

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT**

**Air, Energy, & Mining Division
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Barretts Minerals, Inc.
Dillon Talc Processing Facility
East ½ of Section 17, Township 8 South, Range 9 West, in Beaverhead County
8625 MT HWY 91 South
Dillon, MT 59725

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		Method 5 and Method 9 (as required by the Department)
Ambient Monitoring Required		X	
Continuous Opacity Monitoring Systems (COMS) Required		X	
Continuous Emission Monitoring Systems (CEMS) Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
Administrative Rules of Montana (ARM) Subchapter 7 Montana Air Quality Permit (MAQP)	X		MAQP #1995-18
New Source Performance Standards (NSPS)	X		40 CFR 60, Subparts OOO and UUU
National Emission Standards for Hazardous Air Pollutants (NESHAPS)	X		40 CFR 61, Subpart M
Maximum Achievable Control Technology (MACT)		X	
Major New Source Review (NSR) - includes Prevention of Significant Deterioration (PSD) and/or Non-attainment Area (NAA) NSR		X	
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
Compliance Assurance Monitoring (CAM)		X	
State Implementation Plan (SIP)	X		General SIP

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SECTION I. GENERAL INFORMATION

A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emission units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the United States Environmental Protection Agency (USEPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the original application submitted by Barretts Minerals, Inc. (Barretts) on March 19, 1995; the significant modification application submitted by Barretts on May 20, 2003, and additional information submitted on September 22, 2003; the renewal application submitted on July 20, 2004; the significant modification application submitted on January 19, 2005, and additional information submitted on February 3, 2005; the significant modification application submitted on May 10, 2005, and additional information submitted on June 8, 2005; the significant modification application submitted on May 1, 2006; the significant modification application submitted on September 22, 2006, and additional information submitted on October 10, 2006; the renewal application submitted on September 15, 2009; the de minimis notice received on December 9, 2011, the administrative amendment request received on February 29, 2012, a de minimis notice received on July 21, 2014, and the renewal application received on September 1, 2015.

B. Facility Location

Barretts owns and operates a talc processing facility located in the East ½ of Section 17, Township 8 South, Range 9 West, in Beaverhead County, Montana. Beaverhead County is designated as an Unclassifiable/Attainment area for National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. The facility is located approximately 7 miles South of Dillon, adjacent to Interstate 15. The complex entrance is near the Beaverhead Canyon along the Beaverhead River.

C. Facility Background Information

Montana Air Quality Permit Background

The Department of Environmental Quality (Department) issued the original Montana Air Quality Permit (MAQP) to Pfizer, Inc. (Pfizer) on June 30, 1970. MAQP **#179-082470** was issued for the #1 Jet Mill.

The Department issued MAQP **#561-061273** on May 16, 1973, for Hammermills #3 and #4, the Bauer Mill, and the Bagging Plant.

MAQP **#574-071073** was issued June 16, 1973, for the secondary cone crusher and the #1 Jet Mill.

MAQP **#638-101073** was issued October 5, 1973, for the #3 (66") Roller Mill, #2 Jet Mill, and bagging plant.

MAQP **#690-022674** was issued February 25, 1974, for the rotary kiln.

MAQP **#1061** was issued April 28, 1977, for the #1 (50") Roller Mill.

MAQP **#1081** was issued July 12, 1977, for the central vacuum system.

MAQP **#1090** was issued July 12, 1977, for the #2 (50") Roller Mill.

MAQP **#1186** was issued February 22, 1978, for the JS 30 Jet Stream Classifier and related equipment.

MAQP **#1493** was issued June 27, 1980, for a #4 Raymond Roller Mill, #3 Jet Mill, and the Packaging equipment. This equipment was never installed.

MAQP **#1576** was issued April 20, 1981, for a Jet Mill Nuisance Dust Collector. This equipment was never installed.

MAQP **#1583** was issued April 22, 1981. This permit was an operating permit to cover the following permits: MAQP #1576; MAQP #1186; MAQP #1061; MAQP #1081; MAQP #574-071073; MAQP #561-061273; MAQP #638-101073; and MAQP #1090.

MAQP **#1618** was issued August 18, 1981, for the #1 Jet Mill.

MAQP **#1995** was issued February 15, 1985, for the talc densifier.

The Large Bag Filling system was installed on January 8, 1986. No permit was issued for this construction.

MAQP **#1995A** was issued May 8, 1990, for the beneficiation plant. MAQP #1995A replaced all previously issued permits.

MAQP **#1995-02** was issued June 3, 1992, for the addition of the JS 80 Classifier, a Classifier Feed Bin, Pack Bin, packer, and related equipment. This equipment was added to the plant to allow the company to market a new product. MAQP #1995-02 replaced MAQP #1995A.

MAQP **#1995-03** was issued December 7, 1992, for a Semi-bulk packaging system. This permit also changed the name on the MAQP from Pfizer to Barretts, as requested by the company. MAQP #1995-03 replaced MAQP #1995-02.

MAQP **#1995-04** was issued November 18, 1993, for the installation and operation of Silo #7, Silo #8, Silo #9, Silo #10, the Bulk Loadout System, HiRoller Enclosed Belt conveyor, and Packer (PKR33103). All these sources, except the Bulk Loadout system, are subject to Standards of Performance for New Stationary Source (NSPS) 40 CFR 60, Subpart OOO, requirements. Silo #7, Silo #8, and the Bulk Loadout System were installed at the plant in 1990 without a permit. Since this was discovered, Barretts applied to have the equipment added to the permit. Silo #9 and Silo #10 were installed in May of 1994. The HiRoller Enclosed Belt conveyor was installed to replace the current screw conveyors used to feed the beneficiation plant. The Packer (PKR33103) was planned to increase the bag accuracy by increasing the fill time and was added to the existing packout area. The conveyor and packer were controlled by existing baghouses.

The permit also included some clarifications and the addition of Barretts' numbering system for identifying equipment. The numbers were incorporated into the permit. The Department uses

the numbers, along with the descriptions of equipment, in communications concerning the facility. The descriptions and numbers are also used for conducting emission inventories and tracking an exceedance.

The clarifications associated with the permit were the more detailed identification of which sources at the plant (to the best of the Department's knowledge) are subject to NSPS requirements. The two NSPS subparts that have been identified as affecting this facility are 40 CFR 60, Subpart OOO, and 40 CFR 60, Subpart UUU. MAQP #1995-04 replaced MAQP #1995-03.

MAQP #1995-05 was issued January 29, 1995, for the installation and operation of the following equipment: Coated Talc #1 Feed Bin; Coated Talc #2 Feed Bin; K-tron Feed Bin; Coated Talc Recycle System; Coated Talc #1 Product Silo; Coated Talc #2 Product Silo; Coated Talc Small Bag Packer; Coated Talc Semi-Bulk Packer; ACM Mill; and the associated control equipment. With the addition of this equipment, coated talc production increased from 1,000 pounds per hour (lbs/hr) to 4,000 lbs/hr.

The ACM Mill allowed the facility to increase the production and sizing capabilities of milled talc. The addition of the ACM Mill also allowed Barretts to change the use of the existing mills to allow for a better flow of sized materials. MAQP #1995-05 replaced MAQP #1995-04.

MAQP #1995-06 was issued December 17, 1995, for the installation and operation of a talc pelletizer system including a dryer (natural gas-fired, vibratory), loadout conveyor and loadout system, and the associated control equipment. Two existing bins, which had not previously been permitted, were also included (Compactor Classifier Bin and Compactor Jet Mill Feed Bin). As part of this permit action, the requirement for daily opacity observations was reduced to weekly opacity observations. MAQP #1995-06 replaced MAQP #1995-05.

MAQP #1995-07 was issued April 29, 1996, for the relocation of semi-bulk packaging equipment and the addition of the #1 and #2 Semi-bulk Feed Bins and collectors. MAQP #1995-07 replaced MAQP #1995-06.

On July 24, 1999, Barretts was issued MAQP #1995-08. Barretts requested an alternative to the required weekly visible emission observations and the delta pressure data from baghouse sources. The modification required regular inspection and preventive maintenance similar to what will be required at the facility through the Title V permit. In addition, the equipment list was updated with the correct source terminology.

The calciner was removed from the list of equipment requiring a baghouse (Section II.A.3 of MAQP #1995-07) because the Calciner was incorrectly incorporated into Section II.A.3 in MAQP #1995-04.

The beneficiation dryer's particulate limit and opacity limitation listed in Section II.B.5 of MAQP #1995-07 were corrected. The limitations were incorrectly stated in MAQP #1995-07. The corrected values were incorporated into Section II.B.8 of the permit.

The new silo and the new baghouse that were constructed according to the provisions of the Administrative Rules of Montana (ARM) 17.8.705(1)(r) were incorporated into the equipment list in the permit analysis. The project was completed to improve the Roller Mill rejects collection and recycling system (Throw-puts alley). The existing DC032407 Mikro-Pulsaire Model 16S-8-20 baghouse was replaced with a Mikro-Pulsaire Model 36S-8-20 baghouse.

Further, the testing requirements and the rule references were updated. MAQP #1995-08 replaced MAQP #1995-07.

On October 18, 2000, Barretts was issued MAQP **#1995-09**, for the addition of a 30-ton storage silo (CPS Storage Silo) and two associated baghouses (CPS Silo Baghouse and CPS Vacuum Packer Baghouse) to the existing centralized packaging system. The CPS Silo Baghouse controls emissions resulting from material transfer to the silo and the CPS Silo Reclaim Baghouse captures emissions from the packaging reclaim system. MAQP #1995-09 replaced MAQP #1995-08.

On November 6, 2000, the Department received a letter, from Barretts, requesting that MAQP #1995-09 be modified so that the equipment identification nomenclature would match the nomenclature in Barretts Title V operating permit.

In addition, on March 23, 2001, the Department received a request for the installation and operation of a dust collector on top of silo #15. The baghouse was to be operated as process equipment utilized for product reclaim during silo loading operations. Because potential emissions from the baghouse were less than the de minimis threshold of 15 tons per year, the change was a de minimis change as defined in ARM 17.8.705(1)(r).

Further, on April 5, 2001, the Department received a letter requesting changes in the emission testing requirements for certain equipment at the plant. MAQP #1995-09 requires that several pieces of near identical equipment be tested on the same frequency and schedule. Barretts proposed that these units be tested on an alternating schedule pending any significant affected equipment or process changes.

On July 6, 2001, Barretts was issued MAQP **#1995-10**, for the installation and operation of the dust collector baghouse on top of silo #15. The baghouse was added to the MAQP according to the provisions of ARM 17.8.705(1)(r). In addition, the equipment identification nomenclature was updated to match the nomenclature used in Barretts Title V Operating Permit #OP1995-00. However, Barretts' request to modify the testing schedules of several pieces of equipment was not incorporated into MAQP #1995-10 because all of the testing requirements in Section II.C of the MAQP include a specific schedule and the statement "or another testing schedule as may be approved by the Department". The Department determined that any testing schedule change requests would be evaluated on a case-by-case basis. MAQP #1995-10 replaced MAQP #1995-09.

On May 20, 2003, the Department received a request from Bison Engineering, Inc. (Bison), on behalf of Barretts, requesting an administrative amendment to MAQP #1995-10. Specifically, Barretts requested the following changes to MAQP #1995-10:

- Update the emitting unit descriptions and/or titles;
- Remove decommissioned equipment from the permit;
- Add equipment to the permit that was incorporated according to the provisions of ARM 17.8.745(1);
- Separate multiple emitting units that are referenced as one emitting unit;
- Combine multiple emitting units that vent through the same baghouse (process equipment) into one single emitting unit;
- Revise the testing schedules of controlled point sources; and
- Add a new Jet Mill (#4 Jet Mill) to the facility according the provisions of ARM 17.8.745.

This permit action incorporated the changes requested by Barretts. In addition, the conditions requiring initial source tests (conditions II.C.1 through II.C.9) were removed from the permit because Barretts completed all of the initial source tests, as appropriate. MAQP #1995-11 replaced MAQP #1995-10.

On February 6, 2004, the Department received a de minimis notification letter from, on behalf of Barretts. Barretts notified the Department that they would be replacing the existing fan in the baghouse (DC032407) for the Roller Mill Rejects (Throwouts) Silo (EU082). The change increased the airflow capacity of the baghouse to 2,973 actual cubic feet per minute (acfm), which represented a 1.404 ton per year increase in the facility's Potential to Emit (PTE). The change was accomplished according to the provisions of ARM 17.8.745 and the emission inventory contained in the permit analysis was adjusted to account for the change in the facility's PTE. On May 21, 2004, MAQP #1995-12 replaced MAQP #1995-11.

On June 4, 2004, the Department received a de minimis notification letter from Bison, on behalf of Barretts. Barretts notified the Department that they would be replacing the existing baghouse (DC032612) for the #1 Jet Mill and #4 Jet Mill (EU 037) with a smaller baghouse (DC032613). The new baghouse is designed to achieve a nominal air flow rate of 5,000 dry standard cubic feet per minute (dscfm) and a maximum Particulate Matter (PM) and particulate matter of less than 10 microns (PM₁₀) emission rate of 0.020 grains/dscf (gr/dscf). The new baghouse had the PTE PM and PM₁₀ at a rate of 3.754 tons per year.

In addition, Barretts notified the Department of the addition of a new Silo (Silo #16, (EU 087)) and associated baghouse (DC032516) to be installed at the facility. The baghouse is designed to achieve a nominal air flow rate of 3,200 dscfm and a maximum PM and PM₁₀ emission rate of 0.020 gr/dscf. The new baghouse had the PTE PM and PM₁₀ at a rate of 2.405 tons per year.

Further, Barretts requested that the Department remove the #1 Jet Mill Pack Bin (lift fan) (EU 038) from the permit because the equipment has been removed from operations. The permit action incorporated Barretts' requests into the permit according to the provisions of ARM 17.8.745. Furthermore, as referenced in the Title V Renewal application submitted on July 20, 2004, minor errors in the emission inventory were corrected. On August 26, 2004, MAQP #1995-13 replaced MAQP #1995-12.

On January 13, 2005, the Department received a de minimis notification letter from Barretts. Barretts notified the Department of the addition of a new talc mill (ACM #2 Mill) and associated fabric filter baghouse (DCO32522). The baghouse is designed to achieve a nominal air flow rate of 12,000 acfm (8,845 dscfm) and a maximum PM and PM₁₀ emission rate of 0.020 gr/dscf. The baghouse had a PTE PM and PM₁₀ of 6.64 tons per year.

In addition, Barretts notified the Department of a modification of the Roller Mill Rejects (Throwouts) Silo (EU 082) baghouse (DCO32407). The modification consists of increasing the nominal airflow rate from 2307 acfm (1790 dscfm) to 2900 ACFM (2250 dscfm). The maximum PM and PM₁₀ emission rate of the baghouse will remain 0.020 gr/dscf. The modified baghouse had a PTE PM and PM₁₀ of 1.689 tons per year.

Further, Barretts notified the Department of the addition of a new vacuum system (ACM surface vacuum). Barretts reported a PTE of 0.00 tons per year for the vacuum system because it would vent inside EU 082. The current permit action incorporated Barretts' requests into the permit according to the provisions of ARM 17.8.745(1). In addition, conditions were added to the permit according to the provisions of ARM 17.8.745(2) that required the ACM #2 Mill be

vented to a baghouse and required the ACM surface vacuum be vented inside EU082. Furthermore, NSPS conditions were applied to the ACM #2 Mill. On March 18, 2005, MAQP #1995-14 replaced MAQP #1995-13.

On October 26, 2005, May 10, 2005, and May 1, 2006, the Department received de minimis notification letters from Barretts. Barretts notified the Department of the replacement of the Roller Mill Rejects (Throwouts) Silo baghouse, the addition of a heat sterilization system, and a new talc mill designated as the #5 Jet Mill, respectively. The current permit action added the de minimis equipment to MAQP #1995-14.

Barretts replaced the baghouse on the Roller Mill Rejects (Throwouts) Silo to enhance dust collection capabilities. The replacement resulted in an increase in air flow capacity from 2970 acfm to 4000 acfm with an increase in emissions of 0.623 tons per year. The addition of the heat sterilization system was to give the facility the ability to treat talc for specialty markets. The addition of the new #5 Jet Mill will increase emissions 2.07 tons per year, have a design capacity of 4914 acfm and will not require expansion of the boiler capacity. The emission inventory was updated to reflect the additional emissions. On August 4, 2006, MAQP #1995-15 replaced MAQP #1995-14.

On September 22, 2006, the Department received a de minimis notification letter from Barretts. Barretts notified the Department of the addition of a new silo (Silo #17) and associated fabric filter baghouse (DCO-328-22). The baghouse is designed to achieve a nominal air flow rate of 1,200 acfm (978 dscfm) and a maximum PM and PM₁₀ emission rate of 0.020 gr/dscf. The baghouse has a PIE PM and PM₁₀ of 0.736 tons per year. The current permit action added Silo #17 to the MAQP according to the provisions of ARM 17.8.745(1). Conditions were also added to the permit according to the provisions of ARM 17.8.745(2) that will require Silo #17 be vented to a baghouse and identified NSPS requirements applicable to Silo #17.

In addition, two jet mills that were previously added to the permit (#4 jet mill (EU 037) and #5 jet mill (EU 092)) had been identified as being subject to NSPS, Subpart OOO. Therefore, NSPS conditions were applied to EU 037 (only the #4 jet mill) and EU 092. Further, a condition was added to the permit according to the provisions of ARM 17.8.745(2) that will require EU 092 be vented to a baghouse. On January 22, 2007, MAQP #1995-16 replaced MAQP #1995-15.

On January 20, 2009, the Department received a de minimis notification letter in accordance with ARM 17.8.745(1)(b) from Barretts. The de minimis action added a baghouse to the existing #1 Jet Mill Crude Bin to prevent cross contamination with the #2 Jet Mill Crude Bin. The #1 Jet Mill Crude Bin and the #2 Jet Mill Crude Bin utilized the same baghouse prior to the project. Barretts also use this baghouse to capture and reclaim material used in the talc manufacturing process. The baghouse has a nominal fan capacity of 1000 acfm and a guaranteed maximum particulate emission rate of 0.02 gr/dscf.

The modification included the de minimis change and updated the permit to reflect current permit language, format, and rule references. MAQP #1995-17 replaced MAQP #1995-16.

On July 21, 2014, the Department received a de minimis notification letter in accordance with ARM 17.8.745(1)(b) from Barretts requesting to install a new Talc Compaction System (TCS). The TCS project is designed to take finely ground talc and densify it through a roll compaction system. The system includes a feed system, compaction unit, transportation system and packaging equipment. The TCS will utilize an existing fabric filter reclaim system (FFRS) to

capture air-entrained talc particles and return them to the process. BMI plans to use the existing FFERS formerly assigned to the #4 Jet Stream Classifier Rotor (EU015). The emitting unit number, EU015, was retained and applied to the new TCS. **MAQP #1995-18** replaced MAQP #1995-17.

Title V Operating Permit Background

On March 29, 1995, the Department received an operating permit application for the Barretts talc processing facility. The permit application was deemed administratively complete on March 30, 1995; and the permit application was deemed technically complete on April 30, 1995. Additional submittals regarding the permit application were submitted on March 9, 1999. Title V Operating Permit #**OP1995-00** became final and effective on January 12, 2000.

On May 20, 2003, the Department received a significant modification application from Bison, on behalf of Barretts, requesting several revisions to Title V Operating Permit #OP1995-00. Specifically, Barretts requested the following changes:

- Update the emitting unit descriptions and/or titles;
- Remove decommissioned equipment from the permit;
- Add equipment to the permit that has been incorporated into MAQP #1995-10, but not yet included in the Title V permit;
- Separate multiple emitting units that are referenced as one emitting unit;
- Combine multiple emitting units that vent through the same baghouse (process equipment) into one single emitting unit;
- Revise the testing schedules of controlled point sources; and
- Add a new Jet Mill (#4 Jet Mill) to the Title V permit that was incorporated into MAQP #1995-11 according the provisions of ARM 17.8.745.

On July 16, 2004, Title V Operating Permit #**OP1995-01** became final and effective and replaced Title V Operating Permit #OP1995-00.

On June 4, 2004, the Department received a minor modification application (de minimis change notification letter) to incorporate the changes requested by Barretts that are noted in the MAQP Background Section (see MAQP #1995-13). Prior to the Department determining if the changes would be considered a minor modification, Barretts submitted their renewal application on July 20, 2004. Therefore, the Department decided to incorporate the changes as part of the Title V Permit Renewal. In addition, the centralized reclaim (EU044) was not previously included in the permit; therefore, the Department added EU044 to Section H of the permit (Particulate Sources – NSPS with Baghouses) because the Department believes that EU044 is an NSPS affected facility. On March 18, 2005, Title V Operating Permit #**OP1995-02** replaced Title V Operating Permit #OP1995-01.

On January 13, 2005, the Department received a minor modification application (de minimis change notification letter) to incorporate the changes requested by Barretts that are noted in the MAQP Background Section (see MAQP #1995-14). On January 21, 2005, the Department notified Barretts that the proposed changes could not be accomplished through a minor modification. On February 3, 2005, Barretts submitted the additional information that the Department requested to proceed with issuing the significant modification. Title V Operating Permit #**OP1995-03** replaced Title V Operating Permit #OP1995-02.

On May 10, 2005, the Department received a minor modification application (de minimis change notification letter) to incorporate changes requested by Barretts. Barretts requested to add a heat sterilization system to treat talc for specialty markets. On May 20, 2005, the Department notified Barretts that the proposed changes could not be accomplished through a minor modification. On June 8, 2005, Barretts submitted the additional information that the Department requested to proceed with issuing the significant modification. Title V Operating Permit #OP1995-04 replaced Title V Operating Permit #OP1995-03.

On May 1, 2006, the Department received a minor modification application (de minimis change notification letter) to incorporate a new talc mill (#5 Jet Mill) into Permit OP1995. Based on the information provided by Barretts, the Department responded in a letter dated May 5, 2006, that a minor modification was not required because the #5 Jet Mill would be considered a insignificant emitting unit as defined in ARM 17.8.1201(22). The Department informed Barretts that the permit would be updated during the next significant modification or renewal.

On September 22, 2006, the Department received a minor modification application (de minimis notification letter) to incorporate a new silo (Silo #17) and associated fabric filter baghouse (DCO-328-22) into Permit OP1995. In addition, two jet mills that were previously added to the permit (#4 jet mill (EU 037) and #5 jet mill (EU 092)) were identified as being subject to NSPS, Subpart OOO. Therefore, NSPS conditions were applied to the #4 jet mill (part of EU 037) and EU 092. Further, a condition was added to the permit that requires EU 092 be vented to a baghouse. Title V Permit #OP1995-05 replaces Title V Permit OP1995-04.

On September 15, 2009, the Department received an application from Barretts to renew Title V Operating Permit #OP1995-05. No construction or changes in operations have occurred at the facility that would affect the permit since the last revision of the permit was issued in July of 2007. The renewal included updated permit language. Title V Operating Permit #OP1995-06 replaced Title V Operating Permit #OP1995-05.

On February 29, 2012, the Department received a correspondence from Barretts indicating that a change to the Responsible Official designation had occurred. In addition to the aforementioned change, the permit action incorporates a single de minimis notification submitted by Bison and received by the Department on December 9, 2011. Three emitting units were added to the emissions unit list and appropriate permit conditions section associated with NSPS affected sources employing baghouses, identified as; #3 ACM (EU094), #3 ACM Wet Crude Bin (EU095), and #3 ACM Dry Crude Bin (EU096). In addition, Barretts requested the following equipment name changes;

- (EU008) #1 Jet Mill Crude Bin → #5 Jet Mill Crude Bin
- (EU034) #2 Jet Mill Pack Bins → #4 Jet Mill Crude Bin
- (EU037) #1 Jet Mill and #4 Jet Mill → #4 Jet Mill
- (EU057) Coated Talc Small Bag Packer Bin → Semi-bulk #7
- (EU079) ACM Blending Crude Bin → #2 ACM Crude Bin
- (EU089) ACM Surface Vacuum → ACM Throwouts

Title V Operating Permit #OP1995-07 replaced Title V Operating Permit #OP1995-06.

D. Current Permit Action

On September 1, 2015, Barretts submitted a complete application to renew Title V Operating Permit #OP1995-07. Since the operating permit was last modified in June of 2012, one de minimis change has occurred at Barretts. As reflected in MAQP #1995-18, Barretts removed the #4 Jet Stream Classifier Rotor (EU015) and replaced this unit with a new Talc Compaction System (TCS), utilizing the existing fabric filter reclaim system (FFRS). The emitting unit number, EU015, was retained and applied to the new TCS. In addition, this action updates Julia Gwinn Business Director, and replace with Justin Bowers, EHS Manager as the Responsible Official. This renewal includes any updated permit language, format and rule references. Title V Operating Permit #OP1995-08 replaces Title V Operating Permit #OP1995-07.

E. Taking and Damaging Analysis

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 105, Montana Code Annotated (MCA), the Department has conducted a private property taking and damaging assessment and has determined that there are no taking or damaging implications. The checklist was completed on October 20, 2010.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

F. Compliance Designation

A Full Compliance Evaluation (FCE) of Barretts was completed on August 10, 2015, which encompassed a physical site inspection performed on July 9, 2015. Based upon the information gathered at the time of the facility inspection, the observations made during the inspection, and the information gathered through the review of the files associated with Barretts during the review period, the Department believes that Barretts is in compliance with the applicable requirements of their air quality permits.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

Barretts operates a talc and chlorite production and processing facility located south of Dillon, Montana. Once the source receives the ore, the ore is crushed, washed, and stockpiled. The material is then transferred into the facility where it is milled to obtain different size distributions for different products. A portion of the product is coated to customer specifications. Approximately 80% of the product is bagged and the remaining is shipped in bulk. The mill ships approximately 65% of the product by truck and 35% by railcar.

B. Emission Units and Pollution Control Device Identification

Emission Unit ID	Description	Pollution Control Device/Practice
EU 001	Boiler	None
EU 002	#1 Roller Mill	Baghouse
EU 003	#2 Roller Mill	Baghouse
EU 004	#3 Roller Mill	Baghouse
EU 005	#1 Roller Mill-Nuisance	Baghouse
EU 006	#2 Roller Mill-Nuisance	Baghouse
EU 007	#1 ACM Feed Bin	Baghouse
EU 008	#5 Jet Mill Crude Bin	Baghouse
EU 009	#2 Jet Mill Crude Bin	Baghouse
EU 010	Beneficiation Crude Silos, Bucket Elevator, and Nuisance	Baghouse
EU 012	Pellet Nuisance-East	Baghouse
EU 013	Pellet Nuisance-West	Baghouse
EU 014	#3 Jet Stream Classifier	Baghouse
EU 015	#Talc Compaction System (TCS)	Baghouse
EU 016	#4 Jet Stream Classifier Feed Bin	Baghouse
EU 017	Bulk Loadout – Spout #1 Bulk Loadout – Spout #2 Bulk Loadout – Spout #3	Baghouse
EU 018	#3 Roller Mill Crude Bins	Baghouse
EU 020	Packout Packers, East and West	Baghouse
EU 022	Pump Stations	Baghouse
EU 024	Silo #1	Baghouse
EU 025	Silo #2	Baghouse
EU 026	Silo #3	Baghouse
EU 027	Silo #4	Baghouse
EU 028	Silo #5	Baghouse
EU 029	Silo #6	Baghouse
EU 030	Silo #7	Baghouse
EU 031	Silo #8	Baghouse
EU 032	Wash Plant	Baghouse
EU 034	#4 Jet Mill Crude Bins	Baghouse
EU 035	#2 Jet Mill	Baghouse
EU 036	#3 Jet Mill	Baghouse
EU 037	#4 Jet Mill	Baghouse

Emission Unit ID	Description	Pollution Control Device/Practice
EU 039	#3 and #4 Hammermills	Baghouse
EU 041	Packout Reclaim	Baghouse
EU 042	#1 and #2 Jet Stream Classifiers	Baghouse
EU 043	#1 and #2 Hammermill	Baghouse
EU 044	Centralized Reclaim	Baghouse
EU 045	Dry Mill Input (Cone Crusher)	Baghouse
EU 047	Calciner	None
EU 048	Beneficiation Dryer	Baghouse
EU 050	Jet Mill Reclaim System	Baghouse
EU 052	Silo #9	Baghouse
EU 053	Silo #10	Baghouse
EU 054	#1 Air Classifier Mill (ACM)	Baghouse
EU 055	East Coated Talc Feed Bin Silo #11	Baghouse
EU 056	West Coated Talc Feed Bin – Silo #12	Baghouse
EU 057	Semi-Bulk #7	Baghouse
EU 058	Coated Talc Semi-bulk Packer Bin	Baghouse
EU 059	Pelletizer Dryer System	Baghouse
EU 060	Pellet Loadout Conveyor	Baghouse
EU 061	Pelletizer South Feed Bin	Baghouse
EU 062	Pelletizer North Feed Bin	Baghouse
EU 063	#1 Semi-bulk Feed Bin	Baghouse
EU 064	#2 Semi-bulk Feed Bin	Baghouse
EU 065	K-tron Feed Bin	Baghouse
EU 066	Coated Talc Recycle Bin	Baghouse
EU 067	Wash Plant Jaw Crusher	Best Operating Practices
EU 068	Bulk Crude Conveyor	Best Operating Practices
EU 069	Ore Stockpile	Best Operating Practices
EU 070	Rejects Stockpile	Best Operating Practices
EU 071	Fines Stockpile	Best Operating Practices
EU 072	Auxiliary Equipment	Water/Chemical dust suppressant
EU 073	Haul and Access Roads	Water/Chemical dust suppressant
EU 074	Disturbed Acres	Water/Chemical dust suppressant
EU 075	Tailings Handling	Best Operating Practices
EU 076	Conveyor Transfer Points	Best Operating Practices
EU 077	West Coated Talc Product Bin	Baghouse
EU 078	East Coated Talc Product Bin	Baghouse
EU 079	#2 ACM Crude Bin	Baghouse
EU 080	Beneficiation Product Silos	Baghouse
EU 082	Roller Mill Rejects (Throwouts) Silo	Baghouse
EU 083	CPS Vacuum Packer	Baghouse
EU 084	CPS Silo	Baghouse
EU 085	Silo #15	Baghouse
EU 086	Centralized Vacuum System	Baghouse
EU 087	Silo #16	Baghouse

Emission Unit ID	Description	Pollution Control Device/Practice
EU 088	#2 ACM	Baghouse
EU 089	ACM Throwouts	Baghouse
EU 090	Sterilizer System Natural Gas Heater	None
EU 091	Sterilizer System Feed Bin	Baghouse
EU 092	#5 Jet Mill	Baghouse
EU 093	Silo #17	Baghouse
EU 094	#3 ACM	Baghouse
EU 095	#3 ACM Wet Crude Bin	Baghouse
EU 096	#3 ACM Dry Crude Bin	Baghouse

Emitting units 12, 13, 20, 21, 43, and 44 have individual baghouses but are vented to single shared stacks. Emitting units 10, 11, 18, 19, 22, 23, 39, and 40 have shared baghouses and are vented to single stacks. Because some of these units are subject to the 7% opacity limitation the stack must meet this requirement.

C. Categorically Insignificant Sources/Activities

The miscellaneous emissions from Barretts include emissions from the Supersucker Collection System, Fire Control Equipment, HVAC Maintenance, Janitorial Activities, Maintenance, Natural Gas Unit/Domestic Water Heater, Office/Laboratory Activities, and Pollution Control Equipment Maintenance. These units are insignificant because they emit less than 5 tons per year of any regulated pollutant and are not subject to an applicable requirement other than a generally applicable requirement.

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

Barretts shall comply with the general applicable requirements as well as some specific requirements. Barretts shall comply with the 20% and 40% opacity limitations, which is dependent on the year of installation. Barretts is also required to comply with the sulfur in fuel limitation of 50 gr/100scf. The #5 Jet Mill Crude Bin shall be limited to 0.02 gr/dscf of particulate emissions. The #3 Jet Mill shall not exceed 9.3 lbs/hr of particulate emissions. Barretts also has several sources listed in the permit that are subject to the requirements of 40 CFR 60, Subpart OOO and Subpart UUU.

B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance does not require the permit to impose the same level of rigor for all emission units. Furthermore, it does not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for an insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (**i.e., no monitoring**) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the Department may require testing to determine compliance with the emission limits and standards.

C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

D. Recordkeeping Requirements

The recordkeeping provisions shall be sufficient to meet the provisions of the monitoring requirements and shall include, as necessary, the installation, use and maintenance of the monitoring equipment or methods as well as the following information: the date the analyses were performed; the place and time of the sampling; the company or entity performing the sampling; the analytical techniques or methods used; the results of such analyses; and the operating conditions at the time of the analyses. Retention of the records of all required

monitoring data and support information shall be for a period of at least 5 years from the date of measurement. Support information includes: all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the operating permit. Barretts is required to keep all records listed in the operating permit as a permanent business record for at least 5 years following the date of the generation of the record.

E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semi-annual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in the *Butte Montana Standard* newspaper on or before January 25, 2017. The Department provided a 30-day public comment period on the draft operating permit from January 25 to February 24. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by February 24 will be summarized, along with the Department's responses, in the following table. All comments received during the public comment period will be promptly forwarded to Barretts so they may have an opportunity to respond to these comments as well.

G. Draft Permit Comments

Summary of Public Comments

Person/Group Commenting	Comment	Department Response
No comments received	N/A	N/A

Summary of Permittee Comments

Permit Reference	Permittee Comment	Department Response
Section I. General Information	Update contact information. Remove Julia Gwinn Business Director, and replace with Justin Bowers, EHS Manager. Also, remove Melinda Reynolds, HR Assistant	The requested change has been made.

Summary of EPA Comments

Permit Reference	EPA Comment	Department Response
No comments received	N/A	N/A

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

Pursuant to ARM 17.8.1221, Barretts did not request a permit shield for all non-applicable regulatory requirements and regulatory orders identified in the tables in Section 8 of the permit application. Section IV of the operating permit discussing “Non-applicable Requirements” would have contained the requirements that Barretts identified as non-applicable and for which the Department concurred. Requirements that Barretts identified as non-applicable but for which the Department did not agree with the applicability determination would have been listed below.

Applicable Requirement	Reason for Not Including
N/A	N/A

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

The Department is not aware of any proposed or pending MACT standards, in addition to those already listed, that may be applicable.

B. NESHAP Standards

As of the draft issuance date of Title V Operating Permit #OP1995-08 the Department is unaware of any future NESHAP Standards that may be promulgated that will affect this facility.

C. NSPS Standards

As of the draft issuance date of Title V Operating Permit #OP1995-08, the Department is unaware of any future NSPS Standards that may be promulgated that will affect this facility. The facility is currently subject to 40 CFR 60, Subpart OOO - Nonmetallic Mineral Processing Plants and 40 CFR 60, Subpart UUU - Calciners and Dryers in Mineral Industries.

D. Risk Management Plan

As of the draft issuance date of Title V Operating Permit #OP1995-08, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later than June 21, 1999; three years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.

E. CAM Applicability

An emitting unit located at a Title V facility that meets the following criteria listed in ARM 17.8.1503 is subject to Subchapter 15 and must develop a CAM Plan for that unit:

- The emitting unit is subject to an emission limitation or standard for the applicable regulated air pollutant (other than emission limits or standards proposed after November 15, 1990, since these regulations contain specific monitoring requirements);
- The emitting unit uses a control device to achieve compliance with such limit; and
- The emitting unit has potential pre-control device emission of the applicable regulated air pollutants that are greater than major source thresholds.

Barretts does not have an emitting unit that is subject to CAM.

F. PSD and Title V GHG Tailoring Rule

On May 7, 2010, EPA published the “light duty vehicle rule” (Docket # EPA-HQ-OAR- 2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s).

On June 3, 2010, EPA promulgated the GHG “Tailoring Rule” (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that would become final on or after January 2, 2011 would be subject to PSD permitting requirements for GHG if the GHG increases associated with that action were at or above 75,000 TPY of carbon dioxide equivalent (CO₂e) and greater than 0 TPY on a mass basis. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for modifications that were determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, sources that are not considered PSD major sources based on criteria pollutant emissions would become subject to PSD review if their facility-wide potential emissions equaled or exceeded 100,000 TPY of CO₂e and 100 or 250 TPY of GHG on a mass basis depending on their listed status in ARM 17.8.801(22) and they undertook a permitting action with increases of 75,000 TPY or more of CO₂e and greater than 0 TPY of GHG on a mass basis. With respect to Title V, sources not currently holding a Title V permit that have potential facility-wide emissions equal to or exceeding 100,000 TPY of CO₂e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit.

The Supreme Court of the United States (SCOTUS), in its *Utility Air Regulatory Group v. EPA* decision on June 23, 2014, ruled that the Clean Air Act neither compels nor permits EPA to require a source to obtain a PSD or Title V permit on the sole basis of its potential emissions of GHG. SCOTUS also ruled that EPA lacked the authority to tailor the Clean Air Act’s unambiguous numerical thresholds of 100 or 250 TPY to accommodate a CO₂e threshold of 100,000 TPY. SCOTUS upheld that EPA reasonably interpreted the Clean Air Act to require sources that would need PSD permits based on their emission of conventional pollutants to comply with BACT for GHG. As such, the Tailoring Rule has been rendered invalid and sources cannot become subject to PSD or Title V regulations based on GHG emissions alone. Sources that must undergo PSD permitting due to pollutant emissions other than GHG may still be required to comply with BACT for GHG emissions.