AIR QUALITY PERMIT

Issued to:	Holnam, Inc. 4070 Trident Road Three Forks, MT 59752	Permit: #0982-09 Application Complete: 08/10/00 Preliminary Determination Issued: 09/15/00 Department Decision Issued: 10/04/00 Final Permit Issued: 10/20/00 AFS #031-0005

An air quality permit, with conditions, is hereby granted to Holnam, Inc. (Holnam) pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.701, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

The Holnam facility is located in the Northeast ¼ of Section 9, Southeast ¼ of Section 4, Southwest ¼ of Section 3, Northwest ¼ of Section 10, Township 2 North, Range 2 East, Gallatin County, Montana.

B. Current Permit Action

On August 10, 2000, Holnam submitted a permit application to request federally enforceable permit conditions to limit potential particulate matter emissions. Holnam requested the federally enforceable conditions to ensure that the facility's potential emissions would be within the "area source" definition as defined in the Portland Cement Maximum Achievable Control Technology (PC MACT). Although this permit action could have been accomplished through a permit modification, an alteration was requested by Holnam to allow the public to comment on the permit. In addition, approved de minimis changes were included in the permit.

SECTION II: Conditions and Limitations

A. Emission Control Requirements

Holnam shall install, operate, and maintain the following emission control equipment and practices, and all emission control equipment and practices as specified in their Montana air quality permit applications.

1. Holnam shall operate and maintain the Finish Mill #2 pulsejet baghouse to control emissions from the equipment listed below (ARM 17.8.715).

    a. A replacement air slide
    b. The clinker/gypsum feed belt via a booster fan
    c. The Finish Mill #2
    d. The bucket elevator
    e. The product separator

2. Holnam shall install, operate, and maintain the following baghouses to control emissions from the equipment listed below (ARM 17.8.715).

    a. A 3,800-acfm baghouse will control the following equipment:

        i. A 24-inch covered screw conveyor that transports the coke;
        ii. A 290-ton "raw" coke storage silo; and
        iii. The coke storage silo.

    b. A 1,500-acfm baghouse will control the following equipment:

        i. Two diverter valves;
        ii. The hammermill; and
        iii. The bucket elevator.

    c. A 1,500-acfm baghouse will control the coal storage silo.

3. Holnam shall operate and maintain the coke system pulsejet baghouse to control emissions from the equipment listed below (ARM 17.8.715)

    a. A belt conveyor with weighing system at the base of the raw coke storage silo
    b. A coke grinding mill
    c. A 220-ton "fine" coke storage silo

4. Holnam shall operate and maintain an electrostatic precipitator to control kiln emissions, sized for 300,000 cfm @ 700°F, 0.15 gr/acfm outlet (ARM 17.8.715).

5. Holnam shall operate and maintain a pulsejet baghouse to control clinker cooler emissions, sized for 100,000 cfm @ 350°F (ARM 17.8.710).

6. Holnam shall operate and maintain 4 Micro-pulsaire dust collectors on the rock silos (ARM 17.8.710).

7. Holnam shall operate and maintain 2 Micro-pulsaire dust collectors to control emissions from crushing and screening (ARM 17.8.710).

8. Holnam shall operate and maintain a baghouse to control emissions at the clinker belt conveyor (ARM 17.8.710).

9. Holnam shall operate and maintain a baghouse to control emissions at the dust bin near the precipitator (ARM 17.8.710).

10. Holnam shall operate and maintain a baghouse to control emissions from the Portland cement silos (ARM 17.8.710).

11. Holnam shall operate and maintain a baghouse to control emissions from the Finish Mill #4 system (ARM 17.8.710).

12. Holnam shall install, operate, and maintain a baghouse to control emissions from the pozzolan material storage silo (ARM 17.8.715).

13. Holnam shall install, use, and maintain enclosures around the pozzolan material system components listed below (ARM 17.8.715).

    a. Rotary feeder
    b. Weighbelt conveyor
    c. Screw line (conveyor)

14. Holnam shall use water spray, as necessary, to maintain compliance with the opacity limitation in Section II.C.9 when handling landfilled cement kiln dust (ARM 17.8.715).

15. Whenever process equipment is operating, Holnam shall use and maintain, as they were intended, conveyor covers, transfer point covers, or structural enclosures surrounding process equipment (ARM 17.8.710).

B. Operational Limitations

1. In the cement kiln, Holnam is authorized to burn up to 100% natural gas, up to 100% coal, up to 25% coke, or any combination of these fuels within the previously stated limits (ARM 17.8.710).

2. Holnam shall comply with ARM 17.8.322.

3. Holnam shall not use, in any rolling 12-month period, greater than 50,000 tons of pozzolan material in the pozzolan material system (ARM 17.8.715).

4. The amount of post-consumer recycled container glass used by Holnam in the cement kiln shall be limited to 800 tons during any rolling 12-month period (ARM 17.8.715).

5. Holnam shall not handle, in any rolling 12-month period, greater than 85,000 tons of landfilled cement kiln dust (ARM 17.8.715).

6. Holnam shall limit kiln production to 425,000 tons of clinker during any rolling 12-month period (ARM 17.8.710).

7. Holnam shall limit clinker handling to 500,000 tons during any rolling 12-month period (ARM 17.8.710).

C. Emission Limitations

1. Holnam shall not cause or authorize to be discharged into the atmosphere any visible fugitive emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308).

2. Holnam shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308[2]).

3. Holnam shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precaution limitation (ARM 17.8.710).

4. Holnam shall not cause or authorize to be discharged into the atmosphere visible emissions from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

5. Holnam shall not cause or authorize to be discharged into the atmosphere visible emissions from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

6. Holnam shall not cause or authorize to be discharged into the atmosphere, from the Finish Mill #2 baghouse:

    a. Particulate matter in excess of 0.02 gr/dscf (ARM 17.8.715), and
    b. Visible emission which exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340).

7. Holnam shall not cause or authorized to be discharged into the atmosphere from the 3,800 acfm and two 1,500 acfm baghouses (formerly the coal/coke baghouse):

    a. Particulate matter in excess of 0.02 gr/dscf (ARM 17.8.715):, and
    b. Visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340).

8. Holnam shall not cause or authorized to be discharged into the atmosphere from the coke system baghouse:

    a. Particulate matter in excess of 0.02 gr/dscf (ARM 17.8.715), and
    b. Visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340).

9. Holnam shall not cause or authorize to be discharged into the atmosphere from the pozzolan material silo baghouse (ARM 17.8.715):

    a. Particulate matter in excess of 0.02 gr/dscf, and
    b. Visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

10. Holnam shall comply with all applicable requirements of ARM 17.8.340, which references 40 CFR Part 60, Standards of Performance for New Stationary Sources.

    a. Subpart F - Standards of Performance for Portland Cement Plants shall apply to sources at Holnam including, but not limited to, the following:

        (i) Finish Mill #2,
        (ii) Finish Mill #4, and
        (iii)Storage Silos #26 through 30.

    b. Holnam shall not cause or authorize to be discharged into the atmosphere from the Finish Mill #4, visible emissions that exhibit 10% opacity or greater, as required by Subpart F of 40 CFR Part 60 (ARM 17.8.340).

    c. Holnam shall not cause or authorize to be discharged into the atmosphere from the Finish Mill #2, visible emissions that exhibit 10% opacity or greater, as required by Subpart F of 40 CFR Part 60 (ARM 17.8.340).

    d. Holnam shall not cause or authorize to be discharged into the atmosphere from Storage Silos #26 through 30, visible emissions that exhibit 10% opacity or greater, as required by Subpart F of 40 CFR Part 60 (ARM 17.8.340).

11. Holnam shall not cause or authorize to be discharged into the atmosphere visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes when handling landfilled cement kiln dust (ARM 17.8.710).

12. Particulate matter emissions from the kiln are limited to 0.77 lb/ton of clinker produced (ARM 17.8.710).

D. Testing Requirements

1. Holnam shall conduct initial visible emission observations to assess compliance with the opacity limit in Section II.C.6 for the Finish Mill #2 baghouse within 180 days of installation of the system. Holnam shall conduct additional visible emission observations at least once every 4 years thereafter, or according to another testing/monitoring schedule as may be approved by the Department of Environmental Quality (department) (ARM 17.8.105 and ARM 17.8.340).

2. Holnam shall conduct an initial performance source test on the Finish Mill #2 baghouse to determine compliance with the applicable particulate emission limit in Section II.C.6 within 180 days of installation of the system. Holnam shall conduct additional particulate emission limit tests at least once every 4 years thereafter, or according to another testing/monitoring schedule as may be approved by the department (ARM 17.8.105, ARM 17.8.710, and ARM 17.8.340).

3. Holnam shall conduct initial visible emission observations to assess compliance with the opacity limit in Section II.C.7 for the coal/coke baghouse within 180 days of installation of the system. Holnam shall conduct additional visible emission observations at least once every 4 years thereafter, or according to another testing/monitoring schedule as may be approved by the department (ARM 17.8.105 and ARM 17.8.710).

4. Holnam shall conduct an initial performance source test on the coal/coke baghouse to determine compliance with the applicable particulate emission limit in Section II.C.7 within 180 days of installation of the system. Holnam shall conduct additional particulate emission limit tests at least once every 4 years thereafter, or according to another testing/monitoring schedule as may be approved by the department (ARM 17.8.105 and ARM 17.8.710).

5. Holnam shall conduct initial visible emission observations to assess compliance with the opacity limit in Section II.C.8 for the coke system baghouse within 180 days of installation of the system. Holnam shall conduct additional visible emission observations at least once every 4 years thereafter, or according to another testing/monitoring schedule as may be approved by the department (ARM 17.8.105 and ARM 17.8.710).

6. Holnam shall conduct an initial performance source test on the coke system baghouse to determine compliance with the applicable particulate emission limit in Section II.C.8 within 180 days of installation of the system. Holnam shall conduct additional particulate emission limit tests at least once every 4 years thereafter, or according to another testing/monitoring schedule as may be approved by the department (ARM 17.8.105 and ARM 17.8.710).

7. Holnam shall conduct an initial performance source test on the kiln to determine compliance with the applicable particulate emission limit in Section II.C.12 within 180 days of installation of the system. Holnam shall conduct additional particulate emission limit tests at least once every 4 years thereafter, or according to another testing/monitoring schedule as may be approved by the department (ARM 17.8.105 and ARM 17.8.710).

8. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

9. The department may require further testing (ARM 17.8.105).

E. Operational Reporting Requirements

1. Holnam shall supply the department with annual production information for all emission points, as required by the department in the annual emission inventory request. The request will include, but is not limited to the amount of pozzolan material used, the amount of post-consumer recycled container glass used in the kiln, the amount of landfilled cement kiln dust handled, the amount of clinker produced in the kiln, and the amount of total product handled (ARM 17.8.710).

   Production information shall be gathered on a calendar-year basis and submitted to the department by the date required in the emission inventory request. Information shall be in the units required by the department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. Holnam shall notify the department of any construction or improvement project conducted, pursuant to ARM 17.8.705(1)(r), that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.705(1)(r)(iv) (ARM 17.8.705).

3. Holnam shall document, by month, the amount of pozzolan material used in the pozzolan material system. By the 3rd day of each month, Holnam shall total the amount of pozzolan material use during the previous 12 months to verify compliance with the limitation in Section II.B.5. The records compiled shall be maintained by Holnam as a permanent business record for at least 5 years following the date of the recording, shall be submitted to the department upon request, and shall be available at the plant site for inspection by the department (ARM 17.8.710).

4. Holnam shall document, by month, the amount of post-consumer recycled container glass used in the kiln. By the 3rd day of each month, Holnam shall total the amount of recycled glass used in the kiln during the previous 12 months to verify compliance with the limitation in Section II.B.6. A written report of the compliance verification, including the previous 12-month totals of recycled glass used, shall be submitted annually to the department no later than March 1 and may be submitted along with the annual emission inventory (ARM 17.8.710).

5. Holnam shall document, by month, the amount of landfilled cement kiln dust handled. By the 3rd day of each month, Holnam shall total the amount of cement kiln dust handled during the previous 12 months to verify compliance with the limitation in Section II.B.7. A written report of the compliance verification, including the previous 12-month totals of landfilled cement kiln dust handled, shall be submitted annually to the department no later than March 1 and may be submitted along with the annual emission inventory (ARM 17.8.710).

6. Holnam shall document that conveyor covers, transfer point covers, or structural enclosures surrounding process equipment were maintained and in place during operation of process equipment. The records shall include all repair and maintenance activity to all conveyor covers, transfer point covers, or structural enclosures. The records must include, but is not limited to, the date, time, and action(s) taken for repair and maintenance.

F. Petroleum Coke Test Burn Limitations

1. Operating Conditions

a. Holnam is authorized to burn petroleum coke in excess of 25% (based on the total BTU input required) in conjunction with natural gas and coal during the test burn (ARM 17.8.710).

b. The amount of petroleum coke used during the test burn period shall be limited to 30,400.0 tons. The test burn period begins on the date that greater than 25% coke is burned in the kiln and ends one year from the starting date (ARM 17.8.710).

c. Holnam shall notify the department, in writing, within 10 days of the beginning of the test burn period. Notification was received by the department that test burning began on November 14, 1999 (ARM 17.8.710).

d. Holnam shall comply with ARM 17.8.322(6)(c).

e. Holnam shall maintain a log of the amount of coke used in the kiln each day during the test burn period (ARM 17.8.710).

2. Testing Requirements

a. Holnam shall conduct source tests on the kiln for NO_x and SO_2, concurrently. The tests must be conducted at least once during the test burn. The timing of the test is at the discretion of Holnam, but must occur during the test burn when the maximum amount of petroleum coke is being fired in conjunction with natural gas. In addition, a test is required when the maximum amount of petroleum coke is being fired in conjunction with coal. These testing requirements may be modified upon written agreement with the department (ARM 17.8.105).

b. During the source tests required in Section II.F.2.a, Holnam shall conduct an analysis of the clinker produced and the cement kiln dust to determine the concentration of sulfur in each. This information shall be submitted to the department, along with the results of the source tests (ARM 17.8.710).

c. During the source tests required in Section II.F.2.a, Holnam shall record the following information:

(i) Clinker production rate,
(ii) Coke combustion rate,
(iii) Natural gas combustion rate,
(iv) Coal combustion rate, and
(v) Percent oxygen at the kiln outlet.

This information shall be recorded on an hourly basis during the performance of the source tests and shall be submitted with the source tests report (ARM 17.8.710).

d. All source tests required by the department shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

e. The department may require further testing (ARM 17.8.105).

SECTION III: General Conditions

A. Inspection – Holnam shall allow the department's representatives access to the source at all times for the purpose of making inspections or 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 permit.

B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Holnam fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Holnam of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.701, *et seq.* (ARM 17.8.717).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the department's decision may request, within 15 days after the department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The department's decision on the application is not final unless 15 days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the department's decision until the conclusion of the hearing and issuance of a final decision by the Board.

F. Permit Inspection – As required by ARM 17.8.716, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by department personnel at the location of the permitted source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Holnam may be grounds for revocation of this permit, as required by that Section and rules adopted thereunder by the Board.

PERMIT ANALYSIS
Holnam, Inc.
Permit #0982-09

I. Introduction

A. Facility Description

Holnam, Inc. (Holnam) operates a cement manufacturing plant at their Trident facility in Three Forks, Montana. This facility was acquired by Holnam from the Ideal Cement Company (Ideal Basic Industries) in 1990. They operate 24 hours per day, 365 days per year. Raw materials, such as limestone, shale, and sandstone, are all mined at the Trident Site. These raw materials and iron ore purchased from outside vendors are crushed, screened, and stored in dedicated silos.

Measured amounts of each material are conveyed to the raw mill where water is added and the mixture is pulverized to a fine slurry. The slurry is sent to Trident's only kiln where clinker is produced. The clinker is then sent to the clinker cooler where it is cooled from 2,500 °F to 150 °F. The clinker is then transferred to storage silos or alternative storage sites (usually covered) if the silos are full. Clinker is mixed with 5% gypsum and pulverized to produce Portland cement. The cement enters a high efficiency air separator and is sent to a dust collector. Cement from the dust collector is sent to a cement cooler via an air slide. The cooled cement is then pneumatically conveyed to cement storage silos.

B. Existing Equipment and Activities

Source Description	Control Equipment	Efficiency
Disturbed Area – Fugitive		
Drilling		
Blasting		
Limestone, Sand, Shale Removal		
Transfer, Conveying, and Screening		
Raw Material Storage Piles		
Haul Roads – Fugitives	dust suppression	85%
Primary Crusher	fabric filter	99%
Crusher Screen	fabric filter	99%
Raw Material Silo #1	fabric filter	99%
Raw Material Silos #2 and 3	fabric filter	99%
Raw Material Silos #4 and 5	fabric filter	99%
Raw Material Silos #6 and 7	fabric filter	99%
Coal/Coke Unload Fugitive		
Coal/Coke Transfer Handling Fugitive		
Coal Outside Storage Pile		
Coke Outside Storage Pile		
Coal Crusher	fabric filter	99%
Coal Silo – Loading	fabric filter	99%
Coal Silo - Unloading	fabric filter	99%
Fluid Coke Silo – Loading		
Fluid Coke Silo Unloading		
Kiln	ESP	
Clinker Cooler	fabric filter	99.8%
Inside Clinker Transfer	fabric filter	99.8%
Gypsum/Clinker Storage Silo	fabric filter	99%
Cement Kiln Dust Storage Load	fabric filter	99%

Source Description	Control Equipment	Efficiency
Cement Kiln Dust Storage Unloading	dust suppression	50%
Emergency Clinker Bins Loading	fabric filter	99%
Emergency Clinker Storage Silo 1		
Emergency Clinker Storage Silo 2		
Emergency Clinker Storage Silo 3		
Emergency Clinker Storage Silo 4		
#2 Finish Mill	fabric filter	99%
Clinker Transfer #2 Finish Mill	fabric filter	99%
#3 Finish Mill Transfer	fabric filter	99%
#3 Finish Mill	fabric filter	99%
Clinker Transfer #4 Finish Mill	fabric filter	99%
#4 Finish Mill Product Separator	fabric filter	99.8%
#4 Finish Mill Vent	fabric filter	99.8%
Masonry Storage Bins 1- 3	fabric filter	95%
Cement Storage Silos 4 – 5	fabric filter	99%
Cement Sack Machine #1	fabric filter	98%
Cement Sack Machine #2	fabric filter	98%
Cement Sack Machine #3	fabric filter	98%
Cement Sack Machine #4	fabric filter	98%
Cement Silos 1-7, 10, 11, 13	fabric filter	99%
Cement Silos #8, 9, 12	fabric filter	99%
Cement Transfer 1-13 to Bulk	fabric filter	99%
Cement Storage Silo 14-25	fabric filter	99%
Cement Storage Silo 26-30	fabric filter	99%
Bulk Cement Transfer and Truck Loadout 1	fabric filter	99%
Bulk Cement Transfer and Truck Loadout 2	fabric filter	99%
Bulk Cement Rail Car Loadout	fabric filter	99%
Diesel Fuel		
Gasoline		
Pozzolan Material Storage Silo	fabric filter	99%
Rotary Feeder	fabric filter	95%
Weighbelt Conveyor	fabric filter	95%
Screw Line (conveyor)	fabric filter	95%
Handling Landfilled Cement Kiln Dust	water spray	50%
Waste Oil Burner		

C. Permit History

On April 27, 1971, the Ideal Cement Company received permit #**282-072171**. This permit approved the construction of ten pieces of control equipment, as follows:

1. An electrostatic precipitator to control kiln emissions – sized for 300,000 cfm @ 700 °F, 15 gr/acfm inlet, 0.15/acfm outlet, 99.9% efficient.

2. A pulsejet type baghouse to control clinker cooler emissions – sized for 100,000 cfm @ 350 °F, 8.3: 1 air/cloth ratio, Nomex bags.

3. Four Micro-pulsaire dust collectors on the rock silos:

   2 @ 7.4:1 air/cloth ratio, 843 ft^2 cloth area, Model IF124
   2 @ 7.8:1 air/cloth ratio, 670 ft^2 cloth area

4. Two Micro-pulsaire dust collectors to control emissions from crushing and screening:

   Crushing – Micro-pulsaire model IFI-48, 7200 cfm capacity fan
   Screening – Micro-pulsaire model IFI-24, 6400 cfm capacity fan

5. One small baghouse to control emissions at the clinker belt conveyor.

6. One small baghouse to control emissions at the dustbin near the precipitator.

On May 3, 1971, the Ideal Cement Company received permit #**293-080471** to construct five pieces of equipment.

1. Primary Crusher, 450 tons per hour
2. Vibrating Screen, 6 ft x 12 ft, Missouri-Rodgers
3. Raw Mill, 11 ft x 34 ft, Bawl Mill, 2,000 hp, F.L. Smith
4. Kiln, 12 ft x 450 ft, Wet Process Rotary Kiln, F.L. Smith, 400 hp, kiln draft fan
5. Clinker Cooler, Folax Grates, F.L. Smith

Commitments to the construction of this equipment were made prior to August 17, 1971, so the equipment is not subject to New Source Performance Standards (NSPS) Subpart F.

On April 16, 1975, the Ideal Cement Company was issued permit #**811-050475** to combust coal in their cement kiln.

On July 19, 1976, Ideal Basic Industries was issued permit #**982** to construct four Portland cement storage silos. These silos are controlled by a baghouse.

On January 6, 1984, a modification to permit #**811-050475** was issued to Ideal Basic Industries, which allowed the gas/coal-fired cement kiln to burn a coal/coke combination fuel.

On August 9, 1990, Holnam submitted a permit application #**0982-01** for use of alternative fuels in the cement kiln. This permit application was withdrawn.

On November 22, 1993, Holnam submitted permit application #**0982-02** for replacement of sections of the cement kiln. The changes proposed in the application were determined to be maintenance and did not require a permit change.

Permit #**0982-03** was issued to Holnam on July 29, 1995. Holnam proposed to: upgrade the existing cement Finish Mill #2 baghouse to a modern baghouse; replace the Finish Mill #2 air slide; replace two existing dust collectors on the coal/coke process with one unit; and construct a separate coke grinding, storage, and transport system with dust collection.

The Finish Mill #2 baghouse, which replaced an existing baghouse, controls the emission units listed below.

a. A replacement air slide
b. The clinker/gypsum feed belt via a booster fan
c. The Finish Mill #2
d. The bucket elevator
e. The product separator

The air slide is totally enclosed and is necessary for the transport of cement from the elevator to the product separator (air separator).

The replacement of two existing dust collectors with the coal/coke baghouse on the existing coal/coke diversion, crushing, and storage system controls the equipment listed below.

a. A diverter valve at the top of the existing coal/coke storage silo
b. A 24-inch covered screw conveyor that transports the coke from the above diverter valve
c. A 290-ton "raw" coke storage silo
d. Two diverter valves
e. The hammermill
f. The bucket elevator
g. The coal/coke storage silo
h. The covered screw conveyor

The separate coke system transports coke on the existing path up to the point of delivery into the top of the coal/coke storage silo. At this point, the proposed system incorporates a gate that will discharge into a 290-ton capacity "raw" coke storage silo. Coal is diverted into the existing coal/coke storage silo. The proposed raw coke storage silo gravity feeds onto a covered belt assembly, where the material is weighed before it is gravity fed into the proposed coke grinding mill. The ground coke fines are then evacuated from the grinding mill by a 15,400-cfm fan that pneumatically transports the crushed coke to the proposed coke system baghouse where the gas and solid phases are separated. The ground, "fine" coke material discharges from this dust collector into a 220-ton "fine" coke storage silo. Pneumatic transport of the fine coke particles from this silo to the kiln hood are facilitated by a coke blower system.

The proposed coke system baghouse and fan would control the equipment listed below.

a. A belt conveyor with weighing system at the base of the raw coke storage silo
b. A coke grinding mill
c. A 220-ton "fine" coke storage silo

The emission increase due to the proposed changes was estimated at 10.84 tons/year of particulate matter.

Permit #**0982-04** was issued on May 8, 1998. Holnam submitted a complete permit application on March 30, 1998. The application proposed a pozzolan material (fly ash) system that included the following new equipment: pozzolan material storage silo with bin vent dust collector, rotary feeder, weighbelt conveyor, and screw line (conveyor). Holnam intended to introduce pozzolan material at the finish mill to produce Holnam Performance Cement (HPC). Controlled PM-10 emissions from the proposed equipment would be approximately 2.10 tons per year. The permit was also updated to reflect compliance demonstrations and notifications that were completed and rule references that were outdated.

Permit #0982-03 had included conditions from permits #282-072171, #293-080471, #811-050475, #982, and modification #811-050475. Therefore, permit #0982-04 also replaced these permits.

Permit modification #**0982-05** was issued on September 3, 1998 to allow Holnam to conduct a test burn that exceeds the operational limit in Section II.B.1. The amount of petroleum coke burned in the kiln was limited so that 15 tons per year of SO_2 was not exceeded; therefore, this test burn could be completed according to ARM 17.8.705(1)(q).

However, as described in ARM 17.8.733(1)(c), the permit needed to be modified to allow the temporary burning of petroleum coke in excess of the limitation in Section II.B.1. Holnam was required to comply with the sulfur-in-fuel requirements contained in ARM 17.8.322(6)(c) and to maintain records to demonstrate compliance with the petroleum coke limitation in Section II.F.1.b of the permit. In addition, testing was required to determine emissions at the maximum rate of petroleum coke burned. Permit #0982-05 replaced permit #0982-04.

Permit #**0982-06** was issued on January 24, 1999. The 99.9% control efficiency for removal of particulate emissions from the kiln exhaust through the use of an electrostatic precipitator (ESP) in Section II.A.4 of the permit was removed. The change did not result in an increase in allowable particulate emission rates from the kiln. Permit #0982-06 replaced permit #0982-05.

Holnam proposed (in permit application #**0982-07**) to use 800 tons/yr of post-consumer recycled container glass in the kiln and handle 85,000 ton/year of landfilled cement kiln dust. Holnam submitted an emission inventory that identified 5.13 lbs/year of emissions of hazardous air pollutants being emitted as a result of using post-consumer recycled container glass. Holnam submitted a health risk assessment, which demonstrated that this proposal would constitute a negligible risk to human health and the environment. Handling 85,000 tons/year of landfilled cement kiln dust involved moving landfilled dust from the landfill with a front-end loader to a truck. The cement kiln dust would be sold for use in reclamation projects. Handling the cement kiln dust would result in an emissions increase of approximately 23.8 tons per year of total particulate matter and 11.9 tons per year of PM-10. Permit #0982-07 replaced permit #0982-06.

Permit **#0982-08** was issued on December 29, 1999 to correct condition II.B.5, which was intended to limit the use of pozzolan material fed through the pozzolan material system. This is specific to the pozzolan material storage silo, rotary feeder, weighbelt conveyor, screw line, and bin vent dust collector, and not the entire facility. Also, condition II.E.3 was updated to reflect this correction. Permit #0982-08 replaced permit #0982-07.

D. Current Permit Action

On August 10, 2000, Holnam submitted a permit application to request federally enforceable permit conditions to limit potential particulate matter emissions. Holnam requested the federally enforceable conditions to ensure that the facility's potential emissions would be within the "area source" definition as defined in the Portland Cement Maximum Achievable Control Technology (PC MACT). Although this permit action could have been accomplished through a permit modification, an alteration was requested by Holnam to allow the public to comment on the permit. De minimis changes were also included in the permit (Department Decision) during the comment period. Permit #0982-09 replaces permit #0982-08.

E. Additional Information

Additional information, such as applicable rules and regulations, best available control technology (BACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (department). Upon request, the department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 - General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This section includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, MCA.

   Holnam shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the department upon request.

4. ARM 17.8.110 Malfunctions. The department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Subchapter 2 - Ambient Air Quality, including, but not limited to:

1. ARM 17.8.204 Ambient Air Monitoring,
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide,
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide,
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide,
5. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter,
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility,
7. ARM 17.8.222 Ambient Air Quality Standard for Lead, and
8. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}.

Holnam must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 - Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into an outdoor atmosphere from any source installed after November 23, 1968, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. No person shall cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of airborne particulate matter are taken. Such emissions of airborne particulate matter from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This section requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This section requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.

5. ARM 17.8.315 Odors. This rule requires that no person shall cause, suffer, or allow any emissions of gases, vapors, or odors beyond his property line in such manner as to create a public nuisance. A person operating any business or using any machine, equipment, device, facility or process which discharges into the outdoor air any odorous matter or vapors, gases, dusts, or any combination thereof which create odors, shall provide, properly install, and maintain in good working order and operation such odor control devices or procedures as may be specified by the department.

6. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This section requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth the in this section.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This section incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). The owner and operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60.

   Subpart F – Standards of Performance for Portland Cement Plants. The provisions of this Subpart are applicable to the following affected facilities in Portland cement plants: kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems. Sources subject to the requirements of this Subpart are applicable if the facility commences construction or modification of that source after August 17, 1971. This Subpart shall apply to sources at Holnam, including, but not limited to, the following:

   (i) Finish Mill #2;
   (ii) Finish Mill #4; and
   (iii) Storage Silos #26 through 30.

   Finish Mill #4 replaced Finish Mill #1 in 1988 and the product storage silos were installed in 1976. Since commencement of construction occurred after August 17, 1971 for both of these sources, 40 CFR 60 Subpart F applies. The replacement of the air slide in the Finish Mill #2 system was considered a modification of the Finish Mill #2 system. Since this modification was proposed to occur after August 17, 1971, then 40 CFR Part 60 Subpart F was also considered applicable to Finish Mill #2.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This section incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs). The owner and operator of any stationary source or modification, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63.

Subpart LLL – National Emission Standards for Hazardous Air Pollutants for The Portland Cement Manufacturing Industry. The Holnam Trident Plant must comply with all applicable requirements of this Subpart. On October 14, 1999, the department received initial notification designating the Trident Plant a major source. Holnam is currently testing the facility to determine emissions of HAPs, which could re-designate the facility as an area source.

D. ARM 17.8, Subchapter 5 - Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This section requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the department. Holnam submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the department; and the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions which pro-rate the required fee amount.

E. ARM 17.8, Subchapter 7 - Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.704 General Procedures for Air Quality Preconstruction Permitting. This air quality preconstruction permit contains requirements and conditions applicable to both construction and subsequent use of the permitted equipment.

2. ARM 17.8.705 When Permit Required--Exclusions. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter, or use any air contaminant sources which have the potential to emit more than 25 tons per year of any pollutant.

3. ARM 17.8.706 New or Altered Sources and Stacks--Permit Application Requirements. This section requires that a permit application be submitted prior to installation, alteration or use of a source. Holnam submitted the appropriate permit application for the current permit action.

4. ARM 17.8.710 Condition of Issuance of Permit. This section requires that Holnam demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. Holnam has demonstrated compliance with applicable rules and standards as required for permit issuance.

5. ARM 17.8.715 Emission Control Requirements. This section requires a source to install the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. Holnam was not required to submit a BACT analysis for the current permitting action because it is considered an administrative action and no new or altered sources are being addressed.

6. ARM 17.8.716 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the department at the location of the source.

7. ARM 17.8.717 Compliance with Other Statutes and Rules. This rule states that nothing in the permit shall be construed as relieving Holnam of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.101, *et seq.*

8. ARM 17.8.720 Public Review of Permit Applications. This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Holnam submitted an affidavit of publication on August 18, 2000 from the *Three Forks Herald*, a newspaper of general circulation printed and published in Three Forks, as proof of compliance with the public notice requirements. The notice was published on August 16, 2000.

9. ARM 17.8.731 Duration of Permit. An air quality permit shall be valid until revoked or modified as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

10. ARM 17.8.733 Modification of Permit. An air quality permit may be modified for changes in any applicable rules and standards adopted by the Board or changed conditions of operation at a source or stack which do not result in an increase in emissions because of those changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit, except as specifically provided in the regulations.

11. ARM 17.8.734 Transfer of Permit. This section states an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the department.

F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality (PSD), including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

Holnam is a major stationary source. Permit #0982-09 does not require PSD review because there will be no increase in emissions as a result of this permitting action.

G. ARM 17.8, Subchapter 12 - Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:

a) Potential to Emit (PTE) > 10 tons/year of any one hazardous air pollutant (HAP),

b) PTE > 25 tons/year of a combination of all HAPs,

c) Lesser quantity as the department may establish by rule,

d) PTE > 100 tons/year of any pollutant, or

e) Sources with the PTE > 70 tons/year of PM-10 in a serious PM-10 nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. Holnam submitted a Title V operating permit application on 06/06/96.

III. BACT Determination

A BACT determination is required for each new or altered source. Holnam shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that best available control technology shall be utilized.

The current permitting action did not require a BACT analysis because it is considered an administrative action and no new or altered sources were addressed.

IV. Emission Inventory (Permit #0982-09)

Total potential particulate emissions (from the inventory below): 523 tons/year
Calculated potential metal HAPs emissions (as 1% of potential PM emissions): 5.23 tons/year

Fugitive Emissions: Disturbed Areas
Max Thruput: 288 acres
Control: 0 %
Emission factor: 74.5 lb/acre (National AFS Emission Factor, SCC 30502010)
Annual particulate emissions: 10.728 tpy

Quarry Drilling
Max Thruput: 1,000,000 tpy
Control: 0 % (Quarry drill has built-in control equipment)
Emission factor: 1.68E-04 lb/ton material (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-10)
Annual particulate emissions: 0.084 tpy

Quarry Blasting
Max Thruput: 75 blasts/yr
Control: 0 %
Emission factor: 50 lb/blast (Montana Hard Rock Mining Factor)
Annual particulate emissions: 1.875 tpy

Limestone, Sand, and Shale Removal
Max Thruput: 865,500 tpy
Control: 0 %
Emission factor: 0.010 lb/ton (1999 AFS Plant Emission Inventory)
Annual particulate emissions: 4.328 tpy

Xfer: Truck Dump to Hopper to Apron Feeder 211AF1
Max Thruput: 750 tph; 865,500 tpy
Control: 50% (Truck dumps to below ground hopper)
Emission factor: 2.94E-03 lb/ton ore (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.636 tpy

Xfer: 211AF1 to Covered 211BC1
Max Thruput: 750 tph; 865,500 tpy
Control: Enclosed conveyors – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton ore (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.044 tpy

Primary Crusher 211HC1
Max Thruput: 750 tph; 865,500 tpy
Control: 90% (Enclosed)
Emission factor: 5.04E-03 lb/ton ore (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-03)
Annual particulate emissions: 0.218 tpy

Enclosed Vibrating Screen 211VS1
Max Thruput: 750 tph; 865,500 tpy
Control: Enclosed – control efficiency included in emission factor
Emission factor: 1.76E-03 lb/ton ore (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-02-03)
Annual particulate emissions: 0.763 tpy

Xfer: Surge Hopper to Ground Pile or 211BC3
Max Thruput: 750 tph; 865,500 tpy
Control: 0%
Emission factor: 2.94E-03 lb/ton ore (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 1.272 tpy

Xfer: 211BC3 to 211BC4
Max Thruput: 450 tph; 865,500 tpy
Control: Enclosed conveyors (in building)– control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton ore (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.044 tpy

Xfer: 211BC4 to 1 of 7 Silos
Max Thruput: 450 tph; 865,500 tpy
Control: Enclosed conveyors (in building)– control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton ore (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.044 tpy

Xfer: 1 of 7 Silos to 331BC1
Max Thruput: 130 tph; 865,500 tpy
Control: Enclosed in building and enclosed conveyors – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton ore (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.044 tpy

Raw Material Storage Piles
Max Thruput: 25.6 acres (Thru-put conservatively assumed to cover all available storage area)
Control: Enclosed in old quarry floor – control efficiency included in emission factor
Emission factor: 3.151 lb/day/acre (Control of Fugitive Dust Sources 4.1.3 (9/88))
Annual particulate emissions: 14.721 tpy

Fugitive Emissions: Haul Roads
Max Thruput: 40,012 vmt/yr
Control: 50% (for water on roads)
Emission factor: 6 lb/vmt (1999 AFS Plant Emission Inventory)
Annual particulate emissions: 63.018 tpy

Coal/Coke Unloaded (Coal is pneumatically unloaded; coke is dumped)
Max Thruput: 143,258 tpy
Control: 0%
Emission factor: 0.005 lb/ton (AP-42 Table 11.9-4 (1/95) (Class III))
Annual particulate emissions: 0.358 tpy

Coal/Coke Xfer: L11HP1 and L11HP2 to L21BC1
Max Thruput: 300 tph; 143,258 tpy
Control: 50% (hopper is underground)
Emission factor: 0.00294 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.105 tpy

Coal/Coke Xfer: L21BC1 to L21DG1 and L21DG2
Max Thruput: 300 tph; 143,258 tpy
Control: Equipment is enclosed and inside buildings – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.007 tpy

Coal/Coke Crusher L315HC1
Max Thruput: 300 tph; 143,258 tpy
Control: Equipment is enclosed and inside buildings – control efficiency included in emission factor
Emission factor: 1.01E-04 (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.007 tpy

Coal/Coke Xfer: L315C2 to L31BE1
Max Thruput: 300 tph; 143,258 tpy
Control: Equipment is enclosed and inside buildings – control efficiency included in emission factor
Emission factor: 1.01E-04 (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.007 tpy

Coal/Coke Silo Loading and Unloading
Max Thruput: 37,059 dscfm
Control: #L11BF1
Emission factor: 0.02 gr/dscf (Baghouse Specification)
Annual particulate emissions: 27.826 tpy

Coal and Coke Outside Storage Piles
Max Thruput: 143,258 tons
Control: 0%
Emission factor: 3.151 lb/day/acre (Control of Fugitive Dust Sources 4.1.3 Eqn. (9/88), see permit application for calculations)
Annual particulate emissions: 2.337 tpy

Kiln
Max Thruput: 425,000 tpy
Control: ESP (Production limit required by permit)
Emission factor: 0.77 lb/ton clinker (AP-42 Table 11.6-2 (1/95), SCC 3-05-007-06)
Annual particulate emissions: 163.625 tpy

Post Consumer Recycled Glass
Max Thruput: 800 tpy
Control: 0%
Emission factor: 2.7 lb/ton handled (1999 AFS Plant Emission Inventory)
Annual particulate emissions: 1.080 tpy

Clinker Cooler
Max Thruput: 425,000 tpy
Control: #471BF1 (Dust collector required by permit, 100,000 cfm flow rate)
Emission factor: 0.13 lb/ton (AP-42 Table 11.6-2 (1/95) controlled EF, SCC 3-05-006-14)
Annual particulate emissions: 27.625 tpy

Dust Discharge Spout between Kiln and Precipitator
Max Thruput: 79,244 tpy
Control: Has wind barrier on three sides – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4, Eq.1 (1/95))
Annual particulate emissions: 0.299 tpy

Xfer: Kiln Dust from Precipitator to 421SC1,2,3
Max Thruput: 10 tph; 79,244 tpy
Control: Enclosed – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4, Eq.1 (1/95))
Annual particulate emissions: 0.299 tpy

Xfer: Kiln Dust from 421SC1 to 421SC4
Max Thruput: 10 tph; 79,244 tpy
Control: Enclosed – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4, Eq.1 (1/95))
Annual particulate emissions: 0.299 tpy

Xfer: Kiln Dust from 421SC4 to 421BE1
Max Thruput: 10 tph; 79,244 tpy
Control: Enclosed – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4, Eq.1 (1/95))
Annual particulate emissions: 0.299 tpy

Xfer: Kiln Dust from 421BE1 to 421TK1
Max Thruput: 10 tph; 79,244 tpy
Control: Enclosed – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4, Eq.1 (1/95))
Annual particulate emissions: 0.299 tpy

Xfer: Kiln Dust from 421TK1 to 421SC5
Max Thruput: 10 tph; 79,244 tpy
Control: Enclosed– control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4, Eq.1 (1/95))
Annual particulate emissions: 0.299 tpy

Xfer: 421SC5 to Dustless Unloader
Max Thruput: 10 tph; 79,244 tpy
Control: Enclosed (wet material in dustless unloader) – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4, Eq.1 (1/95))
Annual particulate emissions: 0.299 tpy

Xfer: Dustless Unloader to Truck
Max Thruput: 90 tph; 79,244 tpy
Control: 50% (wet material in dustless unloader)
Emission factor: 0.182 lb/ton (AP-42 13.2.4, Eq.1 (1/95))
Annual particulate emissions: 3.596 tpy

Xfer: Kiln to Clinker Cooler #471CC1
Max Thruput: 425,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Xfer: #491CV1 to 491CV2
Max Thruput: 75 tph; 425,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Xfer: 491CV2 to 491BE2
Max Thruput: 75 tph; 425,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Xfer: 491BE2 to 491CV3
Max Thruput: 75 tph; 425,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Xfer: 491CV3 to Emergency Storage Silos
Max Thruput: 75 tph; 425,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Xfer: Emergency Storage Silos 1 - 4 to Truck
Max Thruput: 425,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Xfer: #491CV1 to 491BE1
Max Thruput: 425,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Xfer: #491BE1 to #491BC1
Max Thruput: 75 tph; 425,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Xfer: #491BC1 to Clinker Storage Silos
Max Thruput: 75 tph; 425,000 tpy
Control: Conveyors have tall sides and carry large material – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.021 tpy

Import Clinker Xfer: Dump to Apron Feeder to 595BE1
Max Thruput: 75,000 tpy
Control: 50% (enclosure, bottom dump to underground)
Emission factor: 0.003 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.055 tpy

Import Clinker Xfer: 595BE1 to Belt Conveyor
Max Thruput: 75,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.004 tpy

Import Clinker Xfer: Belt Conveyor to Silos 2A and 2B
Max Thruput: 75,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.004 tpy

Overflow Clinker Xfer: Clinker Storage Silos 2A and 2B to Ground
Max Thruput: 250,000 tpy (clinker may have to go through system twice)
Control: 0%
Emission factor: 0.003 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.368 tpy

Overflow Clinker Xfer: Dump to Apron Feeder to 595BE1
Max Thruput: 250,000 tpy (clinker may have to go through system twice)
Control: 50% (Bottom dump to underground)
Emission factor: 0.003 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.184 tpy

Overflow Clinker Xfer: 595BE1 to Belt Conveyor
Max Thruput: 250,000 tpy (clinker may have to go through system twice)
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.013 tpy

Overflow Clinker Xfer: Belt Conveyor to Silos 2A and 2B
Max Thruput: 250,000 tpy (clinker may have to go through system twice)
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.013 tpy

Gypsum Xfer: Rail Car to Apron Feeder to 595BE1
Max Thruput: 100 tph; 48,000 tpy
Control: 50% (Bottom dump to underground)
Emission factor: 0.003 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.035 tpy

Gypsum Xfer: 595BE1 to Belt Conveyor
Max Thruput: 100 tph; 48,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.002 tpy

Gypsum Xfer: Belt Conveyor to Interstice Bin
Max Thruput: 100 tph; 48,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.002 tpy

Overflow Gypsum Xfer: Interstice Bin to Ground
Max Thruput: 48,000 tpy (gypsum may go through system twice)
Control: 50% (3-sided enclosure)
Emission factor: 0.003 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.035 tpy

Overflow Gypsum Xfer: Dump to Apron Feeder to 595BE1
Max Thruput: 100 tph; 48,000 tpy (gypsum may go through system twice)
Control: 50% (Bottom dump to underground)
Emission factor: 0.003 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.035 tpy

Overflow Gypsum Xfer: 595BE1 to Belt Conveyor
Max Thruput: 100 tph; 48,000 tpy (gypsum may go through system twice)
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.002 tpy

Overflow Gypsum Xfer: Belt Conveyor to Interstice Bin
Max Thruput: 100 tph; 48,000 tpy (gypsum may go through system twice)
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.002 tpy

Xfer: Clinker Silos 1A, 1B, & Interstice to 534BC1
Max Thruput: 66.5 tph; 395,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.020 tpy

Xfer: 534BC1 to #4 Finish Mill
Max Thruput: 395,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.492 tpy

Xfer: #4 Finish Mill to 594ASA or 594ASB
Max Thruput: 395,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.492 tpy

Xfer: 594ASA or 594ASB to 594BE1
Max Thruput: 395,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.492 tpy

Xfer: 594BE1 to 594ASJ
Max Thruput: 395,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.492 tpy

Xfer: 594ASJ to 594ASF-G or 594ASC
Max Thruput: 395,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.492 tpy

Xfer: Silo 2A or 2B & Interstice to 532BC1 or 533BC1
Max Thruput: 28 tph; 245,280 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.012 tpy

#2 Finish Mill
Max Thruput: 74,118 dscfm
Control: 562BF1
Emission factor: 0.02 gr/dscf (Baghouse specification)
Annual particulate emissions: 55.652 tpy

Xfer: Silo 2A or 2B & Interstice to 532BC1 or 533BC1
Max Thruput: 28 tph; 245,280 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 1.01E-04 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-06)
Annual particulate emissions: 0.012 tpy

Xfer: 533BC1 to Finish Mill #3
Max Thruput: 245,280 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 0.926 tpy

Xfer: Finish Mill #3 to 593BE1
Max Thruput: 245,280 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 0.926 tpy

Xfer: 593BE1to 593AS1
Max Thruput: 245,280 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 0.926 tpy

Xfer: 593AS1 thru 593SR1 to 592SC2 or 593AS2
Max Thruput: 245,280 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 0.926 tpy

Xfer: Cement to Cement Cooler
Max Thruput: 94 tph; 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Xfer: Cement Cooler to Silos and Bins
Max Thruput: 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Xfer: Silos 1 - 13 to Screw Conveyors
Max Thruput: 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Xfer: Screw Conveyors to 612BE2 or 612BE1
Max Thruput: 103 tph; 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Scalping Screen 601SV1
Max Thruput: 103 tph; 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.001764 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-02-03)
Annual particulate emissions: 0.463 tpy

Xfer: Overs to Ground
Max Thruput: 3,833 tpy
Control: 0%
Emission factor: 0.182 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 0.348 tpy

Xfer: Surge Hopper 601PP1 to Bulk Cement Silos
Max Thruput: 103 tph; 521,168 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.968 tpy

Xfer: 592SC1 to Silos 26-30
Max Thruput: 278,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.050 tpy

Xfer: Silos 26-30 to Silos 14-25
Max Thruput: 278,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.050 tpy

Xfer: Silos 14-25 to 621SC1
Max Thruput: 278,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.050 tpy

Xfer: 621SC1 to 631AS1
Max Thruput: 278,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.050 tpy

Xfer: 631AS1 to Railroad Car
Max Thruput: 278,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.050 tpy

Xfer: Bins 1-5 to Conveyors 612SC1-5 (for Sacks)
Max Thruput: 52 tph; 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Xfer: Conveyors 612SC1-5 to 642BE1 or 641BE1
Max Thruput: 110 tph; 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Xfer: 641BE1 to Screw Conveyor
Max Thruput: 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Pre-sacking Screen
Max Thruput: 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.001764 lb/ton (AP-42 Table 11.19.2-2, Footnote c (1/95), SCC 3-05-020-02-03)
Annual particulate emissions: 0.463 tpy

Xfer: To One of Packing Bins 641PM1-4
Max Thruput: 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Xfer: From 641PM1-4 to Packer
Max Thruput: 525,000 tpy
Control: Enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Bags Xfer: Bags from Packer to One of 651BC1-4
Max Thruput: 525,000 tpy
Control: Material in bags and enclosed – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Bags Xfer: 651BC1-4 to 651BC5
Max Thruput: 525,000 tpy
Control: Material in bags and enclosed – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 1.983 tpy

Bags Xfer: Maximum of 6 to Rail Loadout
Max Thruput: 525,000 tpy
Control: Material in bags – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 11.897 tpy (includes the maximum of six pathways)

Fuel Usage: Diesel Fuel
Max Thruput: 150,000 gal/yr
Control: 0%
Emission factor: 17.7 lb/1000 gal (AP-42 Vol. II Mobile Sources, Supplement. A, Table II-7.1, off-highway trucks)
Annual particulate emissions: 1.328 tpy

Fuel Usage: Gasoline
Max Thruput: 18,000 gal/yr
Control: 0%
Emission factor: 6.1 lb/1000 gal (AP-42 Vol. II Mobile Sources, Supplement A, Table II-7.2, miscellaneous)
Annual particulate emissions: 0.055 tpy

Landfilled Cement Kiln Dust
Max Thruput: 79,244 tpy
Control: 50% (water spray as necessary in permit)
Emission factor: 0.56 lb/ton produced (1999 AFS Plant Emission Inventory – 50% controlled EF)
Annual particulate emissions: 22.188 tpy

Pozzolan Material System
Max Thruput: 7,412 dscfm
Control: Baghouse (permit limit = 50,000 tons, 0.02 gr/dscfm)
Emission factor: 0.02 gr/dscf (1999 AFS Plant Emission Inventory)
Annual particulate emissions: 5.565 tpy

Slag Grinding Agent Storage Pile
Max Thruput: 85,410 tpy
Control: 0%
Emission factor: 1.1343 lb/ton (1999 AFS Plant Emission Inventory)
Annual particulate emissions: 48.440 tpy

Slag Grinding Agent Xfer: Pile to Bins
Max Thruput: 85,410 tpy
Control: Bins act as enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 0.323 tpy

Slag Grinding Agent Xfer: Bins to Conveyor
Max Thruput: 85,410 tpy
Control: Bins act as enclosure – control efficiency included in emission factor
Emission factor: 0.008 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 0.323 tpy

Slag Grinding Agent Xfer: Conveyor to XXXXXX
Max Thruput: 85,410 tpy
Control: 0%
Emission factor: 0.182 lb/ton (AP-42 13.2.4. Eq. 1 (1/95))
Annual particulate emissions: 7.753 tpy

Waste Oil Burner

Max Thruput: 14,717 gal/yr
Control: 0%
Emission factor: 39.98 lb/1000 gal (AP-42 Table 1.3-1 (9/98))
Annual particulate emissions: 0.294 tpy

V. Existing Air Quality

Holnam's cement plant is located near the headwaters of the Missouri River in Gallatin County, Montana. Gallatin County is currently classified as attaining the National Ambient Air Quality Standards (NAAQS) for PM-10. The area's climate is semi-arid and the primary land utilization in the area is agricultural.

VI. Ambient Air Impact Analysis

Because the current permitting action actually limits allowable particulate emissions, the department does not believe a violation of ambient air standards will occur as a result. No physical changes, no changes in the methods of operations, and no increases in actual emissions are included in this permit action.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

VIII. Environmental Assessment

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

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air and Waste Management Bureau
1520 East Sixth Avenue
P.O. Box 200901, Helena, Montana 59620-0901
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued For: Holnam, Inc.
4070 Trident Road
Three Forks, MT 59752

Permit Number: 0982-09

Preliminary Determination on Permit Issued: 09/15/00
Department Decision Issued: 10/04/00
Final Permit Issued: 10/20/00

1. **Legal Description of Site:** The Holnam, Inc. (Holnam) facility is located in the Northeast ¼ of Section 9, Southeast ¼ of Section 4, Southwest ¼ of Section 3, Northwest ¼ of Section 10, Township 2 North, Range 2 East, Gallatin County, Montana.

2. **Description of Project:** On August 10, 2000, Holnam submitted a permit application to request federally enforceable permit conditions to limit potential particulate matter emissions. Holnam requested the federally enforceable conditions to ensure that the facility's potential emissions would be within the "area source" definition as defined in the Portland Cement Maximum Achievable Control Technology (PC MACT). Although this permit action could have been accomplished through a permit modification, an alteration was requested by Holnam to allow the public to comment on the permit.

3. **Objectives of Project:** To allow for potential emission calculations that would demonstrate the Holnam Trident Facility would be an area source for the purposes of PC MACT applicability.

4. **Alternatives Considered:** The only alternative would be the "no action" alternative which would include not issuing the permit, making this environmental assessment unnecessary. The permit would not be issued without appropriate permit limitations allowing the source to maintain compliance with air standards. Because Holnam has demonstrated compliance with all applicable rules and regulations as required for permit issuance, the department has eliminated the "no action" alternative from further consideration. This permit action would not include any increase in emissions from the facility. New permit limitations would be added to the permit.

5. **A listing of mitigation, stipulations and other controls:** A list of enforceable permit conditions and a complete permit analysis would be contained in Air Quality Permit #0982-09.

6. **Regulatory effects on private property:** The department has considered alternatives to the conditions imposed in this permit as part of the permit development. The department has determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. **The following table summarizes the potential physical and biological effects of the proposed project on the human environment.** The "no action alternative" was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats				X		Yes
B	Water Quality, Quantity, and Distribution				X		Yes
C	Geology and Soil Quality, Stability, and Moisture				X		Yes
D	Vegetation Cover, Quantity, and Quality				X		Yes
E	Aesthetics				X		Yes
F	Air Quality				X		Yes
G	Unique Endangered, Fragile, or Limited Environmental Resource				X		Yes
H	Demands on Environmental Resource of Water, Air, and Energy				X		Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts				X		Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the department.

A. Terrestrial and Aquatic Life and Habitats

This permitting action would reduce allowable emissions. No impacts to terrestrial life, aquatic life, and habitats are expected. This area does not appear to contain any critical or unique wildlife habitat or aquatic life.

B. Water Quality, Quantity, and Distribution

The actions addressed in this permit would not result in a change in the amount or characteristics of surface water discharged or the alteration of the course or magnitude of any drainage system. Furthermore, this action would not result in a change in the quality or quantity of ground water. Therefore, no impacts to water quality, quantity, and/or distribution would occur.

C. Geology and Soil Quality, Stability, and Moisture

No additional disturbance would be created from this action either inside or outside the current facility boundary. This project would not change the soil stability or geologic substructure or result in any increased disruption, displacement, erosion, compaction, or moisture loss, which would reduce productivity or fertility at or near the site. No unique geologic or physical features would be disturbed. Therefore, no impacts to geology and soil quality, stability, and moisture would occur.

D. Vegetation Cover, Quantity, and Quality

This project involves the addition of emission limits only; therefore, vegetative cover, quantity, and quality would not be disturbed inside or outside the facility boundaries. This action would not affect the diversity, productivity, or abundance of plant species in the surrounding areas.

E. Aesthetics

There would be no significant change in appearance or noise level.

F. Air Quality

Previously modeled levels of pollutants (prior to the emission limitations to be added in this action) show compliance with the National Ambient Air Quality Standards (NAAQS) and the Montana Ambient Air Quality Standards (MAAQS). No impact on air quality is expected.

G. Unique Endangered, Fragile, or Limited Environmental Resources

This permitting action would not result in impacts to terrestrial and aquatic life and/or their habitat. The department is not aware of any unique, rare, threatened, or endangered species in the area surrounding the facility.

H. Demands on Environmental Resource of Water, Air, and Energy

This project would not consume any additional energy, air, or water resources.

I. Historical and Archaeological Sites

This project would not disturb a greater land surface than has already been occupied by the facility. To the best of the department's knowledge, there is no historical or archaeological site in this area. According to the Montana State Historic Preservation Office, there would be low likelihood of disturbance to any known archaeological or historic site given any previous industrial disturbance in the area. Therefore, no impacts to any historical or archaeological sites would occur.

J. Cumulative and Secondary Impacts

The emission limitations reflected in this permit action would result in no cumulative and secondary impacts to terrestrial and aquatic habitats, water quality, and air quality.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The "no action alternative" was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue				X		Yes
D	Agricultural or Industrial Production				X		Yes
E	Human Health				X		Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services				X		Yes
J	Industrial and Commercial Activity				X		Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts				X		Yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:
The following comments have been prepared by the department.

A. Social Structures and Mores
B. Cultural Uniqueness and Diversity
H. Distribution of Population

This project would not involve any significant physical or operational change that would affect the location, distribution, density, or growth rate of the human population. In addition, the project would not alter the cultural uniqueness or diversity of the community surrounding the facility. The fundamental moral views of a social group would not be altered as a result of this permitting action.

C. Local and State Tax Base and Tax Revenue
I. Demands of Government Services

The changes to Holnam's air quality permit would not result in a need for new or altered governmental services, nor adversely affect local or state tax bases or revenues.

D. Agricultural or Industrial Production
J. Industrial and Commercial Activity

This project would not result in a reduction of available acreage or productivity of any agricultural land; therefore, agricultural production would not be affected. Industrial production and commercial activity at the facility or in the neighboring area would not be altered by issuing permit #0982-09.

E. Human Health

The two primary vehicles for impact upon human health are water and air. This permitting action would not result in a change in the amount or characteristics of surface water discharged or the quality or quantity of ground water. Therefore, human health impacts from water would not occur. The permit limitations reflected in this permit action would decrease allowable pollutant and production levels. No health impacts from either water or air would occur.

F. Access to and Quality of Recreational and Wilderness Activities

This project would not alter any existing access to or quality of any recreational or wilderness area. This project would not have an impact on recreational or wilderness activities because the project would take place within an existing facility's boundaries.

G. Quantity and Distribution of Employment

This project would not result in any impacts to the quantity and distribution of employment at the facility or surrounding community.

K. Locally Adopted Environmental Plans and Goals

There are no locally adopted environmental plans and goals that would be affected by the current permit action.

L. Cumulative and Secondary Impacts

No cumulative or secondary impacts would occur as a result of this action.

Recommendation: An EIS is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The action involves adding permit limitations, with no increase in pollutant levels. The analysis indicates compliance with all applicable air quality rules and regulations.

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

Individuals or groups contributing to this EA: Department of Environmental Quality, Permitting and Compliance Division - Air and Waste Management Bureau.

EA prepared by: Debbie Skibicki
Date: 09/07/00