permits are not issued, the Environmental Protection
[2] Agency will not accept that the State of Idaho has
[3] fulfilled the requirements of its own attainment
[4] strategy and will not consider extending the
[5] attainment date for the Sandpoint PM-10 Nonattainment
[6] Area. This could result in the redesignation of
[7] Sandpoint as a serious PM-10 nonattainment area.
[8] Further reductions in activities that create PM-10
[9] emissions are expected if the serious area
[10] redesignation occurs.
[11] The response package will be available to
[12] the public at the public libraries in Sandpoint and
[13] Coeur d'Alene, the Division of Environmental Quality
[14] regional office in Coeur d'Alene, and at the central
[15] office in Boise. Any further comments on this project
[16] after this hearing must be submitted in writing to
[17] Tony Wilson, Division of Environmental Quality, 1410
[18] North Hilton, Boise, Idaho, 83706-1255, by 5:00
[19] o'clock p.m., Mountain Daylight Time, June 23, 1995.
[20] Thank you.
[21] HEARING OFFICER AYERS: Thank you.
[22] To begin with, I will call upon persons who
[23] have indicated on the roster that they wish to be
[24] heard. Since – again, since these proceedings will
[25] be recorded, I ask that those who wish to be – wish

Page 22

[1] to make an oral presentation to come forward, state
[2] their name, spell their last name, and then proceed
[3] with their comments.
[4] And let's take Colleen Spickelmire first.
[5] You can just remain seated there since you're
[6] disabled.
[7] MS. SPICKELMIRE: My name is Colleen
[8] Spickelmire, S-p-i-c-k-e-l-m-i-r-e. And I represent
[9] Lignetics of Idaho.
[10] I would just like to, on behalf of
[11] Lignetics, express our support for the revised SIP.
[12] And we as a company will continue to support efforts
[13] in the community to further our abilities to get out
[14] of the nonattainment area and stay out of a serious
[15] designation. We have supported activities so far and
[16] will continue to do so. And we would just like that
[17] to be known.
[18] HEARING OFFICER AYERS: Thank you. Walt
[19] Bauer?
[20] MR. BAUER: I don't have any comment right
[21] now. Thank you.
[22] HEARING OFFICER AYERS: All right. Jerry
[23] Spray?
[24] MR. SPRAY: No. No comment right now.
[25] Thank you.

Page 23

[1] HEARING OFFICER AYERS: Pete Kelly?
[2] MR. KELLY: Nothing.
[3] HEARING OFFICER AYERS: Paul Franz.
[4] MR. FRANZ: My name is Paul Franz. I'm here
[5] representing Interstate Concrete and Asphalt.
[6] HEARING OFFICER AYERS: Would you spell your
[7] last name, please.
[8] MR. FRANZ: F-r-a-n-z.
[9] HEARING OFFICER AYERS: Thank you.
[10] MR. FRANZ: I'll have some written comments
[11] which I'll be sending to Boise.
[12] But I want to express our satisfaction in
[13] the process to the end. And thanks to the staff for
[14] spending a great deal of time addressing the earlier
[15] deficiencies that were noted. Some range from simple
[16] things like changing our output in concrete in cubic
[17] yards versus tons, since we sell in cubic yards, to
[18] more larger changes such as the contingency items
[19] which allow us – which encourage us to invest in
[20] Sandpoint's future by recognizing additional efforts
[21] to control emissions by allowing for business growth
[22] as Sandpoint grows. We appreciate that.
[23] We only have a few minor exceptions, and
[24] those will be written comments. Thank you.
[25] HEARING OFFICER AYERS: Thank you. Monica

Page 24

[1] Van Fossen.
[2] MS. VAN FOSSEN: I don't wish to comment at
[3] this time. Thank you.
[4] HEARING OFFICER AYERS: Well, that's
[5] everyone I had on the list at least for the first
[6] go-round. Is there anyone who desires to make any
[7] comment at all about the permits?
[8] Well, if not, I think we'll take a recess
[9] for about 30 minutes in case there are some
[10] latecomers. And you're welcome to stay or leave as
[11] you choose. And if you do have any questions,
[12] Mr. Reinbold is here. Perhaps he'd be good enough to
[13] chat with you. In any event, we will take a recess
[14] until, say, 8:05.
[15] *(A recess was taken.)*
[16] HEARING OFFICER AYERS: We'll be back in
[17] session, then.
[18] Before we adjourn, does anyone else desire
[19] to make any comment?
[20] Seeing no indication that anyone desires to
[21] speak again or at all, I'll make a closing statement.
[22] This hearing, having been called, commenced
[23] at 7:09 p.m., and it is now 8:06 p.m. and is now
[24] closed. The record together with the exhibits will be
[25] transmitted to the Department of Health and Welfare,

[1] Division of Environmental Quality. Anyone wishing to
[2] submit further comment should address them in writing
[3] to Tony Wilson, Division of Environmental Quality,
[4] 1410 North Hilton, Boise, Idaho, 83706-1253. All
[5] final written comments must be received at the above
[6] address by 5:00 o'clock p.m., Mountain Daylight Time
[7] on June 23, 1995.
[8] The oral comments presented at this hearing
[9] and the written comments received by the deadline for
[10] submittal of comments will be reviewed and considered
[11] by the Division of Environmental Quality. The
[12] statement of final action will be made available to
[13] the public.
[14] Thank you for your attendance tonight. And
[15] that concludes the hearing.
[16]
[17]
[18]
[19]
[20]
[21]
[22]
[23]
[24]
[25]

[1] CERTIFICATE
[2]
[3] STATE OF IDAHO)
: ss.
[4] County of Kootenai)
[5]
[6] I, BYRL CINNAMON, CSR, Freelance Court
[7] Reporter and Notary Public for the State of Idaho,
[8] residing in Hayden Lake, Idaho, do hereby certify:
[9]
[10] That I was duly authorized to and did report
[11] the public hearing in the above-entitled cause;
[12]
[13] That the foregoing pages of this transcript
[14] constitute a true and accurate transcription of my
[15] stenotype notes of the proceedings.
[16]
[17] IN WITNESS WHEREOF, I have hereunto set my
[18] hand and seal on this 19th day of June, 1995.
[19]
[20]
[21] BYRL CINNAMON, CSR
Freelance Court Reporter
[22] Notary Public, States of Idaho
and Washington
[23] Residing in Hayden Lake, Idaho
My commission expires 7/16/96
[24]
[25]

Look-See Concordance Report

UNIQUE WORDS: 859
TOTAL OCCURRENCES: 2,140
NOISE WORDS: 385
TOTAL WORDS IN FILE: 4,303

SINGLE FILE CONCORDANCE

CASE SENSITIVE

NOISE WORD LIST(S):
NOISE.NOI

COVER PAGES = 3

INCLUDES ALL TEXT OCCURRENCES

DATES OFF

IGNORES PURE NUMBERS

POSSESSIVE FORMS OFF

MAXIMUM TRACKED OCCURRENCE THRESHOLD: 50

– 1 –

14th [1]
4:6
19th [1]
26:18

– 2 –

200-tons-per-hour [1]
15:1

– 5 –

5:00 [3]
20:14; 21:18; 25:6

– 7 –

7/16/96 [1]
26:23
7:09 [2]
4:6; 24:23

– 8 –

83706-1253 [1]
25:4
83706-1255 [1]
21:18
8:05 [1]
24:14
8:06 [1]
24:23

– A –

abides [1]
11:17
abilities [1]
22:13
above-entitled [1]
26:11
accept [2]
4:19; 21:2
according [3]
7:21; 10:25; 20:1
accurate [2]
10:1; 26:14
accurately [1]
9:5
achieving [1]
8:14
Act [1]
8:13
action [3]
8:10; 20:20; 25:12
actions [1]
7:6
activities [4]
7:17; 13:14; 21:8; 22:15
actual [2]
16:25; 18:25
additional [3]
12:15; 13:19; 23:20
address [3]
19:19; 25:2, 6
addressed [2]
7:16; 11:4
addressing [1]
23:14
adjourn [1]
24:18
aerodynamic [1]
10:19
affected [4]
8:7; 9:3; 10:13; 15:15
affidavits [1]
5:1
Agency [1]
21:2
aggregate [4]
13:13; 14:6; 15:14, 21
Air [2]
8:13; 9:13
air [16]
4:11; 5:19; 6:25; 7:12, 13, 14; 8:22; 9:16, 20; 10:2; 11:4; 19:16, 17, 18; 20:5, 9
allow [2]
14:22; 23:19
allowable [7]
11:14; 14:23; 15:3, 9; 17:7, 9; 18:6
allowances [1]
13:21
allowed [2]
17:12; 18:8
allowing [1]
23:21
altered [1]
18:6
ambient [2]
8:15, 22
amount [4]
13:3; 15:14, 21; 17:9
amounts [2]
11:8; 13:6
amplify [1]
5:24
analysis [1]
6:6
analyst [1]
6:25
Annual [4]
11:25; 12:1; 13:5; 18:20
annual [3]
12:14; 17:7, 20
answer [1]
5:21
anticipated [1]
8:19
anytime [1]
17:14
applause [1]
6:17
applicable [1]
19:23
application [3]
4:10, 17; 6:6
applies [1]
15:4
apply [2]
11:23; 18:19
appreciate [1]
23:22
appreciated [1]
19:14
approvable [1]
11:16
approval [1]
6:16
approve [1]
8:20
approved [1]
12:25
Area [3]
7:16; 9:13; 21:6
area [9]
8:21, 24; 9:1; 16:5, 15, 19; 21:7, 9; 22:14
areas [1]
14:5
arguments [1]
4:16
aspects [1]
9:16
Asphalt [5]
4:14; 10:15; 13:11; 19:21; 23:5
asphalt [8]
13:12, 15; 14:7, 22, 25; 15:5, 20; 16:1
asphaltic [1]
15:19
Attainment [1]
8:25
attainment [6]
8:5, 15, 21; 9:10; 21:3, 5
attendance [1]
25:14
attending [1]
5:25
August [1]
8:6
authority [1]
7:5
authorized [1]
26:10
availability [1]
10:8
available [3]
10:4; 21:11; 25:12
AYERS [11]
4:1; 21:21; 22:18, 22; 23:1, 3, 6, 9, 25; 24:4, 16
Ayers [1]
4:4

– B –

background [1]
11:17
backup [1]
18:20
baghouse [2]
14:9; 18:24
baghouses [1]
16:20
based [1]
12:12
batch [4]
13:12; 14:7, 9; 15:8
BAUER [1]
22:20
Bauer [1]
22:19
Bee [2]
5:8; 10:10
behalf [1]
22:10
bin [1]
16:15
board [2]
17:3, 8
boiler [8]
12:23; 16:9; 17:12, 16; 18:12, 15, 17, 22
boilers [1]
18:20
Boise [5]
10:8; 21:15, 18; 23:11; 25:4
Bonner [2]
5:8; 10:10
brief [2]
6:5; 7:6
briefly [1]
7:4
Building [1]
4:7
Bureau [1]
7:1
burner [2]
8:13; 12:8
burning [1]
8:13
business [1]
23:21
BYRL [2]
26:6, 21

– C –

call [1]
21:22
capacity [3]
11:10; 12:13, 14
carbon [3]
10:22; 13:7; 17:24
case [1]
24:9
caused [1]
11:8
cement [1]
14:8
central [2]
10:7; 21:14
certification [1]

20:19
certify [1]
26:8
changes [1]
23:18
changing [1]
23:16
charged [1]
7:11
chat [1]
24:13
chemical [1]
11:23
choose [1]
24:11
CINNAMON [2]
26:6, 21
citizen [1]
19:11
citizens [1]
8:8
classified [1]
8:23
Clean [1]
8:13
clear [1]
20:6
closed [1]
24:24
closes [1]
20:13
closing [1]
24:21
coat [1]
16:18
Coeur [6]
5:7; 10:5, 7, 10; 21:13, 14
Colleen [2]
22:4, 7
combustion [3]
12:7, 8; 18:3
commence [1]
4:2
commenced [1]
24:22
comment [15]
5:3, 4, 13; 8:2, 5, 7; 20:13, 16, 19; 22:20, 24; 24:2, 7, 19; 25:2
comments [26]
4:10; 5:19, 20; 6:4, 14, 17; 7:8; 9:17, 20; 19:7, 9, 13, 16; 20:2, 11, 12, 15, 18; 21:15; 22:3; 23:10, 24; 25:5, 8, 9, 10
commission [1]
26:23
commonly [1]
10:19
community [2]
7:18; 22:13
Company [4]
4:13; 8:11; 12:4; 19:22
company [1]
22:12
compelling [1]
20:24
completes [1]
17:16
completing [1]
16:18
compliance [2]
15:2; 17:17
comply [1]
11:19
complying [1]
19:22
compounds [3]
10:23; 13:9; 17:25
concentrations [1]
11:17
concern [2]
10:17; 11:9
concerns [1]
10:14
concludes [1]
25:15
Concrete [9]
4:13; 10:15, 16; 11:2; 13:11; 19:21, 22; 23:5
concrete [10]
11:11, 12, 15; 14:7, 9; 15:8, 12, 19, 20; 23:16
conduct [1]
15:25
confines [1]
20:4
conform [2]
9:19
consider [2]
19:16; 21:4
consideration [2]
4:18; 16:12
considered [2]
15:6; 25:10
consist [1]
20:17
constitute [1]
26:14
constrained [1]
19:15
Construct [2]
13:16; 15:6
construct [1]
4:11
consumes [1]
6:19
consumption [2]
13:3; 15:20
contacted [1]
7:24
contained [1]
9:12
contains [4]
13:1, 12; 15:25; 18:11
contaminants [1]
7:14
content [1]
7:7
contents [1]
10:12
contingency [10]
13:23; 14:18, 21; 15:15; 16:11, 24; 17:6, 21; 18:5; 23:18
continue [2]
22:12, 16
continuous [1]
18:13
continuously [1]
18:14
control [16]
7:14; 8:20; 9:4, 10; 11:20, 22; 13:2, 19, 22; 14:2, 10; 15:23; 16:13; 19:4; 23:21
controlled [1]
12:24
controls [1]
14:1
Corporation [2]
16:3; 19:20
counsel [1]
5:14
County [3]
5:8; 10:10; 26:4
course [1]
5:17
Court [2]
26:6, 21
covered [4]
12:5; 13:15, 17; 18:3
covers [1]
12:11
create [1]
21:8
creation [1]
9:23
cross-examine [1]
5:13
crushing [1]
13:14
CSR [2]
26:6, 21
cubic [11]
11:11, 12, 14; 12:19, 21, 22; 15:12, 13; 23:16, 17
current [1]
14:23
Currently [1]
17:12
currently [5]
11:2, 22; 12:5; 13:15, 16
custodian [1]
4:24
cyclone [1]
16:17
cyclones [2]
17:2; 18:24

– D –

d'Alene [6]
5:7; 10:5, 7, 11; 21:13, 14
Daily [1]
10:10
daily [7]
11:11, 14; 13:2; 15:19, 20, 21; 18:16
data [1]
7:24
date [2]
8:22; 21:5
day [8]
4:7; 12:20, 21; 15:13, 16; 16:25; 18:9; 26:18
Daylight [3]
20:14; 21:19; 25:6
days [2]
5:3; 18:9
deadline [1]
25:9
deadlines [1]
8:14
deal [2]
9:23; 23:14
December [1]
12:7
decided [1]
8:8
decision [1]
20:3
decrease [1]
12:10
deficiencies [1]
23:15
delivered [1]
17:5
demonstrate [1]
9:9
demonstrates [1]
9:10
Department [19]
4:5, 19, 23; 5:5; 6:5, 20; 7:3, 4, & 10:25; 13:23; 18:18; 19:6, 12; 20:6, 12, 15, 21; 24:25
DEQ [4]
7:15; 8:8, 10; 9:9
descriptions [1]
9:4
designated [1]
4:4
designation [1]
22:15
desire [2]
6:2; 24:18
desired [1]
9:7
desires [2]
24:6, 20
detailed [1]
19:8
details [2]
9:11; 10:3
determination [1]
5:18
developed [1]
7:15
diameter [1]
10:19
differently [1]
20:1
dimensional [2]
16:7; 17:8
disabled [1]
22:6
disapproval [1]
6:16
discounted [1]
12:9
discretion [1]
20:6
Discussion [1]
10:12
disruptive [1]
6:18
dissimilar [1]
10:16
Division [10]
4:5, 24; 7:2, 10; 10:6; 21:13, 17; 25:1, 3, 11
documents [2]
4:20; 19:9
downtown [1]
11:3
draft [2]
7:25; 8:4
drafting [1]

dramatically [1]
12:10
drawings [1]
9:4
dried [1]
16:6
drop [1]
14:6
dry [1]
11:24
Due [1]
11:6
duly [1]
26:10
dust [8]
11:20, 23; 12:23; 13:2; 14:4, 10; 15:23; 19:4

– E –

efforts [3]
14:4; 22:12; 23:20
emission [11]
7:22, 23; 9:5; 10:21; 12:14; 13:16; 15:3; 17:18, 20; 18:4, 6
emissions [18]
7:14, 17; 8:9; 9:9, 25; 11:8, 25; 12:1, 10, 23; 13:5, 20; 14:10, 15; 15:23; 19:4; 21:9; 23:21
emit [3]
10:20; 11:6; 14:14
emitting [1]
4:11
enclose [1]
14:6
enclosing [2]
16:15, 18
encourage [1]
23:19
end [3]
16:17, 18; 23:13
enforceable [2]
9:24; 14:13
Enforcement [1]
7:2
enhanced [1]
13:19
entrance [1]
6:2
Environmental [11]
4:6, 24; 7:2, 10; 10:6; 21:1, 13, 17; 25:1, 3, 11
EPA [2]
8:3, 19
equipment [7]
9:4; 11:18, 22; 12:13, 15; 13:19; 18:8
established [1]
7:22
establishes [1]
17:17
estimates [1]
9:5
event [2]
20:25; 24:13
except [1]
10:14
exceptions [1]
23:23
exchange [1]
13:21
exercise [1]
9:12
exhibits [2]
4:22; 24:24
existed [1]
10:1
existing [1]
16:20
expected [2]
9:7; 21:9
expires [1]
26:23
explain [1]
5:22
explore [1]
5:23
express [2]
22:11; 23:12
expressing [1]
6:16
extending [1]
21:4
Extension [2]
8:25; 9:2
extension [1]
8:21

– F –

F-r-a-n-z [1]
23:8
Facilities [1]
10:20
facilities [9]
7:19, 20; 9:3, 25; 10:14; 11:1; 16:8; 20:22, 23
facility [14]
10:1, 13; 11:3, 12, 16, 23; 12:5, 11, 18; 13:11, 20; 14:13; 16:20; 18:12
facility-wide [1]
14:15
facts [1]
4:16
Federal [1]
4:7
federal [3]
9:19; 19:23; 20:4
federally [2]
9:23; 14:12
feel [1]
19:8
feet [5]
12:19, 21, 22; 17:3, 9
felt [1]
19:12
file [1]
5:2
final [6]
8:10; 19:10; 20:3, 20; 25:5, 12
finalized [1]
8:3
finished [2]
17:3; 19:1
first [2]
22:4; 24:5
five [1]
6:4
flexible [1]
13:21
followed [1]
6:21
following [3]
13:6; 14:4; 16:13
foregoing [1]
26:13
forward [2]
6:12; 22:1
FOSSEN [1]
24:2
Fossen [1]
24:1
four [3]
9:3, 24; 20:25
FRANZ [3]
23:4, 8, 10
Franz [2]
23:3, 4
Freelance [2]
26:6, 21
fuel [2]
16:9; 17:5
Fugitive [1]
12:23
fugitive [6]
11:8, 20; 13:2; 14:10; 15:23; 19:4
fulfilled [1]
21:3
future [1]
23:20

– G –

gain [1]
9:15
Gary [1]
6:25
gas [4]
12:22; 13:3; 15:20; 18:20
gather [1]
4:15
generated [1]
17:10
gentlemen [1]
6:24
given [1]
6:7
go-round [1]
24:6
grain [1]
17:19
grandfathered [1]
15:9
grant [1]
8:21
great [1]
23:14
green [2]
16:5, 6
grows [1]
23:22
growth [1]
23:21

– H –

hand [1]
26:18
haul [2]
16:14, 16
hauled [2]
13:3; 15:21
Hayden [2]
26:8, 23
he'd [1]
24:12
Health [5]
4:5, 23; 5:5; 7:3; 24:25
hear [2]
6:15; 20:7
heard [2]
6:9; 21:24
HEARING [11]
4:1; 21:21; 22:18, 22; 23:1, 3, 6, 9, 25; 24:4, 16
Hearing [2]
6:24; 20:19
hearing [21]
4:2, 4, 20; 5:9, 16; 6:10, 11; 7:6, 9; 9:15, 23; 19:6, 15; 20:11, 17; 21:16; 24:22; 25:8, 15; 26:11
held [1]
10:2
helpful [1]
9:21
hereby [1]
26:8
hereunto [1]
26:17
Hilton [2]
21:18; 25:4
Hogged [1]
16:8
hogged [1]
17:5
hopper [1]
14:8
horizontal [1]
16:20
hot-mix [3]
13:12, 15; 15:5
hour [6]
14:23, 24; 15:12; 17:14, 15, 18
hourly [4]
11:10; 12:13; 15:3; 18:16
hours [5]
12:20; 16:24, 25; 18:9, 23

– I –

IDAHO [1]
26:3
Idaho [15]
4:4, 8, 23; 5:5; 7:11, 13; 20:5; 21:2, 18; 22:9; 25:4; 26:7, 8, 22, 23
identification [1]
9:18
II [1]
12:6
important [1]
18:2
imposes [1]
8:14
Improvement [1]
9:14
improvements [1]
9:18
include [6]
10:22; 12:17; 14:3; 15:18; 16:24; 17:1

included [3]
4:22; 5:9; 19:25
includes [1]
11:10
inclusion [1]
8:1
incorporate [1]
9:8
incorporates [1]
11:13
incorporation [1]
13:25
increase [8]
11:14; 14:4, 22; 15:6; 17:8, 10; 18:7, 9
increased [1]
17:14
indicated [1]
21:23
indicating [1]
6:2
indication [1]
24:20
industrial [5]
7:19, 20, 23; 8:9; 9:3
industries [1]
8:8
informal [1]
5:12
information [6]
5:24; 9:8; 10:25; 15:22; 18:17; 19:3
input [1]
19:13
inspection [1]
10:5
install [2]
14:7, 9
installation [8]
13:18; 14:18, 21; 16:13, 23; 17:6, 21; 18:4
intended [1]
9:15
interested [4]
4:16; 5:25; 19:6; 20:7
Interstate [11]
4:13; 10:15; 13:11, 14, 18; 14:22; 15:11, 25; 16:12; 19:21; 23:5
inventories [1]
7:25
inventory [4]
7:23, 24; 8:9; 15:11
invest [1]
23:19
issuance [2]
8:24; 19:11
issue [5]
7:12; 8:11; 9:22; 20:21
issued [3]
8:18; 12:6; 21:1
issues [2]
19:19; 20:6
items [1]
23:18

– J –

Jerry [1]
22:22
July [4]
8:6; 14:3, 15; 16:24
June [5]
4:7; 20:13; 21:19; 25:7; 26:18

– K –

keeping [4]
11:20; 13:1; 15:18; 18:19
KELLY [1]
23:2
Kelly [1]
23:1
kilns [1]
16:6
knowledge [1]
19:8
Kootenai [1]
26:4

– L –

L-P [7]
16:3, 11, 12; 17:7; 18:15; 19:2
L.D. [5]
4:12; 8:11; 12:4, 9; 19:21
ladies [1]
6:24
Lake [10]
4:13; 10:15; 11:2, 7, 9, 15, 19; 19:22; 26:8, 23
larger [1]
23:18
last [2]
22:2; 23:7
latecomers [1]
24:10
law [2]
20:1, 4
leading [1]
7:6
leave [1]
24:10
legal [2]
5:15; 10:9
legally [1]
11:5
level [4]
14:14; 15:10; 17:13, 15
levels [4]
7:22; 9:7; 15:16, 19
libraries [2]
10:6; 21:12
Lignetics [2]
22:9, 11
limit [9]
6:3; 7:14; 11:5, 10, 11; 13:20; 15:3; 17:18; 18:6
limitation [1]
12:18
limitations [4]
9:24; 10:1; 12:12; 14:13
limited [5]
5:18; 12:1, 2; 13:5; 19:18
limits [6]
10:21, 24; 12:14, 21; 17:21; 18:4
list [1]
24:5
loaded [1]
16:16
loading [2]
14:11; 17:19
loadout [1]
16:15
local [1]
19:23
located [2]
11:2, 7
location [2]
11:13, 16
log [1]
19:3
Louisiana-Pacific [3]
4:14; 16:3; 19:20
lower [1]
11:16
lumber [6]
16:5, 6, 7; 17:4, 8; 19:1

– M –

mailed [1]
20:12
maintain [2]
11:21; 19:3
major [1]
8:19
mandated [2]
8:14, 17
materials [2]
4:21; 10:8
Matter [1]
9:13
matter [3]
10:18, 24; 17:19
maximum [3]
12:12; 17:2; 18:16
May [4]
5:8; 8:3, 5; 10:9
McFarland [5]
4:12; 8:11; 12:4, 9; 19:21
means [1]
6:17
measure [2]
15:15; 16:11
measures [14]
13:20, 22, 23, 24; 14:2, 18, 21; 15:22; 16:14, 24; 17:7, 21; 18:5; 19:4
methods [1]
12:25
microns [1]
10:19
milestones [2]
8:14, 17
mill [4]
16:4, 23; 18:8
million [3]
12:21; 17:3, 8
minibaghouses [1]
14:8
minor [1]
23:23
minutes [2]
6:4; 24:9
mixer [1]
14:10
modeled [1]
9:9
modeling [1]
9:12
modification [1]
15:7
modified [1]
19:10
Monica [1]
23:25
monitored [1]
19:2
Monitoring [1]
18:23
monitoring [2]
18:11, 13
monoxide [3]
10:22; 13:8; 17:24
Monthly [1]
18:25
monthly [1]
11:24
Mountain [3]
20:14; 21:19; 25:6
moves [1]
11:15
MS [2]
22:7; 24:2
myself [1]
5:23

– N –

name [7]
4:3; 6:25; 22:2, 7; 23:4, 7
natural [4]
12:22; 13:2; 15:20; 18:20
nature [1]
5:15
needlessly [1]
19:25
nitrogen [3]
10:23; 13:7; 17:23
nominal [1]
10:18
Nonattainment [2]
7:16; 21:5
nonattainment [4]
8:24; 9:1; 21:7; 22:14
nonconformance [1]
20:9
North [2]
21:18; 25:4
Notary [2]
26:7, 22
note [1]
18:2
noted [1]
23:15
notes [1]
26:15
notice [4]
5:2, 9, 11; 10:9

– O –

o'clock [3]
20:14; 21:19; 25:6
objections [1]
5:14
obtained [1]
16:9
occur [1]
13:14
occurs [2]
13:13; 21:10
off-site [1]
16:9

offering [1]
5:13
office [4]
10:7, 8; 21:14, 15
OFFICER [11]
4:1; 21:21; 22:18, 22; 23:1, 3, 6, 9, 25; 24:4, 16
Officer [2]
6:24; 20:19
officer [2]
4:4; 5:16
omissions [2]
9:18; 20:8
opacity [1]
18:13
operate [3]
7:11; 11:21; 17:13
operated [1]
18:14
operates [1]
16:4
operating [10]
4:12; 7:21; 8:4, 12, 24; 11:24; 12:5, 6; 16:22; 18:23
Operation [1]
18:7
operation [9]
7:22; 9:7; 11:21; 12:17, 20; 16:18, 19; 17:1; 18:9
operational [1]
18:15
operations [4]
9:6; 10:16; 11:3; 12:11
opportunity [2]
5:3; 6:8
Oral [1]
20:11
oral [5]
4:10; 6:2, 21; 22:1; 25:8
order [2]
4:2; 19:9
orderly [1]
6:18
organic [3]
10:23; 13:8; 17:25
outline [1]
7:4
output [1]
23:16
outside [1]
5:19
overall [1]
8:20
overlooked [2]
19:12, 25
oxides [6]
10:23, 24; 13:7, 9; 17:23; 18:1

– P –

p.m. [6]
4:6; 20:14; 21:19; 24:23; 25:6
package [3]
20:16; 21:11
pages [1]
26:13
painting [1]
16:18
part [2]
5:22; 8:25
Particulate [1]
9:13
particulate [4]
10:18, 24; 11:8; 17:19
particulates [1]
14:17
parties [1]
5:25
Paul [2]
23:3, 4
paved [2]
12:24; 14:5
paving [1]
16:14
peeling [1]
12:19
performance [4]
15:4; 16:1; 17:16; 18:20
performs [1]
15:1
period [3]
5:4; 20:13, 19
periods [1]
11:24
Permit [2]
13:15; 15:6
permit [20]
4:10, 18; 5:20, 22; 6:7; 8:12; 10:2, 12; 11:10, 13; 12:6, 10; 13:1, 17, 25; 14:12; 15:3, 24; 18:3, 11
Permits [1]
7:1
permits [30]
4:12; 7:5, 7, 12, 21; 8:4, 11, 16, 18, 25; 9:8, 17, 19, 22; 11:5; 12:6; 19:7, 10, 17, 19; 20:3, 8, 9, 20, 21, 22, 23; 21:1; 24:7
Permitted [2]
15:11, 16
permitted [3]
14:14; 17:17, 20
permitting [1]
19:17
person [3]
5:13; 6:7, 8
persons [3]
4:17, 21; 21:22
Pete [1]
23:1
place [3]
4:9; 11:22; 14:3
Plan [1]
9:14
plan [5]
7:15, 21; 8:2, 5; 9:11
planer [5]
16:4, 16, 23; 17:2; 18:8
plant [13]
13:12, 13, 15; 14:7, 9, 22, 25; 15:5, 8, 21; 16:2, 14
please [2]
6:15; 23:7
PM [2]
17:22; 18:3
PM-10 [24]
7:16; 8:15, 22; 9:1, 11, 13, 25; 10:20, 21; 11:17; 12:1, 3; 13:6, 20; 14:14, 16, 18; 15:3; 17:17, 22; 18:6; 21:5, 7, 8
point [1]
19:11
points [1]
14:6
pole [2]
12:4, 19
poles [1]
12:19
pollutant [1]
10:17
pollutants [2]
10:20, 22
pollution [5]
4:11; 5:20; 7:12; 10:2; 11:4
potential [4]
9:25; 11:6; 12:9; 14:14
pounds [3]
17:13, 15, 18
Pre-Mix [8]
4:13; 10:15; 11:2, 7, 9, 15, 19; 19:22
predict [1]
9:6
prepared [1]
6:5
present [2]
11:12, 25
presentation [3]
6:3, 18; 22:1
presentations [2]
5:17; 6:22
presented [3]
5:24; 10:25; 25:8
presenting [1]
4:21
presently [1]
11:4
Press [2]
5:7; 10:11
principal [1]
10:17
prior [4]
5:3; 6:8; 7:25; 19:10
private [1]
8:8
procedures [2]
5:15; 10:4
proceed [1]
22:2
proceeding [2]
4:15; 5:12
proceedings [3]
6:1; 21:24; 26:15
process [10]
9:4; 12:13, 15, 23; 15:11; 17:1, 10; 18:8; 19:18; 23:13
processed [1]
16:6
produce [1]
16:8
Product [1]
16:7
production [19]
11:10, 14, 20; 12:16, 18; 13:2, 21; 14:23; 15:2, 5, 9, 10, 12, 19; 17:2, 4, 7; 18:16, 25
production-related [1]
16:25
products [1]
16:8
program [2]
7:11, 13
prohibiting [1]
8:12
prohibits [1]
12:7
Project [1]
9:2
project [4]
7:15; 10:3, 18; 21:15
property [1]
11:7
propose [1]
9:6
Proposed [2]
12:17; 16:22
proposed [42]
4:10, 12, 17; 5:19, 22; 6:7; 7
7; 8:2, 10, 16, 18; 9:8, 10, 1
22; 10:12; 11:9, 13; 12:10, 1
13:1, 18, 22, 24, 25; 14:2, 1
15:24; 16:13, 23; 17:6, 20; 1
5, 11, 21; 19:7, 19; 20:3, 25
Protection [1]
21:1
provide [2]
14:12; 19:9
provided [4]
7:25; 11:15; 14:25; 17:15
provisions [1]
15:25
Public [2]
26:7, 22
public [18]
5:3, 9; 8:2, 5, 7; 9:15, 16; 1
5; 19:13; 20:13, 16, 18; 21:
25:13; 26:11
publication [3]
5:2, 7, 9
publications [1]
5:10
published [1]
10:9
purpose [2]
4:15; 7:12

– Q –

Quality [11]
4:6, 24; 7:2, 10; 9:14; 10:6,
21:13, 17; 25:1, 3, 11
quality [10]
6:25; 7:13; 8:22; 9:16, 20; 19:16, 17, 18; 20:5, 9
question [1]
5:23
questions [2]
5:21; 24:11

– R –

range [1]
23:15
rate [2]
15:2; 17:14
raw [1]
15:21
read [1]
6:21
reason [1]
20:24
reasons [1]
11:9
receive [4]
4:9, 18; 7:20; 10:21

received [5]
5:16; 7:8; 20:18; 25:5, 9
receives [1]
16:5
recess [3]
24:8, 13, 15
recognized [1]
11:5
recognizing [1]
23:20
Record [1]
15:18
record [10]
4:3, 22; 5:1; 6:21; 11:20; 13:1; 18:15, 18; 19:3; 24:24
recorded [2]
6:11; 21:25
records [1]
4:25
redesignation [2]
21:6, 10
redirecting [1]
16:19
reductions [1]
21:8
reexamine [1]
8:9
referred [2]
10:20; 13:22
reflect [1]
13:25
reflected [1]
9:5
reflects [1]
15:10
refrain [1]
6:15
regarding [2]
5:2; 20:7
Region [1]
8:19
region [1]
10:7
regional [1]
21:14
Regulations [1]
5:6
regulations [1]
9:20
regulator [1]
5:17
REINBOLD [1]
6:23
Reinbold [3]
6:22, 25; 24:12
related [1]
12:14
relating [1]
4:11
relative [1]
4:17
release [1]
19:20
relevant [3]
4:20; 19:16; 20:15
relocation [1]
12:2
remain [1]
22:5
remaining [1]
16:14
remind [1]
6:10
removing [1]
16:17
repetitious [1]
5:21
report [2]
18:18; 26:10
reported [2]
10:9; 19:2
Reporter [2]
26:7, 21
reporter [1]
6:13
reporting [1]
18:19
represent [1]
22:8
representing [1]
23:5
Request [1]
8:25
requested [2]
15:10; 16:11
required [9]
7:20; 8:4; 9:2; 14:3; 15:24; 18:13, 15, 25; 19:3
requirement [2]
11:18; 18:21
requirements [11]
5:11; 11:21; 13:1, 17; 15:15, 18; 16:22; 18:12, 19; 19:24; 21:3
requiring [1]
15:25
residential [1]
7:18
Residing [1]
26:23
residing [1]
26:8
respond [3]
7:8; 8:16; 20:15
response [2]
20:16; 21:11
restrictions [2]
12:15, 17
result [2]
8:6; 21:6
results [1]
6:6
Retail [1]
13:13
review [2]
7:25; 10:4
reviewed [3]
13:23; 15:7; 25:10
revised [3]
9:9; 20:22; 22:11
revisions [1]
8:19
revoke [1]
20:22
right [5]
5:12, 14; 22:20, 22, 24
road [2]
7:19; 16:15
roads [6]
12:24, 25; 14:5; 15:24; 19:5
Room [1]
4:8
room [1]
6:14
roster [2]
6:1; 21:23
Rules [1]
5:6
rules [2]
20:5, 10

– S –

S-p-i-c-k-e-l-m-i-r-e [1]
22:8
safeguard [1]
7:13
sale [1]
13:13
sanding [1]
7:19
Sandpoint [16]
4:8; 7:16, 18; 8:16, 21, 23; 9:1, 13; 10:5; 11:3; 16:4; 21:5, 7, 12; 23:20, 22
satisfaction [1]
23:12
sawdust [1]
16:16
sawmills [1]
16:5
scheduled [1]
5:4
scope [2]
5:19; 7:4
seal [1]
26:18
seated [2]
6:13; 22:5
second [1]
6:9
Section [1]
5:6
sell [1]
23:17
semiannual [1]
18:18
sending [1]
23:11
separated [1]
10:13
serious [4]
8:23; 21:7, 9; 22:14
seriously [1]
19:13
Services [1]
7:1
session [1]
24:17
setback [1]
11:18
shavings [1]
16:16
shipped [1]
16:7
show [2]
4:3; 5:1
shows [1]
15:2
sign [1]
6:1
signed [1]
4:20
significant [1]
8:7
simple [1]
23:15
SIP [2]
8:1; 22:11
site [6]
9:3; 11:25; 13:4, 14; 15:22; 17:5
six [1]
14:6
size [1]
11:6
sold [1]
15:14
sole [1]
5:16
source [5]
4:11; 13:16; 15:1, 4, 9
sources [7]
7:15, 17, 23; 8:10; 16:10; 17:1; 18:3
speak [2]
6:8; 24:21
speakers [2]
6:17, 19
Specific [1]
15:22
specified [1]
5:5
spell [2]
22:2; 23:6
spending [1]
23:14
SPICKELMIRE [1]
22:7
Spickelmire [2]
22:4, 8
SPRAY [1]
22:24
Spray [1]
22:23
ss [1]
26:3
staff [1]
23:13
stand [1]
6:12
standard [5]
8:15, 22; 9:11; 15:4; 17:19
STATE [1]
26:3
State [3]
7:11; 21:2; 26:7
state [5]
9:19; 17:18; 19:23; 20:4; 22:1
statement [4]
6:5, 20; 24:21; 25:12
statements [1]
4:19
States [1]
26:22
statute [1]
7:11
statutes [1]
20:5
stay [2]
22:14; 24:10
steam [3]
17:13, 15; 18:16
stenotype [1]

26:15
Steve [1]
4:3
stoves [1]
7:18
strategy [3]
8:20; 9:10; 21:4
street [1]
12:24
structured [1]
13:24
submit [3]
9:3; 18:17; 25:2
submittal [1]
25:10
submitted [2]
8:3; 21:16
subpoena [1]
5:14
successfully [1]
17:16
suggested [1]
9:17
suggestions [1]
20:7
sulfur [3]
10:23; 13:9; 17:25
summarizing [1]
6:5
summary [1]
7:6
support [2]
22:11, 12
supported [1]
22:15
suppressant [1]
11:23
suppression [1]
14:4
suspended [1]
14:16
sweep [1]
14:5
sweeper [1]
12:24
system [3]
14:9; 18:14, 24

– T –

takes [1]
19:13
Technical [1]
7:1
technical [2]
10:3; 19:8
technically [1]
5:15
ten [2]
6:4; 10:19
test [3]
15:1; 16:1; 17:16
testimony [1]
7:3
testing [1]
18:21
Thank [11]
6:23; 21:20, 21; 22:18, 21, 25; 23:9, 24, 25; 24:3; 25:14
thanks [1]
23:13
throughput [2]
12:12; 17:2
throughputs [1]
19:1
Tier [1]
12:6
timely [1]
5:10
ton [1]
14:17
tonight [1]
25:14
tons [29]
12:1, 2; 13:6, 7, 8, 9, 10; 14:16, 19, 23, 24, 25; 15:16, 17; 17:3, 4, 5, 9, 11, 22, 23, 24, 25; 18:1, 7; 23:17
Tony [2]
21:17; 25:3
topics [1]
19:18
total [5]
14:16; 18:3, 5, 16, 23
transcript [2]
20:17; 26:13
transcription [1]
26:14
transmitted [2]
4:23; 24:25
treated [1]
12:19
treating [1]
12:4
trim [1]
16:17
truck [2]
14:10; 16:15
trucks [1]
16:17
true [1]
26:14
TSP [2]
14:17, 19
type [1]
9:20
types [1]
20:2

– U –

underwent [2]
8:2, 5
unduly [1]
5:20
unique [1]
10:14
unpaved [5]
12:25; 14:5; 15:23; 16:14; 19:5
usage [1]
12:22
useful [2]
19:9; 20:2
uses [1]
12:11

– V –

valid [1]
10:2
VAN [1]
24:2
Van [1]
24:1
vents [1]
16:19
versus [1]
23:17
vertical [1]
16:21
viewed [1]
15:8
views [3]
4:16; 6:18; 9:16
volatile [3]
10:23; 13:8; 17:24

– W –

Walt [1]
22:18
Washington [1]
26:22
waste [1]
16:7
We'll [1]
24:16
we'll [2]
4:1; 24:8
week [3]
14:6; 16:25; 18:10
weekly [1]
18:23
weeks [1]
18:10
weigh [1]
14:8
welcome [2]
20:12; 24:10
Welfare [5]
4:5, 24; 5:5; 7:3; 24:25
WHEREOF [1]
26:17
wigwam [3]
8:12; 12:8, 9
Wilson [2]
21:17; 25:3
wish [4]
21:23, 25; 24:2
wishing [1]
25:1
WITNESS [1]
26:17
wood [2]
7:18; 16:8
woodwaste [14]
8:13; 12:7, 8; 13:3; 16:9; 17:4, 10, 12; 18:12, 14, 17, 21, 24; 19:1
writing [2]
21:16; 25:2
written [7]
4:19; 20:11, 18; 23:10, 24; 25:5, 9

– Y –

yards [8]
11:11, 12, 15; 15:12, 13; 23:17
year [26]
12:1, 2, 19, 22; 13:6, 7, 8, 9, 10; 14:16, 17, 19, 20, 24, 25; 15:14, 17; 17:11, 22, 23, 24, 25; 18:1, 7, 10
years [1]
16:1

AFFIDAVIT OF PUBLICATION

State of Idaho

ss.

County of Bonner,

Pamela D. Johnson being first duly sworn on oath deposes and says that he/she is Bookkeeper of the Bonner County Daily Bee, a newspaper printed and published at Sandpoint, Bonner County, Idaho; that the said newspaper has been continuously and uninterruptedly published in said Bonner County during a period of 12 months prior to the first publication of the hereto attached notice of publication in the case of:

NOTICE OF PUBLIC COMMENT PERIOD AND PUBLIC HEARING

as it was published in the regular and entire issue of the said paper for a period of 1 day ~~consecutive weeks~~, commencing on 25 day of May, 19 95 and ending on the 25 day of May, 19 95 and that said notice was published in said newspaper.

On this 25 day of May in the year of 1995, before me, a Notary Public, personally appeared Pamela D. Johnson, 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 he executed the same.

Carolyn L. Dye

Notary Public for Idaho

Residing at Sandpoint

My commission expires: 6/2000

COMMENT PERIOD AND REGARDING PUBLIC HEARING REGARDING THE PROPOSED TIER II OPERATION PERMITS FOR AIR POLLUTION EMITTING SOURCES

SUBJECT: Proposed Tier II Operating Permits for Air Pollution Emitting Sources issued to: L.D. McFarland Company, Lake Pre-Mix Concrete, Interstate Concrete & Asphalt, and Louisiana-Pacific Corporation.

PURPOSE: The Department of Health and Welfare has scheduled a public hearing with an accompanying public comment period under Docket Number 10AP-9502, concerning the air quality aspects of the proposed Tier II Operating Permits for the purpose of meeting EPA requirements in order to implement the control measures based on updated industrial source emissions inventories.

AUTHORITY: In compliance with Section 404.02 of the Rules For The Control of Air Pollution in Idaho, Administrative Rules of the Idaho Department of Health and Welfare, notice is hereby given that the State of Idaho, Department of Health and Welfare, Division of Environmental Quality (DEQ), is proposing to issue Tier II permits to operate air pollution source(s) to L.D. McFarland Company, Lake Pre-Mix Concrete, Interstate Concrete & Asphalt, and Louisiana-Pacific Corporation, which are all located in Sandpoint, Idaho. Notice is also given that a period for public comment has been scheduled. These actions are authorized pursuant to Sections 39-105(3)(a), 39-105(3)(i), 39-110, 39-115(i), Idaho Code.

PUBLIC HEARING SCHEDULE: The public hearing is scheduled for June 14, 1995, at 7:00 p.m., in room 103 of the Sandpoint Federal Building, 1500 Highway 2, Sandpoint, Idaho. The hearing site will be accessible to the physically challenged. Interpreters for persons with hearing impairments and braille or taped information for persons with visual impairments can be provided upon five (5) days notice. For arrangements, contact the undersigned at (208) 334-5898.

DESCRIPTIVE SUMMARY: Sandpoint, Idaho, located in Bonner County, has exceeded the 24 hour average 150 microgram per cubic meter PM-10 National Ambient Air Quality Standard (NAAQS) a total of eight (8) times. The events that led to the requirement of the issuance of Tier II Operating Permits to L.D. McFarland and Company, Lake Pre-Mix Concrete, Interstate Concrete & Asphalt, and Louisiana-Pacific Corporation are documented extensively in the Sandpoint Area Particulate Matter (PN-10) Air Quality Improvement Plan as prepared by DEQ for EPA Region 10. A thorough explanation of the role of operating permits in reducing the impact of industrial sources is included in this document.

These permits have been proposed as part of the Extension Project for Attainment Date of the Sandpoint Non-Attainment Area.

The above-named industrial sources affected by the plan's permitting requirements are to have restrictions on operations that may include throughput limitations, operating schedule limitations, plant operation requirements (such as fugitive dust control), and required control equipment to be utilized during operation. These restrictions are based on the requirements of the Sandpoint PM-10 plan and the wholly revised emission information provided by each of the above-named sources in the development of the plan's attainment demonstration control strategy. Please review the information package for details.

PROPOSED ACTION: The Department of Health and Welfare, through DEQ, has tentatively determined that the issuance of these Tier II Operating Permits will not cause or significantly contribute to a violation of any ambient air quality standard and will not injure or unreasonably affect human or animal life or vegetation.

Based on this analysis, DEQ proposes to issue Tier II Operating Permits to the above named sources.

AVAILABILITY OF MATERIALS: An information package containing DEQ's analyses and proposed actions will be available for public review. These materials may be reviewed at any of the following locations:

Div. of Environmental Quality, Department of Health and Welfare, 1410 N. Hilton, 3rd Floor, Boise, Idaho 83706-1253; Div. of Environmental Quality Regional Office, 2110 Ironwood Parkway, Coeur d'Alene, ID 83814; East Bonner County Public Library, 419 N. 2nd Avenue, Sandpoint, ID 83864; Coeur d'Alene Public Library, 201 Harrison, Coeur d'Alene, ID 83814.

SUBMISSION OF WRITTEN COMMENTS, ASSISTANCE ON TECHNICAL QUESTIONS: Anyone may submit written comments regarding the proposed actions. To be most effective, comments should address air quality considerations and include supporting materials where available. For information, call Tony Wilson, Division of Environmental Quality, (208) 334-5898, or write to 1410 N. Hilton, Boise, Idaho 83706-1253.

All written comments and data concerning this proposal must be directed to and received by the undersigned on or before 5:00 P.M., MDT June 23, 1995.

DATED this 25th day of May, 1995.

Tony Wilson, Program Development Specialist
Division of Environmental Quality
Department of Health and Welfare
1410 N. Hilton
Boise, ID 83706-1253
SNP#6928 May 25, 1995

IDAHO DEPARTMENT
OF HEALTH AND WELFARE

DIVISION OF
ENVIRONMENTAL QUALITY

1410 North Hilton, Boise, ID 83706-1255, (208) 334-0502

Philip E. Batt, Governor

July 13, 1995

Mr. Chuck Clarke
Regional Administrator
U.S. Environmental Protection Agency
Region 10, MS: SO-141
1200 Sixth Avenue, AT-082
Seattle, WA 98101

Dear Mr. Clarke:

On behalf of the State of Idaho, the Department of Health and Welfare, Division of Environmental Quality (DEQ), hereby submits the enclosed Contingency Measure revisions for the Northern Ada County/Boise, Sandpoint, and Pinehurst Particulate Matter (PM_{10}) Air Quality Improvement Plans for approval by the U.S. Environmental Protection Agency (EPA) as revisions to Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho (Idaho SIP).

The Contingency Measure revisions have been adopted pursuant to the Idaho Environmental Protection and Health Act, Idaho Code §§ 39-101 through 39-130, and in accordance with the requirements of the federal Clean Air Act, as amended. The documents memorializing the adoption are enclosed.

Four additional copies of the revisions have been provided to your staff to review, as required by federal regulations. Questions concerning this submittal should be directed to Michael McGown, Manager, Air Quality Protection Section, Prevention and Certification Bureau. If you or your staff have questions concerning the technical portions of the Pinehurst or Sandpoint revisions, please contact Dan Redline, Air Quality Analyst, North Idaho Regional Office, Division of Environmental Quality, 2110 Ironwood Parkway, Coeur d'Alene, Idaho, 83814, (208) 769-1422. If you have questions concerning the technical portion of the Northern Ada County Contingency Measure revision, please contact Craig Shepard, Monitoring and Technical Support Supervisor, Southwest Idaho Regional Office, Division of Environmental Quality, 1445 N. Orchard, Boise Idaho, 83706, (208) 334-0550.

Sincerely,

Wallace N. Cory, P.E.
Administrator

WNC/pm

ADOPTION OF CONTINGENCY MEASURE REVISION TO THE
SANDPOINT PARTICULATE MATTER (PM_{10})
AIR QUALITY IMPROVEMENT PLAN

Pursuant to the Environmental Protection and Health Act (EPHA), Idaho Code §§ 39-101 through 39-130, and a delegation of authority from the Director of the Idaho Department of Health and Welfare. I hereby adopt the Contingency Measure revision dated July 13, 1995. This adoption is also made in accordance with the requirements of the federal Clean Air Act, as amended, and applicable federal regulations. The revision will be included in Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho (Idaho SIP).

Except as limited by federal law, the EPA and state regulations authorize immediate adoption of the Contingency Measure revision by the State of Idaho. Therefore, the Division of Environmental Quality is directed to begin state implementation of the measure as soon as possible in order to protect the environment and the personal health of the citizens of the State of Idaho and to bring the State of Idaho portions of the Sandpoint PM_{10} Nonattainment Area into compliance with national and state air quality standards.

Dated this 13th day of July, 1995.

Wallace N. Cory, P.E.
Administrator

ADOPTION OF CONTINGENCY MEASURE REVISION TO THE
PINEHURST PARTICULATE MATTER (PM_{10})
AIR QUALITY IMPROVEMENT PLAN

Pursuant to the Environmental Protection and Health Act (EPHA), Idaho Code §§ 39-101 through 39-130, and a delegation of authority from the Director of the Idaho Department of Health and Welfare, I hereby adopt the Contingency Measure revision dated July 13, 1995. This adoption is also made in accordance with the requirements of the federal Clean Air Act, as amended, and applicable federal regulations. The revision will be included in Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho (Idaho SIP).

Except as limited by federal law, the EPA and state regulations authorize immediate adoption of the Contingency Measure revision by the State of Idaho. Therefore, the Division of Environmental Quality is directed to begin state implementation of the measure as soon as possible in order to protect the environment and the personal health of the citizens of the State of Idaho and to bring the State of Idaho portions of the Pinehurst PM_{10} Nonattainment Area into compliance with national and state air quality standards.

Dated this 13th day of July, 1995.

Wallace N. Cory

Wallace N. Cory, P.E.
Administrator

ADOPTION OF CONTINGENCY MEASURE REVISION TO THE NORTHERN ADA COUNTY/BOISE PARTICULATE MATTER (PM_{10}) AIR QUALITY IMPROVEMENT PLAN

Pursuant to the Environmental Protection and Health Act (EPHA), Idaho Code §§ 39-101 through 39-130, and a delegation of authority from the Director of the Idaho Department of Health and Welfare, I hereby adopt the Contingency Measure revision dated July 13, 1995. This adoption is also made in accordance with the requirements of the federal Clean Air Act, as amended, and applicable federal regulations. The revision will be included in Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho (Idaho SIP).

Except as limited by federal law, the EPA and state regulations authorize immediate adoption of the Contingency Measure revision by the State of Idaho, including implementation, as described in the revision and the interagency agreement. Therefore, the Division of Environmental Quality is directed to begin state implementation of the measure as soon as possible in order to protect the environment and the personal health of the citizens of the State of Idaho and to bring the State of Idaho portions of the Northern Ada County/Boise PM_{10} Nonattainment Area into compliance with national and state air quality standards.

Dated this 13th day of July, 1995.

Wallace N. Cory

Wallace N. Cory, P.E.
Administrator

File: SUBMIT-2.EPA

REVISION OF CONTINGENCY MEASURES
PUBLIC INVOLVEMENT PROCESS

The notice of the comment period for the contingency measure revisions in the Sandpoint PM_{10} Air Quality Improvement Plan and the Pinehurst PM_{10} Air Quality Improvement Plan was published in the Bonner County Daily Bee, Idaho Statesman, and Spokesman Review on June 10, 1995. The comment period ran from June 10 through July 11, 1995. Copies of the revisions were available for public review at the Division of Environmental Quality North Idaho Regional Office, East Bonner County Library, and Pinehurst Kingston Library. There was a hearing held in Coeur d'Alene on July 10, 1995, during the comment period. There were no public comments given at the hearing nor were written comments provided during the comment period. The hearing transcript, hearing officer's report, hearing exhibit and legal notice with affidavits of publication are included for documentation.

PUBLIC HEARING HANDOUT

Contingency Measures
for the Pinehurst and Sandpoint Area
Particulate Matter (PM_{10})
Air Quality Improvement Plans

July 10, 1995
Lake City Senior Center

CONTENTS

- Public Notice for Hearing
- DEQ Hearing Statement
- Contingency Measures for Sandpoint and Pinehurst
- Map of Nonattainment Area Boundaries
- What is PM_{10} and Where does it come from?

OF HEALTH AND WELFARE
DIVISION OF
ENVIRONMENTAL QUALITY

2110 Ironwood Parkway, Coeur d'Alene, ID 83814-2648, (208) 769-1422

Philip E. Batt, Governor

NOTICE OF INTENT TO AMEND A STATE PLAN REGARDING PARTICULATE MATTER (PM-10) AIR QUALITY IMPROVEMENT IN THE SANDPOINT NONATTAINMENT AREA AND PINEHURST NONATTAINMENT AREA

Notice is hereby given that the State of Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) has scheduled a public comment period from June 10 to July 11, 1995 and will conduct a public hearing on July 10, 1995 at 7:00 p.m. in the Lake City Senior Center, 1916 Lakewood Drive, Coeur d'Alene.

The purpose of the hearing and comment period is to receive comments from the public on revising Chapter VIII of the Implementation Plan for the Control of Air Pollution in the State of Idaho, Sandpoint PM-10 Air Quality Improvement Plan and Pinehurst PM-10 Air Quality Improvement Plan, to include contingency measures as required by the federal Clean Air Act (CAA). The contingency measures provide for additional emission reductions when applicable under the CAA provisions. The air quality improvement plans identify residential wood burning and fugitive road dust as the primary sources of PM-10 pollution. The Sandpoint plan also identifies industrial sources as primary sources of PM-10 pollution. These sources have contributed to violations of the state and federal ambient air quality standards for PM-10.

In the Sandpoint and Pinehurst plans, the contingency measures will reduce emissions from residential wood burning through various control measures. A mandatory wood burning curtailment program is the contingency measure in the Sandpoint area. Overcontrol of wood burning emissions through replacement programs, voluntary curtailment, and other programs constitutes the contingency measure in Pinehurst. These plan revisions demonstrate that implementation of additional control measures will further improve air quality to meet the ambient air quality standard for PM-10 as well as maintain the ambient standard into the future.

Written comments and data concerning this action are encouraged and will be accepted by DEQ until 5:00 P.M., MST July 11, 1995. Comments transmitted by facsimile will be accepted up to the deadline. Written comments will be received at the following address:

Cynthia Grafe, Air Quality Program Development Specialist
Department of Health and Welfare
Division of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706
Phone: (208) 334-5860
FAX: (208) 334-0576

Copies of the proposed revisions are available at the above address, or at the following locations:

Div. of Environmental Quality
North Idaho Regional Office
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

East Bonner County Library
419 North Second Avenue
Sandpoint, ID 83864

Pinehurst Kingston Library
107 Main Street
Pinehurst, ID 83850

If you have any questions, please contact Dan Redline at the DEQ-North Idaho Regional Office (208/769-1422) or Cynthia Grafe.

Public Comment Period
for the Revised Contingency Measures in the
Sandpoint and Pinehurst Particulate Matter (PM_{10}) Air Quality Improvement Plans

PUBLIC HEARING STATEMENT

Ms. Hearing Officer, Ladies and Gentleman, my name is Ed Tulloch. I am the Monitoring and Technical Support Supervisor with the Idaho Department of Health and Welfare, Division of Environmental Quality for the North Idaho Regional Office in Coeur d'Alene. The purpose of the hearing tonight is to receive comments on the revised contingency measures for two PM_{10} nonattainment areas; Sandpoint and Pinehurst. My testimony will briefly outline (1) the history of the events which have triggered these revisions, (2) the Department's actions leading to this hearing, and (3) how the Department will respond to the comments received at this hearing.

In July 1987, the U.S. Environmental Protection Agency (EPA) adopted ambient air quality standards for small airborne particles less than or equal to 10 microns in diameter, known as PM_{10}. The State of Idaho later adopted these health-based standards. The standard that we are concerned with tonight is the 24-hour standard for particulate matter, PM_{10}, which is established at 150 micrograms per cubic meter ($\mu g/m^3$). This air quality standard was set by the EPA to protect human health and provide a margin of safety.

Ambient monitoring conducted by the Department has shown that the Sandpoint and Pinehurst areas have periodically exceeded the 24-hour ambient standard for PM_{10} and as a result, these areas were designated as nonattainment areas for PM_{10}. Maps of the nonattainment boundaries are available in the corresponding documents for each area. When an area is designated nonattainment for one or more of the criteria pollutants identified by the National Ambient Air Quality Standard, the Clean Air Act (CAA) requires that states adopt and submit a state implementation plan to the EPA. A state implementation plan (SIP) must improve air quality in the nonattainment area by the applicable date set by the Act and also demonstrate that the air quality standard will be maintained into the future under the guidance of the plan. It is the Department's goal to meet all the requirements set forth by the CAA for improving air quality in nonattainment areas while minimizing any associated impact on the local community structure and its economic vitality.

One of the many requirements of the CAA is that SIP's include contingency measures for each area. Contingency measures must provide for additional emission reductions as a safety net to the attainment strategy. The contingency measures must be equivalent to at least 25 percent of the emission reductions required to achieve attainment. To expedite their effectiveness, the CAA requires that the contingency measures are fully adopted by the States and ready to take effect when needed. Some states may decide to build the contingency measures into

the control strategy as overcontrol in that the contingency measures are already in effect, thereby further reducing emissions from the significant sources. This is the approach DEQ has proposed for the Pinehurst and Sandpoint areas.

The Division of Environmental Quality (DEQ) has conducted several scientific investigations to determine the major sources of PM_{10} pollution in each of the nonattainment areas. This comprehensive investigative work, which includes chemical analysis of ambient samples, computerized modeling of source impacts, detailed analysis of meteorological conditions and an inventory of sources producing PM_{10} emissions, is summarized in the air quality improvement plan for each area. The results from each of the investigative techniques were evaluated and used by DEQ to identify the major sources causing the air quality problems in the Sandpoint and Pinehurst areas. A comprehensive control strategy for each area was developed based on these source impacts. The contingency measures are part of the comprehensive emission reduction strategies designed for the two locations.

In the Sandpoint and Pinehurst plans, the contingency measures will reduce emissions from residential wood burning through various control measures. A mandatory wood burning curtailment program is the contingency measure in the Sandpoint area. Overcontrol of wood burning emissions through replacement programs, voluntary curtailment, and other programs constitutes the contingency measure in Pinehurst. The attainment plans for each area demonstrate that implementation of additional control measures will further improve air quality to meet the ambient air quality standard for PM-10 as well as maintain the ambient standard into the future.

The Department is very interested in receiving comments from the public on the revised contingency measures. No one should feel that they must have detailed technical knowledge of the plan in order to provide useful comments. Many of the rules and plans developed by the Department are modified prior to final issuance because of significant comments by concerned citizens. The Department takes public input very seriously and your comments are always appreciated.

Oral comments presented at this hearing, or written comments mailed to the Department are welcome. Following this hearing, and after receiving the Hearing Officers' report and public comments, the Department will review all the comments, make the appropriate revisions and prepare a final document for inclusion in the State Implementation Plan for air quality. The adopted contingency measures will then be submitted to the Environmental Protection Agency for its consideration.

The public comment period closes on July 11, 1995. To be considered, all written comments submitted to DEQ must be received no later than 5:00 P.M.,MST, July 11, 1995. Comments submitted by facsimile (FAX)

will be accepted up to the deadline. Written comments should be submitted to the following address:

Cynthia Grafe, Air Quality Program Development Specialist
Department of Health and Welfare
Division of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706
Phone: (208) 334-5860
FAX: (208) 334-0576

Copies of the proposed revisions are available for public review at the East Bonner County Library, Pinehurst Kingston Library, the DEQ regional office in Coeur d'Alene, and the DEQ office in Boise.

c:\...\snpt\conmg\phstatem.doc