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

In the Matter of Compliance of Pack and Company, Inc., 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 Pack and Company, Inc. ("Pack"), 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

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 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. Pack is located outside of the Kalispell non-attainment area boundary.

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 MAAQS.

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 projects, 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 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 indicated 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 results of the earlier CMB modeling study were in part dependent upon the level of actual emissions from the various sources in the Kalispell area during the study period. However, and based upon a review of the allowable emissions for those same sources, the department is concerned that the allowable emissions do not correlate well to the actual emissions occurring during the period of CMB analysis.

For example, in the case of Pack, some emission points are not subject to emissions limitations, and other emission points have emissions limitations that are significantly higher that the actual emissions during the CMB 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 non-attainment 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 Pack were identified as a significant contributor to ambient levels of PM-10 in the Kalispell nonattainment area. As used in the preceding sentence, the term "significant" means that the PM-10 emissions from Pack, when modeled, were greater than 5 micrograms per cubic meter impact for at least one receptor point within the Kalispell nonattainment area, consistent with the federal Clean Air Act, implementing regulations found at 40 CFR Part 51, and pertinent EPA guidance. Both parties agree that based upon these modeling results, and notwithstanding the location of Pack outside of the Kalispell nonattainment area, revised emission limitations for Pack are necessary to demonstrate compliance with the particulate matter NAAQS. The department has performed additional modeling using revised emission rates for Pack and other sources in the Kalispell area to determine the level of emissions

which achieves the particulate matter NAAQS. Based upon these modeling results, the department and Pack agree to the revised emission limitations for Pack, as set forth in Exhibit B.

B. BINDING EFFECT

12. The parties to this Stipulation agree that any such emission limitations placed on Pack 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 Pack. The specific conditions which comprise these limitations are contained in Exhibit B to this Stipulation (entitled "Emission Limitations and Conditions, Pack and Company, Inc.") 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 the plan, 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 Department is the state agency that is primarily responsible for the development and implementation of the State Implementation Plan under the Federal Clean Air Act.

Section 75-2-112(2)(c), MCA. 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. 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 Pack.

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 that Act.

17. Any obligations in this Stipulation and attached Exhibit B that are more stringent than conditions set forth in an air quality permit issued to Pack, 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 imposing the

terms in this Stipulation and the limitations and conditions contained in Exhibit B of this Stipulation, and adopting the same as enforceable measures applicable to Pack.

PACK AND COMPANY, INC.

BY _____
Its: President

BY _____
Attorney

DATE 9/16/93

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

BY _____
Robert J. Robinson
Director

BY _____
Timothy R. Baker
Attorney

DATE 9/17/93

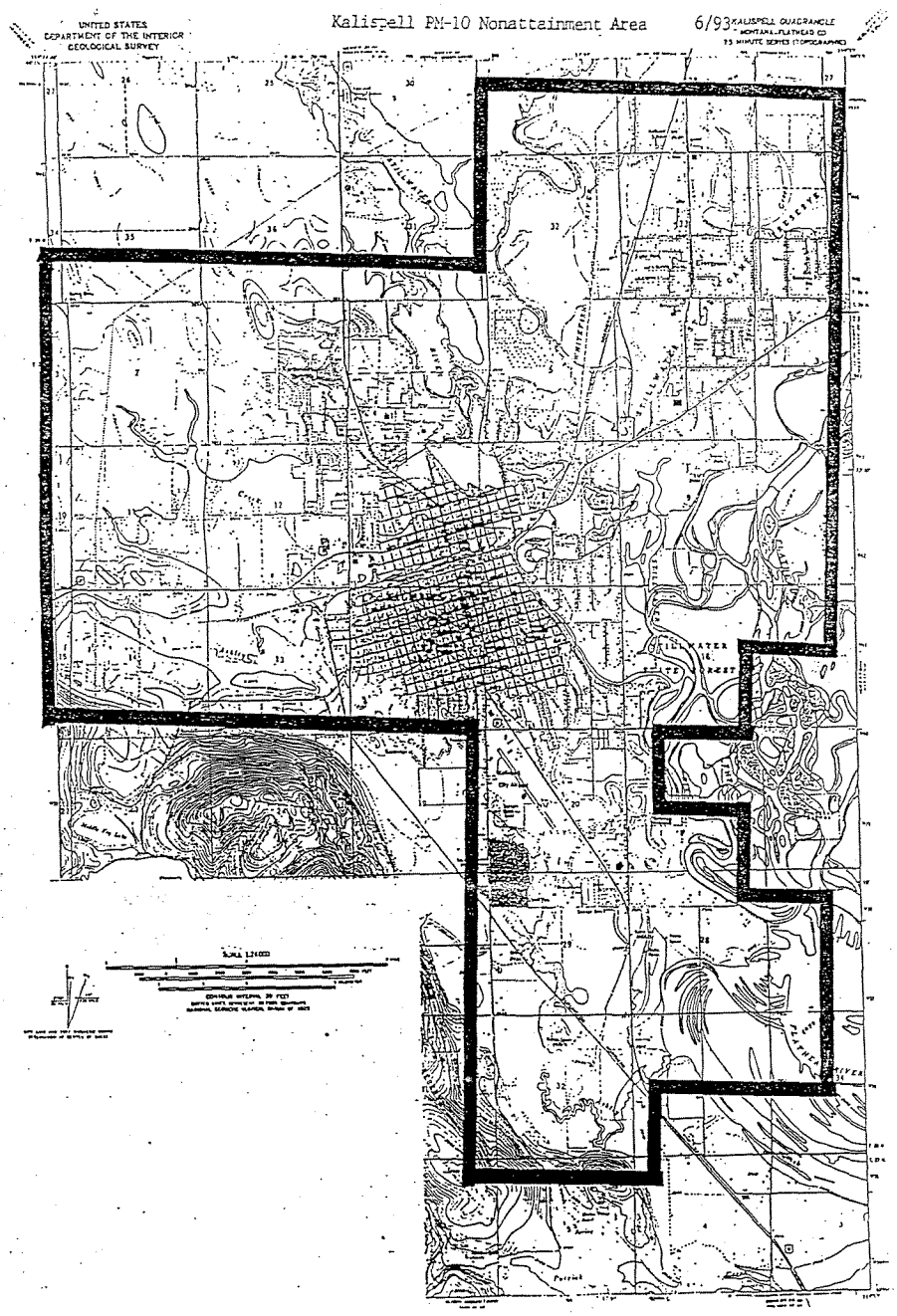
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Kalispell PM-10 Nonattainment Area
6/93
KALISPELL QUADRANGLE
MONTANA-FLATHEAD CO.
15 MINUTE SERIES (TOPOGRAPHIC)

EXHIBIT B
EMISSION LIMITATIONS AND CONDITIONS

Pack and Company, Inc.
2355 Highway 93 North
Kalispell, MT 59901

The above-named company is hereinafter referred to as "Pack"

Section I: Affected Facilities

A. Equipment: A stationary 1967 Stansteel #RM 5000 asphalt plant (200 TPH) serial #654 with a Stansteel Wet Scrubber - Model 260A, installed in 1977.

B. Plant Location: 2355 Highway 93 North (SW¼, NW¼, Sec 31, T29N, R21W, Flathead County).

Section II: Limitations and Conditions

A. Emission Limitations

1. Pack 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. Pack 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. Pack shall treat all unpaved portions of the haul roads, access roads, and the general plant area with water, chemical dust suppressant and/or acceptable oil or asphalt products as necessary to maintain compliance with the 5% opacity limitation.(RACT) The use by Pack Concrete of any dust suppressants, including any oil or asphalt products, shall be in compliance with all applicable local, state or federal environmental requirements.

5. Pack 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 21.00 lbs/hr.

[1] Opacity shall be determined according to 40 CFR, Part 60, Appendix A, Method 9 Visual Determination of Opacity of Emissions from Stationary Sources.

7. Asphalt plant PM-10 emissions are limited to 0.10 gr/dscf and 21.00 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 200 tons/hour. It is recognized that the Pack asphalt plant is governed by an existing Air Quality Permit, in addition to the terms of this Stipulation (Air Quality Permit #1125). Notwithstanding the limitation contained in this Stipulation, Pack shall have the opportunity to seek an increase in the allowed production rate by requesting that the Department consider an alteration to the existing Air Quality Permit. Similarly, Pack is not foreclosed by this Stipulation from seeking an Air Quality Permit from the Department for the utilization of additional equipment on-site. Pack recognizes that before the Department may approve any alteration to the existing Air Quality Permit, or issue an additional Air Quality Permit for the use of additional equipment on-site, the emissions from the permitted facility or facilities must be reviewed for their impacts on PM-10 ambient air quality, and the Department may withhold approval if such impacts are found to be unacceptable.
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. As noted immediately above in Paragraph No. 9, and notwithstanding this limitation, Pack shall have the opportunity to seek to increase this production rate or otherwise add to its production capacity, as may be consistent with the obligation and duty of the Department to ensure that there are not unacceptable impacts on PM-10 ambient air quality.
11. The asphalt plant operation is limited to 8760 hours/year.

B. Emission Testing

1. A source test must be conducted and compliance demonstrated within 320 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, 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.

4. An EPA Method 9 opacity test must also be performed in conjunction with the particulate tests to demonstrate compliance with condition 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. The tests identified in subsections 1-4 above 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 department and must be submitted to the department upon request.

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

3. Pack shall provide an annual report identifying any days in which the hours of operation, or the process rates in Section II.A. are exceeded. The report shall be submitted by March 1 of each year.

4. 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) Average number of trips annually;
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. Pack 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. Pack 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
Pack and Company, Inc.

I. Introduction

A. Equipment

A stationary 1967 Stansteel #RM 5000 asphalt plant (200 TPH) Serial #654 with a Stansteel Wet Scrubber - Model 260A, installed in 1977.

B. Process Description

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

C. Facility Location

Pack operates a stationary asphalt plant and a ready mix concrete batch plant in a gravel pit at 2355 Hwy 93 North (SW¼, NW¼, Sec 31, T29N, R21W, Flathead County) in the Kalispell nonattainment area. The 1967 Stansteel #RM 5000 asphalt plant is permanently located at this pit.

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 = $55 (200 \text{ tons/hr})^{.11} - 40 = 58.51$ lbs/hr.

The enforceable total particulate matter emission limit is 21.00 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 1967 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

Pack's asphalt plant was constructed in 1967, and therefore, NSPS does not apply. The department has determined that BACT for pre-NSPS asphalt plants is an emission limitation of 0.10 gr/dscf and 20% opacity. The plant was tested in 1988 and the results showed emissions at 0.082 gr/dscf. 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 of 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

1967 Stansteel #RM 5000 Portable Asphalt Plant

Annual Emission Rates (Potential) *

Source	Tons/Year TSP	PM-10	NOX	VOC	CO	SOX
Asphalt Plant Drum Dryer	91.98	91.98	31.54	24.53	33.29	63.95
Elevator, Screens, Bins, and Mixer	175.20	26.28				
Cold Aggregate Handling	87.60	35.04				
Haul Roads	0.15	0.06				
Total	354.93	153.36	31.54	24.53	33.29	63.95

* Based on operating 8760 hours/year.

Daily Emission Rates (Potential) **

Source	lbs/day TSP	PM-10	NOX	VOC	CO	SOX
Asphalt Plant Drum Dryer	504.00	504.00	172.80	134.40	182.40	350.40
Elevator, Screens, Bins, and Mixer	960.00	144.00				
Cold Aggregate Handling	480.00	192.00				
Haul Roads (Daily)	1.31	0.47				
Total	1945.31	840.47	172.80	134.40	182.40	350.40

** Based on operating 24 hours/day.

Asphalt Plant Drum Dryer with Wet Scrubber

Maximum Process Rate: 200 tons/hr
Process Airflow Rate: 24500 dscf/min (Maximum Process Airflow Rate)
Hours of operation: 8760 hr/yr 24 hr/day

TSP Emissions:

Emission Factor: 0.10 gr/dscf (RACT Determination)
Calculations: 0.10 gr/dscf * 24500 dscf/min * 1/7000 lbs/gr * 60 min/hr = 21.00 lbs/hr
21.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 91.98 tons/yr
21.00 lbs/hr * 24.0 hr/day = 504.00 lbs/day

PM-10 Emissions:

Emission Factor: 0.10 gr/dscf (Assume 100% of TSP is PM-10)
Calculations: 0.10 gr/dscf * 24500 dscf/min * 1/7000 lbs/gr * 60 min/hr = 21.00 lbs/hr
21.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 91.98 tons/yr
21.00 lbs/hr * 24.0 hr/day = 504.00 lbs/day

NOx Emissions:

Emission Factor: 0.036 lbs/ton (AFSSC 3-05-002-01, page 116)
Calculations: 0.036 lbs/ton * 200 tons/hr = 7.20 lbs/hr
7.20 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 31.54 tons/yr
7.20 lbs/hr * 24.0 hr/day = 172.80 lbs/day

VOC Emissions:

Emission Factor: 0.028 lbs/ton (AFSSC 3-05-002-01, page 116)
Calculations: 0.028 lbs/ton * 200 tons/hr = 5.60 lbs/hr
5.60 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 24.53 tons/yr
5.60 lbs/hr * 24.0 hr/day = 134.40 lbs/day

CO Emissions:

Emission Factor: 0.038 lbs/ton (AFSSC 3-05-002-01, page 116)
Calculations: 0.038 lbs/ton * 200 tons/hr = 7.60 lbs/hr
7.60 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 33.29 tons/yr
7.60 lbs/hr * 24.0 hr/day = 182.40 lbs/day

SOx Emissions:

Emission Factor: 0.073 lbs/ton (AFSSC 3-05-002-01, page 116)
Calculations: 0.073 lbs/ton * 200 tons/hr = 14.60 lbs/hr
14.60 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 63.95 tons/yr
14.60 lbs/hr * 24.0 hr/day = 350.40 lbs/day

Elevator, Screens, Bins, and Mixer

Process Rate: 200 tons/hr (Maximum Design)
Hours of operation: 8760 hr/yr 24 hr/day

TSP Emissions:

Emission Factor: 0.2 lbs/ton (AFSSC 3-05-002-02, page 116)
Calculations: 0.20 lbs/ton * 200 tons/hr = 40.00 lbs/hr
40.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 175.20 tons/yr
40.00 lbs/hr * 24.0 hr/day = 960.00 lbs/day

PM-10 Emissions:

Emission Factor: 0.03 lbs/ton (AFSSC 3-05-002-02, page 116)
Calculations: 0.03 lbs/ton * 200 tons/hr = 6.00 lbs/hr
6.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 26.28 tons/yr
6.00 lbs/hr * 24.0 hr/day = 144.00 lbs/day

Cold Aggregate Handling

Process Rate: 200 tons/hr (Maximum Design)
Hours of operation: 8760 hr/yr 24 hr/day

TSP Emissions:

Emission Factor: 0.10 lbs/ton (AFSSC 3-05-002-04, page 116)
Calculations: 0.10 lbs/ton * 200 tons/hr = 20.00 lbs/hr
20.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 87.60 tons/yr
20.00 lbs/hr * 24.0 hr/day = 480.00 lbs/day

PM-10 Emissions:

Emission Factor: 0.04 lbs/ton (AFSSC 3-05-002-04, page 116)
Calculations: 0.04 lbs/ton * 200 tons/hr = 8.00 lbs/hr
8.00 lbs/hr * 8760 hr/yr * 0.0005 tons/lb = 35.04 tons/yr
8.00 lbs/hr * 24.0 hr/day = 192.00 lbs/day

Haul Roads

Operating Hours: 8760 Hours/Yr
Vehicle Miles Traveled: 346 VMT/Yr (Estimated based on maximum production rate)

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 for TSP 1.0
s= Silt Content in percent 8.7 %
S= Average Speed of vehicles in mph 5.0 mph
W= Average weight of vehicles in Tons 20.8 Tons
w= Average number of wheels on vehicle 4 wheels
PR= Precipitation Ratio based on the following:
130 Days with more than .01" of Precipitation
PR= (365 days - 130 days)/365 Days = 0.6438

TSP Emissions:

TSP Emission Factor: 1.78 Lbs/VMT

E(TSP)= (346 VMT/Yr)(1.78 Lbs/VMT)(0.5)
E(TSP)= 308 Lbs/Yr or 0.15 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 for PM10 0.36
s= Silt Content in percent 8.7 %
S= Average Speed of vehicles in mph 5.0 mph
W= Average weight of vehicles in Tons 20.8 Tons
w= Average number of wheels on vehicle 4 wheels
PR= Precipitation Ratio based on the following:
130 Days with more than .01" of Precipitation
PR= (365 days - 130 days)/365 Days = 0.6438

PM10 Emissions:

PM10 Emission Factor: 0.64 Lbs/VMT

E(PM10)= (346 VMT/Yr)(0.64 Lbs/VMT)(0.5)
E(PM10)= 111 Lbs/Yr or 0.06 Tons/Yr

Haul Roads (Daily)

Operating Hours: 8760 Hours/Yr
Vehicle Miles Traveled: 346 VMT/Yr (Estimated based on maximum production rate)

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 for TSP 1.0
s= Silt Content in percent 8.7 %
S= Average Speed of vehicles in mph 5.0 mph
W= Average weight of vehicles in Tons 20.8 Tons
w= Average number of wheels on vehicle 4 wheels
PR= Assumes no precipitation 1.0000

TSP Emissions:

TSP Emission Factor: 2.77 Lbs/VMT

E(TSP)= (346 VMT/Yr)(2.77 Lbs/VMT)(0.5)
E(TSP)= 478 Lbs/Yr
or 0.24 Tons/Yr
1.31 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 for PM10 0.36
s= Silt Content in percent 8.7 %
S= Average Speed of vehicles in mph 5.0 mph
W= Average weight of vehicles in Tons 20.8 Tons
w= Average number of wheels on vehicle 4 wheels
PR= Assumes no precipitation 1.0000

PM10 Emissions:

PM10 Emission Factor: 1.00 Lbs/VMT

E(PM10)= (346 VMT/Yr)(1.00 Lbs/VMT)(0.5)
E(PM10)= 172 Lbs/Yr or 0.09 Tons/Yr or 0.47 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 assure 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 Pack facility were in some cases nonexistent (no permit required) or several timeshigher than actual emissions (ARM 16.8.1403). Dispersion modelling conducted using emissions from the Pack facility at its potential to emit (emissions associated with maximum design capacity or as limited by ARM 16.8.1403) indicated that some emission points within the facility contributed significantly to the PM-10 concentrations in the Kalispell nonattainment area. As used in the preceding sentence, the term "significantly" means that the PM-10 emissions from Pack Concrete, when modeled, were greater than 5 micrograms per cubic meter impact for at least one receptor point within the Kalispell nonattainment area, consistent with the federal Clean Air Act, implementing regulations found at 40 CFR Part 51, and pertinent EPA guidance.

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 Pack 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 Pack 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
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FINAL ENVIRONMENTAL ASSESSMENT (EA)

Project or Application: Pack and Company, Inc., Air Quality Stipulation for Kalispell SIP.

Description of Project: This stipulation is for the operation of a stationary 1967 Stansteel #RM 5000 asphalt plant (200 TPH) Serial #654 with a Stansteel Wet Scrubber - Model 260A. 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 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 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		