[redacted]

BEFORE THE BOARD OF HEALTH AND ENVIRONMENTAL SCIENCES
OF THE STATE OF MONTANA

In the Matter of Compliance of Flathead Road Department, Kalispell, Montana, with 40 CFR 50.6, National Ambient Air Quality Standard for Particulate Matter and ARM 16.8.821, Montana Ambient Air Quality Standard for PM-10	STIPULATION

The Department of Health and Environmental Sciences ("Department"), and Flathead Road Department ("Flathead Co."), hereby stipulate and agree to all the following Paragraphs 1-18 inclusive, including the exhibits as referenced below, in regard to the above-captioned matter and present the same for consideration and adoption by the Board of Health and Environmental Sciences ("Board"):

A. BACKGROUND:

1. On July 1, 1987, the United States Environmental Protection Agency ("EPA") promulgated national ambient air quality standards for particulate matter (measured in the ambient air as PM-10, or particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) ("particulate matter NAAQS"). The annual standard of 50 micrograms per cubic meter (annual arithmetic mean), and the 24-hour standard of 150 micrograms per cubic meter (24-hour average concentration), were promulgated by EPA pursuant to Section 109 of the Federal Clean Air Act, 42 U.S.C. 7401, et seq., as

(STIPULATION)

amended by the Clean Air Act Amendments of 1990 ("Act").

2. Section 110 of the Act requires each state to submit an implementation plan for the control of each air pollutant for which a national ambient air quality standard has been promulgated. Since a standard has been promulgated for particulate matter, the State of Montana is required to submit an implementation plan for particulate matter to EPA.

3. Section 75-2-202, MCA, requires the Board to establish ambient air quality standards for the state. Sections 75-2-111(3) and 75-2-401, MCA, empower the Board to issue orders upon a hearing before the Board concerning compliance with national and state ambient air quality standards.

4. On April 29, 1988, the Board adopted state ambient air quality standards for PM-10, including an annual standard of 50 micrograms per cubic meter (annual arithmetic mean), and a 24-hour standard of 150 micrograms per cubic meter (24-hour average concentration). ARM 16.8.821 ("PM-10 MAAQS").

5. On August 7, 1987, the Kalispell area was designated as a Group I area by EPA. 52 Fed. Reg. 29383. Pursuant to the Federal Clean Air Act of all Group I areas, including Kalispell, are designated by operation of law to be in nonattainment for the particulate matter NAAQS. 42 U.S.C. 7407(d)(4)(B), as amended. Further, the Act designated the Kalispell area as a "moderate" PM-10 nonattainment area. 42 U.S.C. 7513(a), as amended. For areas designated as "moderate", the state was required to submit to EPA an implementa-

tion plan no later than one year from enactment of November 15, 1990 amendments to the Act. 42 U.S.C. 7513a(a)(2). The area encompassed in the moderate nonattainment designation (hereafter "Kalispell nonattainment area") generally includes the City of Kalispell and that portion of Flathead County within the vicinity of the boundaries of the City of Kalispell. A map of the Kalispell nonattainment area is attached to the Stipulation as Exhibit A and by this reference is incorporated herein in its entirety as part of this document.

6. Results of air quality sampling and monitoring from 1986 through 1991 have demonstrated violations within the Kalispell nonattainment area of the 24-hour standard contained in both the particulate matter NAAQS and the PM-10 NAAQS.

7. On November 25, 1991, Governor Stephens submitted to EPA an implementation plan for Kalispell, Montana, demonstrating attainment of the particulate matter NAAQS. The implementation plan relied upon the receptor modeling technique known as chemical mass balance (CMB) to identify the major emission sources contributing to noncompliance. The implementation plan consisted of an emission control plan that controlled fugitive dusts emissions from roads, parking lots, construction and demolition project, and barren ground.

8. On April 29, 1992, EPA notified Governor Stephens that the Kalispell implementation plan could be conditionally approved if certain deficiencies were corrected. A major

deficiency identified by EPA was that the emission limitations set for industrial sources (or in some cases for industrial sources where there was no emission limitation set at all) could result in significant emission increases above the emission levels occurring during the source apportionment modeling study (CMB). Furthermore, such potential emissions increases were not accounted for in the particulate matter NAAQS demonstration of attainment.

9. On June 15, 1992, Governor Stephens submitted a letter to EPA committing to additional analysis utilizing dispersion modeling technique on the Kalispell area industrial sources. If the dispersion modeling indicted that a source significantly impacted the nonattainment area, the Governor further committed to developing new emission limitations on the Kalispell area industrial sources which would demonstrate attainment of the particulate matter NAAQS.

10. The department has determined that emission limitations applicable to Flathead Co. were in some cases nonexistent (no permit requirements) or significantly higher than actual emissions during the CMB modeling study.

11. Dispersion modeling analysis has been conducted by the department for the Kalispell nonattainment area. The dispersion modeling incorporates the allowable emission rates from the sources of PM-10 emissions in the Kalispell nonattainment area to determine the extent of their respective contributions to the ambient levels of PM-10. Based upon the

results of this modeling, the PM-10 emissions from Flathead Co. were identified as a significant contributor to ambient levels of PM-10 in the Kalispell nonattainment area. Furthermore, both parties agree that based upon these modeling results, revised emission limitation for Flathead Co. are necessary to demonstrate compliance with the particulate matter NAAQS. The department has performed additional modeling using revised emission rates for Flathead Co. and other sources in the Kalispell area to determine the level of emissions which achieves the particulate matter NAAQS. Based upon these modeling results, both parties agree that revised emission limitation must be imposed upon Flathead Co.

B. BINDING EFFECT

12. The parties to this Stipulation agree that any such emission limitations placed on Flathead Co. must be enforceable by both the department and EPA. To this end, the parties have negotiated specific limitations and conditions that are to be applicable to Flathead Co. The specific conditions which comprise these limitations are contained in Exhibit B to this Stipulation (entitled "Emission Limitations and Conditions, Flathead Road Department") which is attached hereto and by this reference is incorporated herein in its entirety as part of this document.

13. Both parties understand and agree that if EPA finds the Kalispell implementation plan incomplete or disapproves

it or if future violations of the particulate matter NAAQS or PM-10 standard MAAQS occur, this Stipulation may be renegotiated and made enforceable through an associated Board Order or simply superseded by a subsequent order of the Board upon notice of hearing.

14. The Board is the state agency that is primarily responsible for the development and implementation of the State Implementation Plan under the Federal Clean Air Act. Under Sections 75-2-101, et seq., the Board is required to protect public health and welfare by limiting the levels and concentrations of air pollutants within the state and such responsibility includes the adoption of emission standards (Section 75-2-203, MCA) and the issuance of orders (Sections 75-2-111(3), 75-2-401, MCA) to effectuate compliance with national and state ambient air quality standards.

15. The parties to this Stipulation agree that upon finding the limitations and conditions contained in Exhibit B to this Stipulation to be necessary for the Kalispell non-attainment area to meet the particulate matter NAAQS and the PM-10 MAAQS, the Board has jurisdiction to require the imposition of such limitations and conditions, and may adopt the same as enforceable measures applicable to Flathead Co.

16. The conditions and limitations contained in Exhibit B to this Stipulation are consistent with the provisions of the Montana Clean Air Act, Title 75, Chapter 2, MCA, and rules promulgated pursuant to statute.

17. Any obligations in this Stipulation and attached Exhibit B that are more stringent than conditions set forth in the permit issued to the air source/party to this agreement (if issued), supersede the less stringent permit conditions.

18. Accordingly, the parties to this Stipulation agree that it would be consistent with the terms and intent of this Stipulation for the Board to issue an Order which requires the imposition of the terms in this Stipulation and the limitations and conditions contained in Exhibit B of this Stipulation, and adopts the same as enforceable measures applicable to Flathead Co.

FLATHEAD ROAD DEPARTMENT	MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
BY _____	BY _____ Robert J. Robinson, Director
BY _____ Attorney	BY _____ Timothy R. Baker, Attorney
DATE 8-25-93	DATE 9/15/93

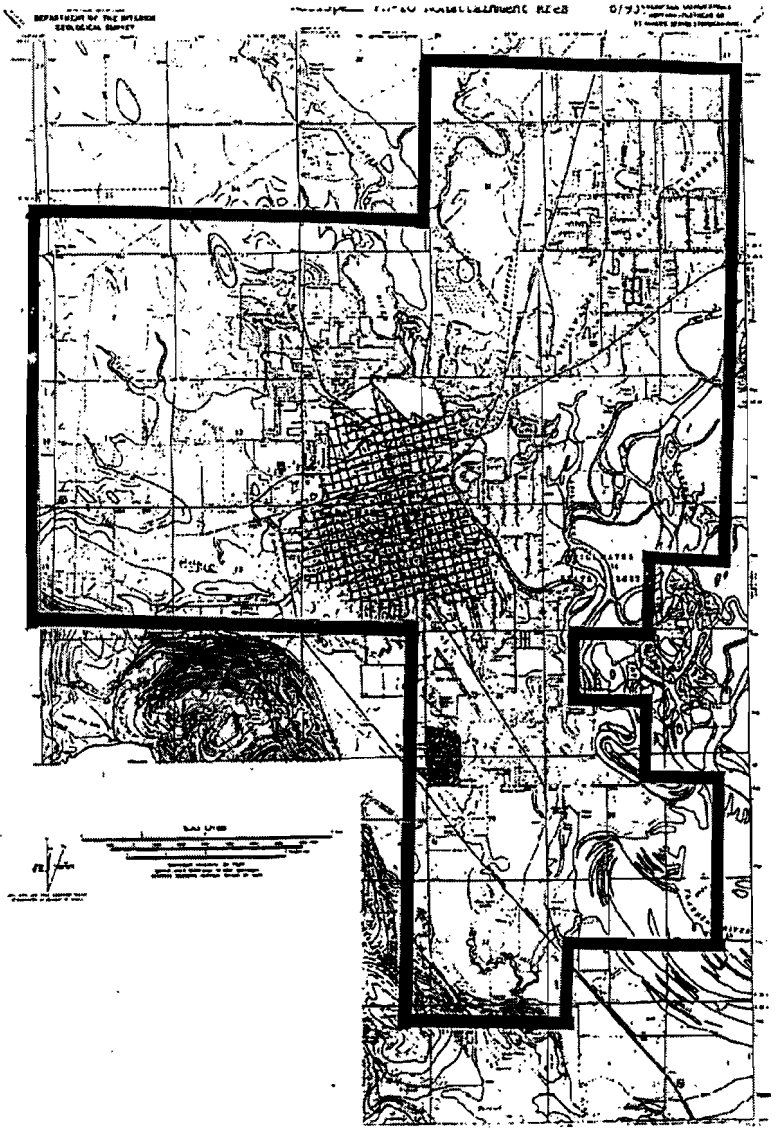

EXHIBIT B
EMISSION LIMITATIONS AND CONDITIONS

Flathead County Road Department
P.O. Box 1102
Kalispell, MT 59902-1102

The above-named company is hereinafter referred to as "Flathead Co."

Section I: Affected Facilities

A. Equipment: A stationary 1970 Barber Green DA 55 Hot Mix Plant (150 TPH) with a cone dust collector (model CB 55) and a wet collector (model CL 63), installed in 1971.

B. Original Location: Steel Bridge Pit (SE¼, SE¼, Sec 3, T28N, R21W, Flathead County).

Section II: Limitations and Conditions

A. Emission Limitations

1. Flathead Co. shall operate and maintain the wet scrubber and all other emission control equipment and utilize all techniques specified in this stipulation to provide the maximum air pollution control for which they were designed.

2. All visible emissions from the asphalt plant stack are limited to 20% opacity[1]. (ARM 16.8.1404)

3. Flathead Co. shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, or the general plant area any visible fugitive emissions that exhibit opacity[1] of 5% or greater. (RACT)

4. Flathead Co. shall treat all unpaved portions of the haul roads, access roads, and the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 5% opacity limitation. (RACT)

5. Flathead Co. shall not cause or authorize to be discharged into the atmosphere from material transfer and storage areas any visible emissions that exhibit opacity[1] of 20% or greater. (ARM 16.8.1401)

6. Asphalt plant TSP emissions are limited to 0.10 gr/dscf and 15.4 lbs/hr.

7. Asphalt plant PM-10 emissions are limited to 0.10 gr/dscf and 15.4 lbs/hr.

8. A device to measure the pressure drop (magnehelic gauge, manometer, etc.) on the control device (wet scrubber, baghouse, etc.) shall be installed and maintained. Pressure drop shall be measured in inches of water.

Temperature indicators at the control device inlet and outlet must be installed and maintained.

9. The original asphalt production rate is limited to 150 tons/hour.

10. Once a stack test is performed, the asphalt production rate is limited to the average production rate during the last source test demonstrating compliance.

11. The asphalt plant operation is limited to 8760 hours/year.

8. Emission Testing

1. A source test must be conducted and compliance demonstrated within 180 days from the date of the signed stipulation

2. An EPA method 1-5 source test must be performed on the asphalt plant every four years to demonstrate compliance with Section II.A.1, 4, 5, and 6.

3. The tests shall consist of three runs, each of at least 60 minutes duration. The test shall be conducted in compliance with the requirements of 40 CFR Part 60, Subpart A, General Provisions; EPA Reference Methods 1-5, 40 CFR Part 60, Appendix A, and 40 CFR Part 60 Subpart I. The next test shall be performed during 1993.

4. An EPA Method 9 opacity test must also be performed in conjunction with the particulate tests to demonstrate compliance with Section II.A.1. This test shall consist of thirty 6-minute average observations with ten of these observations being conducted during each particulate test run.

5. These tests must be conducted in compliance with the pre-test notification and reporting requirements of the AQB's Compliance Source Test Protocol.

6. Production field data sheets must be supplied as part of the test report. Since asphalt production will be limited to the average production rate during the test, it is suggested the test be performed at the highest production rate practical.

7. The AQB must be notified of the test five working days before the test is scheduled to be performed. The AQB must also be notified the day before the test is performed to confirm the test. The responsibility for notification is that of the owner/operator.

8. Pressure drop on the control device and temperatures will be recorded during the test and reported as part of the test results.

C. Reporting Requirements

1. The operator must maintain on-site records showing daily production rates for the current calendar year. These records shall be available for inspection by the AQB and will be submitted to the AQB upon request.

2. Flathead Co. shall retain daily production numbers for a minimum of five (5) years.

3. Annual production information shall be submitted in writing to the AQB by March 1 of the following calendar year. The information shall include:

a) Tons of asphalt produced.

b) Hours of operation.

c) Type and amount of fuel used for the plant.

d) Fugitive dust information consisting of a listing of all plant vehicles including the following for each vehicle type:

i) Number of vehicles;
ii) Vehicle type;
iii) Vehicle weight, loaded
iv) Vehicle weight, unloaded;
v) Number of tires on vehicle;
vi) Average trip length;
vii) Number of trips per day;
viii) Average vehicle speed;
ix) Area of activity; and
x) Vehicle fuel usage (gasoline or diesel) annual total.

f) Fugitive dust control for haul roads and general plant area:

i. Hours of operation of water trucks.
ii. Application schedule for chemical dust suppressant if applicable.

D. The department may require additional emissions testing on sources of emissions per ARM 16.8.704, Testing Requirements.

E. Flathead Co. must maintain a copy of the air quality stipulation at the Kalispell ready mix site and make that copy available for inspection by department personnel upon request.

F. Flathead Co. shall comply with all other applicable state, federal, and local laws and regulations.

Section III: General Conditions

A. Inspection - The recipient shall allow the department's representatives access to the source at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this stipulation.

B. Compliance with Statutes and Regulations - Specific listing of requirements, limitations, and conditions contained herein does not relieve the applicant from compliance with all applicable statutes and administrative regulations including amendments thereto, nor waive the right of the department to require compliance with all applicable statutes and administrative regulations, including amendments thereto.

C. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for penalties.

Analysis of Conditions
Flathead County Road Department

I. Introduction

A. Permitted Equipment

A stationary 1970 Barber Green DA 55 Hot Mix Plant (150 TPH) with a cone dust collector (model CB 55) and a wet collector (model CL 63).

B. Process Description

This plant produces asphalt for use in construction, repair, and maintenance of roads and highways.

C. Facility Location

Flathead Co. operates three (3) gravel pits in or near the Kalispell nonattainment area. They move the Cedar Rapids gravel crusher between these pits in order to crush gravel used to produce asphalt for use in construction, repair, and maintenance of roads and highways. The Barber Greene DA 55 Hot Mix Plant is permanently located at the Steel Bridge Pit. The three gravel pit locations are:

Four Corners Pit (N½, Sec 29, T28N, R21W, Flathead County);
Sheepherders Pit (NW¼, Sec 15, T28N, R22W, Flathead County);
Steel Bridge Pit (SE¼, Sec 3, T28N, R21W, Flathead County).

II. Applicable Rules and Regulations

A. ARM 16.8, Subchapter 8, Ambient Air Quality, including but not limited to:

ARM 16.8.821 Ambient Air Quality Standard for PM-10. This section states that no person may cause or contribute to concentrations of PM-10 in the ambient air which exceed the set standards. (See Section V)

B. ARM 16.8, Subchapter 9, Prevention of Significant Deterioration - This facility is not a PSD source since this facility is not a listed source and the potential to emit is below 250 tons per year of any pollutant.

C. 16.8 Subchapter 14, Emission Standards, including but not limited to:

1. ARM 16.8.1401 Particulate Matter, Airborne. This section requires an opacity limitation of 20% for all fugitive emission sources.

2. ARM 16.8.1403 Particulate Matter, Industrial Process. This section states that no person shall cause, allow, or permit to be discharged into the outdoor atmosphere from any operation, process, or activity, particulate matter in excess of the amount determined by using the following equation:

Allowable Emissions = 55 (150 tons/hr)$^{.11}$ - 40 = 55.44 lbs/hr.
The estimated total particulate matter emissions for the asphalt plant are 15.43 lbs/hr, therefore the source is in compliance.

3. ARM 16.8.1404 Visible Air Contaminants. This section requires an opacity limitation of 20% from all stacks constructed or altered since November 23, 1968.

4. 16.8.1423 Standards of Performance for New Stationary Sources (NSPS) This plant was constructed in 1970 so NSPS (40 CFR Part 60, general provisions, and Subpart I Hot Mix Asphalt Facilities does not apply.

III. RACM/RACT Determination

Under section 189(a)(1)(C) of the amended Clean Air Act of 1990, moderate area State Implementation Plans (SIP's) must contain "reasonably available control measures" (RACM) for the control of PM-10 emissions. RACM for stationary sources is the application of reasonably available control technology (RACT). Since the Kalispell area has been designated as a nonattainment for PM-10 by EPA, RACT must be applied to those stationary sources which cause or contribute to the nonattainment area.

A RACT determination is required for:

A. Asphalt Plant Stack Emissions

Flathead Co.'s asphalt plant was constructed in 1970, and therefore, NSPS does not apply. The department has determined that RACT for pre-NSPS asphalt plants is an emission limitation of 0.10 gr/dscf and 20% opacity. Since BACT is more stringent than RACT and this asphalt plant meets BACT, the RACT requirement is met.

B. Material Transfer Fugitive Emissions

RACT for material transfer points for sources of this type has been determined by the department to be the use of water or chemical stabilization so as to maintain compliance with a 20% opacity limitation.

C. Fugitive Road Dust Emissions

RACT for fugitive road dust emissions for sources of this type has been determined by the department to be the use of water or chemical stabilization so as to maintain compliance with a 5% opacity limitation.

IV. Emission Inventory

Barber Green DA 55 Hot Mix Plant

Annual Emission Rates (Potential) *

Source	TSP	PM-10	NOX	VOC	CO	SOX
	Tons/Year					
Asphalt Plant Drum Dryer	67.58	67.58	23.65	18.40	24.97	47.96
Elevator, Screens, Bins, and Mixer	131.40	19.71				
Cold Aggregate Handling	65.70	26.28				
Haul Roads	3.54	1.27				
Total Emissions	268.22	114.84	23.65	18.40	24.97	47.96

* Based on operating 8760 hours/year.

Daily Emission Rates (Potential) **

Source	TSP	PM-10	NOX	VOC	CO	SOX
	lbs/day					
Asphalt Plant Drum Dryer	370.29	370.29	129.60	100.80	136.80	262.80
Elevator, Screens, Bins, and Mixer	720.00	108.00				
Cold Aggregate Handling	360.00	144.00				
Haul Roads (Daily)	30.12	10.84				
Total Emissions	1480.41	633.13	129.60	100.80	136.80	262.80

* Based on operating 24 hours/day.

Asphalt Plant Drum Dryer with Wet Scrubber

Maximum Process Rate: 150 tons/hr
Process Airflow Rate: 18000 dscf/min (Maximum Process Airflow Rate)
Hours of operation: 8760 hr/yr 24 hrs/day

TSP Emissions:

Emission Factor: 0.10 gr/dscf (BACT Determination)
Calculations: 0.10 gr/dscf * 18000 dscf/min * 1/7000 lbs/gr * 60 min/hr = 15.43 lbs/hr
15.43 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 67.58 tons/yr

PM-10 Emissions:

Emission Factor: 0.10 gr/dscf (Assume 100% of TSP is PM-10)
Calculations: 0.10 gr/dscf * 18000 dscf/min * 1/7000 lbs/gr * 60 min/hr = 15.43 lbs/hr
15.43 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 67.58 tons/yr

NOx Emissions:

Emission Factor: 0.036 lbs/ton (AFSSC 3-05-002-01, page 116)
Calculations: 0.036 lbs/ton * 150 tons/hr = 5.40 lbs/hr
5.40 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 23.65 tons/yr

VOC Emissions:

Emission Factor: 0.028 lbs/ton (AFSSC 3-05-002-01, page 116)
Calculations: 0.028 lbs/ton * 150 tons/hr = 4.20 lbs/hr
4.20 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 18.40 tons/yr

CO Emissions:

Emission Factor: 0.038 lbs/ton (AFSSC 3-05-002-01, page 116)
Calculations: 0.038 lbs/ton * 150 tons/hr = 5.70 lbs/hr
5.70 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 24.97 tons/yr

Emission Factor: 0.073 lbs/ton (AFSSC 3-05-002-01, page 116)
Calculations: 0.073 lbs/ton * 150 tons/hr = 10.95 lbs/hr
10.95 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 47.96 tons/yr

Elevator, Screens, Bins, and Mixer

Process Rate: 150 tons/hr (Maximum Design)
Hours of operation: 8760 hr/yr

TSP Emissions:

Emission Factor: 0.2 lbs/ton (AFSSC 3-05-002-02, page 116)
Calculations: 0.20 lbs/ton * 150 tons/hr = 30.00 lbs/hr
30.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 131.40 tons/yr

PM-10 Emissions:

Emission Factor: 0.03 lbs/ton (AFSSC 3-05-002-02, page 116)
Calculations: 0.03 lbs/ton * 150 tons/hr = 4.50 lbs/hr
4.50 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 19.71 tons/yr

Cold Aggregate Handling

Process Rate: 150 tons/hr (Maximum Design)
Hours of operation: 8760 hr/yr

TSP Emissions

Emission Factor: 0.10 lbs/ton (AFSSC 3-05-002-04, page 116)
Calculations: 0.10 lbs/ton * 150 tons/hr = 15.00 lbs/hr
15.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 65.70 tons/yr

PM-10 Emissions:

Emission Factor: 0.04 lbs/ton (AFSSC 3-05-002-04, page 116)
Calculations: 0.04 lbs/ton * 150 tons/hr = 6.00 lbs/hr
6.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 26.28 tons/yr

Haul Roads

Operating Hours: 8760 Hours/Yr
Vehicle Miles Trav: 3111 VMT/Yr (Based on Maximum Design)
Control Efficiency is 50% for watering.

TSP Emission Factor is determined by the following equation:

E= 5.9*k*(s/12)*(S/30)*(W/3)**0.7*(w/4)**0.5*P*E

Where:

E= TSP Emission Factor in Lbs/Vehicle Mile Traveled (VMT)
k= Particle sizing constant 1.0
s= Silt Content in percent 8.7 %
S= Average Speed of vehicles 10.0 mph
W= Average weight of vehicle 18.0 Tons
w= Average number of wheels 8 wheels
P&= Precipitation Ratio based on the following:

130 Days with more than .01" of Precipitation
P&= (365 days - 130 days)/365 Days = 0.6438

TSP Emissions:

TSP Emission Factor: 4.55 Lbs/VMT

E(TSP)= (3111 VMT/Yr)(4.55 Lbs/VMT)(0.5)
E(TSP)= 7078 Lbs/Yr or 3.54 Tons/Yr

PM10 Emission Factor is determined by the following equation:

E= 5.9*k*(s/12)*(S/30)*(W/3)**0.7*(w/4)**0.5*PR
Where:
E= PM10 Emission Factor in Lbs/Vehicle Mile Traveled (VMT)
k= Particle sizing constant 0.36
s= Silt Content in percent 8.7 %
S= Average Speed of vehicles 10.0 mph
W= Average weight of vehicle 18.0 Tons
w= Average number of wheels 8 wheels
PR= Precipitation Ratio based on the following:
13051 Days with more than .01" of Precipitation
PR= (365 days - 130 days)/365 Days = 0.6438

PM10 Emissions:

PM10 Emission Factor: 1.64 Lbs/VMT

E(PM10)= (3111 VMT/Yr)(1.64 Lbs/VMT)(0.5)
E(PM10)= 2548 Lbs/Yr or 1.27 Tons/Yr

Haul Roads (Daily)

Operating Hours: 8760 Hours/Yr
Vehicle Miles Trav: 3111 VMT/Yr (Based on Maximum Design)
Control Efficiency is 50% for watering.

TSP Emission Factor is determined by the following equation:

E= 5.9*k*(s/12)*(S/30)*(W/3)**0.7*(w/4)**0.5*PR
Where:
E= TSP Emission Factor in Lbs/Vehicle Mile Traveled (VMT)
k= Particle sizing constant 1.0
s= Silt Content in percent 8.7 %
S= Average Speed of vehicles 10.0 mph
W= Average weight of vehicle 18.0 Tons
w= Average number of wheels 8 wheels
PR= Assumes no precipitation 1.0000

TSP Emissions:

TSP Emission Factor: 7.07 Lbs/VMT

E(TSP)= (3111 VMT/Yr)(7.07 Lbs/VMT)(0.5)
E(TSP)= 10994 Lbs/Yr or 5.50 Tons/Yr or 30.12 lbs/day

PM10 Emission Factor is determined by the following equation:

E= 5.9*k*(s/12)*(S/30)*(W/3)**0.7*(w/4)**0.5*PR
Where:
E= PM10 Emission factor in Lbs/Vehicle Mile Traveled (VMT)
k= Particle sizing constant 0.36
s= Silt Content in percent 8.7 %
S= Average Speed of vehicles 10.0 mph
W= Average weight of vehicle 18.0 Tons
w= Average number of wheels 8 wheels
PR= Assumes no precipitation 1.0000

PM10 Emissions:

PM10 Emission Factor: 2.54 Lbs/VMT

E(PM10)= (3111 VMT/Yr)(2.54 lbs/VMT)(0.5)
E(PM10)= 3958 Lbs/Yr or 1.98 Tons/Yr or 10.84 lbs/day

V. Existing Air Quality and Impacts

On July 1, 1987 the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter of 10 microns or less (PM-10). Due to exceedances of the national standards for PM-10, the city of Kalispell and the nearby Evergreen area have been designated by EPA as nonattainment for PM-10. As a result of this designation, EPA required the Department of Health and Environmental Sciences and the Flathead City-County Health Department to submit the Kalispell PM-10 State Implementation Plan (SIP) to EPA in November, 1991. The SIP consisted of an emission control plan that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies determined these sources to be the major contributors of PM-10 emissions.

Receptor modeling (a model which identifies contributors based on actual area and industrial emissions and ambient data) was originally used to demonstrate attainment of the federal PM-10 standards in the SIP. The EPA is now requiring the department to use a dispersion model (a model which incorporates allowable emission rates from facilities) to essure that attainment can still be demonstrated if individual sources are operating at their maximum allowable emission rates.

After an analysis, the department determined that emission limitations applicable to the Flathead Co. facility were in some cases nonexistent (no permit required) or several times higher than actual emissions (ARM 16.8.1403). Dispersion modelling conducted using emissions from the Flathead Co. facility at its potential to emit (emissions associated with maximum design capacity or as limited by ARM 16.8.1403) indicated that the facility contributed significantly to the PM-10 concentrations in the Kalispell nonattainment area.

In order to demonstrate compliance (through dispersion modeling) with the PM-10 NAAQS in the Kalispell nonattainment area, it is necessary to reduce or establish new emission limitations for the Flathead Co. facility. The new emission limitations in this document, in conjunction with similar limitations on other Kalispell area facilities, demonstrates through dispersion modeling that compliance with the NAAQS for PM-10 will be attained. These reductions in allowable emissions will be enforced through a signed stipulation.

With the proper utilization of existing control equipment and application of reasonable control techniques (watering or application of dust suppressant) for haul road dust the department has determined that the Flathead Co. facility can operate at maximum design rates and remain in compliance with the stipulated emission limitations.

Kalispell and Evergreen Nonattainment Boundaries

The area is bounded by lines from UTM Coordinate 700000mE, 5347000mN, east to 704000mE, 5346000mN, south to 704000mE, 5341000mN, west to 703000mE, 5341000mN, south to 703000mE, 5340000mN, west to 702000mE, 5340000mN, south to 702000mE, 5339000mN, east to 703000mE, 5339000N, south to 703000mE, 5338000mN, east to 704000mE, 5338000mN, south to 704000mE, 5336000mN, west to 702000mE, 5336000mN, west to 702000mE, 5336000mN, south to 702000mE, 5335000mN, west to 700000mE, 5335000mN, north to 700000mE, 5340000mN, west to 695000mE, 5340000mN, north to 695000mE, 5345000mN, east to 700000mE, 5345000mN, north to 700000mE, 5347000mN.

VI. Environmental Assessment

An environmental assessment, required by the Montana Environmental Protection Act, was completed for this project. A copy is attached.

DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
Air Quality Bureau
Cogswell Building, Helena, Montana 59620
(406) 444-3454

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Project or Application: Flathead County Road Department, Air Quality Stipulation for Kalispell SIP.

Description of Project: This permit is for the operation of a stationary 1970 Barber Green DA 55 Hot Mix Plant (150 TPH) with a cone dust collector (model CB 55) and a wet collector (model CL 63). This plant produces asphalt for use in construction, repair, and maintenance of roads and highways.

Benefits and Purpose of Proposal: On July 1, 1987 the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter of 10 microns or less (PM-10). Due to exceedences of the national standards for PM-10, the city of Kalispell and the nearby Evergreen area have been designated by EPA as nonattainment for PM-10. As a result of this designation, EPA required the Department of Health and Environmental Sciences and the Flathead City-County Health Department to submit the Kalispell PM-10 State Implementation Plan (SIP) to EPA in November, 1991. The stipulation identifies the emission sources and makes enforceable emission limitations and the operation of control equipment and techniques which when considered with similar limitations on other Kalispell area sources will achieve the PM-10 NAAQS.

Description and analysis of reasonable alternatives whenever alternatives are reasonably available and prudent to consider: No reasonable alternatives available.

A listing and appropriate evaluation of mitigation, stipulations and other controls enforceable by the agency or another government agency: A list of enforceable conditions and an analysis of conditions are contained in a signed stipulation.

Recommendation: No EIS is required.

If an EIS is needed, and if appropriate, explain the reasons for preparing the EA:

If an EIS is not required, explain why the EA is an appropriate level of analysis: The emissions from this plant will not change. This action makes the control equipment and control techniques at the plant enforceable and assures that the emissions from this facility when considered with similar emission limitations at other sources will attain the PM-10 NAAQS.

Other groups or agencies contacted or which may have overlapping jurisdiction: None

Individuals or groups contributing to this EA: Department of Health and Environmental Sciences, Air Quality Bureau.

EA prepared by: Michael Glavin
Date: July 22, 1993

Potential Impact on Physical Environment

		Major	Moderate	Minor	None	Unknown	Comments Attached
1	Terrestrial and Aquatic Life and Habitats				X		
2	Water Quality, Quantity and Distribution				X		
3	Geology and Soil Quality, Stability and Moisture				X		
4	Vegetation Cover, Quantity and Quality				X		
5	Aesthetics				X		
6	Air Quality			X			
7	Unique Endangered, Fragile or Limited Environmental Resource					X	
8	Demands on Environmental Resource of Water, Air and Energy				X		
9	Historical and Archaeological Sites					X	
10	Cumulative and Secondary Impacts			X			

Potential Impact on Human Environment

		Major	Moderate	Minor	None	Unknown	Comments Attached
1	Social Structures and Mores				X		
2	Cultural Uniqueness and Diversity				X		
3	Local and State Tax Base and Tax Revenue				X		
4	Agricultural or Industrial Production				X		
5	Human Health				X		
6	Access to and Quality of Recreational and Wilderness Activities				X		
7	Quantity and Distribution of Employment				X		
8	Distribution of Population				X		
9	Demands for Government Services				X		
10	Industrial and Commercial Activity				X		
11	Locally Adopted Environmental Plans and Goals			X			
12	Cumulative and Secondary Impacts				X		

9 Final Stipulation: 9/17/92