MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT

Air, Energy, and Mining Division
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Graymont Western U.S., Inc. – Indian Creek Facility
Quarry: Section 33, Township 7 North, Range 1 East
Lime Manufacturing Facility: Section 28 (SW¼), Township 7 North, Range 1 East
Railroad Load-Out Facility: Section 25, Township 7 North, Range 1 East
P.O. Box 550
Townsend, MT 59644

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, 6, 6A-C, 7, 7A-E, 9, 10, 10A-b, visual survey
Ambient Monitoring Required		X	
COMS Required	X		Continuous Opacity Monitoring System (COMS)
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		
Monthly Reporting Required		X	
Quarterly Reporting Required	X		COMS Inspection and Audit
Applicable Air Quality Programs			
ARM Subchapter 7 – Montana Air Quality Permit (MAQP)	X		MAQP#1554-17
New Source Performance Standards (NSPS)	X		40 CFR 60, Subpart Y, Subpart HH,
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	Except 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		Appendix E of OP1554-10
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 emissions units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the Environmental Protection Agency (EPA) 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 Continental Lime Incorporated (CLI), predecessor to Graymont Western U.S., Inc., (Graymont), on June 29, 1995, and additional submittals on October 9, 1998; April 11, 2000; August 13, 2001; May 6, 2004; September 21, 2004; October 11, 2005; February 13, 2013; January 7, 2014; August 10, 2015; January 8, 2016; and June 20, 2016.

B. Facility Location

A limestone quarry, lime manufacturing facility, and railroad loadout facility located in Broadwater County, Montana. The limestone quarry and lime manufacturing plant are located approximately 4 miles west of Townsend on Indian Creek Road. The quarry is located in Section 33, Township 7 North, Range 1 East and the lime manufacturing facility is located in Section 28, Township 7 North, Range 1 East. The railroad loadout facility is located 1 mile north of Townsend in Section 25, Township 7 North, Range 1 East.

C. Facility Background Information

Montana Air Quality Permit History

The original air quality **Montana Air Quality Permit (MAQP) #1554** was issued to CLI for a limestone quarry and lime manufacturing facility from the Montana Department of Health and Environmental Sciences on June 15, 1981.

On August 27, 1982, the EPA Region VIII issued a permit to CLI under the requirements of 40 CFR 52.21, Prevention of Significant Deterioration of Air Quality (PSD). The permit was for the construction and operation of the lime manufacturing facility, including the #1 Lime Kiln.

The first change was given **MAQP #1554A** and was modified on May 1, 1985, to update the permit to comply with the applicable New Source Performance Standards and to remove the ambient monitoring requirement.

The second change was given **MAQP #1554A-2** and was issued April 13, 1990. The alteration consisted of the addition of a second rotary lime kiln capable of producing 500 tons per day of quicklime (CaO). The application also included the necessary ancillary equipment to support the kiln, such as lime handling, lime loadout and coal handling systems. The operating capacity of the existing quarry, crusher and conveying systems was sufficient to handle the increase in lime production with only an increase in operating hours. The maximum rated capacity of the crusher is estimated at 1,481,331 tons per year.

The alteration was a "major modification" according to the PSD rules. Therefore, CLI was required to meet the PSD permitting requirements. The PSD rules required submittal of 1 year of Particulate Matter smaller than 10 micros (PM_{10}) pre-monitoring data. CLI submitted 4 months of PM_{10} monitoring data and requested that the Department accept this amount of monitoring data as adequate. CLI submitted a statistical analysis of previously submitted Total Suspended Particulate (TSP) data and demonstrated, to the satisfaction of the Department, that the 4 months of PM_{10} data would provide a complete and adequate analysis. MAQP Application #1554A-2 was deemed complete on February 12, 1990. The third change was given **MAQP #1554-03** and was issued on July 16, 1993. The modification was requested to allow CLI an opportunity to conduct temporary burning of coke and coal mixtures in the two kilns at the Indian Creek plant.

During the temporary burning of coke and coal mixtures, CLI was required to meet their existing permit conditions, as well as additional reporting and tracking requirements outlined in Section II.G of MAQP Modification #1554-03.

During all temporary burning, CLI was required to maintain compliance with the sulfur-in-fuel rule. The temporary burning was allowed for 18 weeks and had to be completed no later than December 3, 1993. CLI is required to submit a permit application to request any permanent change for the burning of coke.

The fourth change to the permit, given **MAQP #1554-04,** was issued on August 27, 1993, for the construction and installation of a lime hydrator at the Indian Creek plant. The hydrator will convert quicklime to hydrated lime. The lime hydrator is located at the product end of the plant. The hydrator process takes lime (as calcium oxide) and adds water and/or steam to form calcium hydroxide or hydrated lime.

The lime hydrator operates at full production only when the demand for hydrated lime is great enough. The demand was expected to be greatest from June through September. During this seasonal period, production was expected to be up to 24 hours per day, 7 days per week. During the non-seasonal market periods, operation was expected to be one shift, 5 days per week.

The lime hydrator was designed to produce 15 tons per hour of hydrated lime. The lime hydrator will be controlled by a wet scrubber to control product losses and keep the process under negative pressure. The process uses the spent scrubbing liquid for its water feed; therefore, no sludge handling or removal is required. The handling of quicklime and hydrated lime is controlled using bin vent fabric filter dust collectors.

CLI submitted another permit application on April 15, 1994, for the addition of a Nitrogen Oxides (NO_x) limit for the #2 Kiln. The application was given **MAQP #1554-05**. This application was withdrawn by the company and, therefore, MAQP #1554-05 was not issued.

MAQP Alteration #1554-06 was issued on March 20, 1996, to do the following:

1. Increase the allowable sulfur limit for the coal used to fire the kilns. The sulfur limit was increased from the previously allowable 0.6% by weight to 1.0 Pounds per Million British Thermal Unit (lb/MMBtu). This allowed CLI greater flexibility in selecting coal suppliers.

2. Allow CLI to use syncoal to fire the kilns.

3. Establish emission limits for NO_x, sulfur dioxide (SO_2), and carbon monoxide (CO) for the #2 Lime Kiln.

4. Increase the SO_2 emission limits for the #1 Lime Kiln. The permit also increased the CO limit and decreased the NO_x limit for the #1 Lime Kiln to be consistent with the limits for the #2 Lime Kiln. The changes in the CO and NO_x limits were based on Best Available Control Technology (BACT) and stack tests at the facility. The increase in the SO_2 limit was based on the increased allowable sulfur-in-fuel.

5. This permitting action also changed the units of the particulate emission limit for the lime hydrator in Section II.B.8.a of Permit #1554-05 from pound per ton (lb/ton) of lime hydrate to pound per hour (lb/hr). The new particulate limit (1.5 lb/hr) was derived by multiplying the old emission limit of 0.10 lb/ton of lime hydrate by the production capacity of 15 tons of lime hydrate per hour.

   The net increases of NO_x, SO_2 and CO were greater than the PSD significance levels, and the permit was subject to the requirements of the PSD program. This application fulfilled the PSD review requirements for both lime kilns and, therefore, the permit replaced EPA's PSD permit that was issued for the #1 Lime Kiln on August 27, 1982, as well as the state **MAQP #1554-04**.

A detailed description of this permitting action is contained in the analysis of **MAQP #1554-06**.

On April 22, 1996, CLI submitted a complete application for **MAQP #1554-07** to increase the particulate emission limit for the lime hydrator at the facility. The unit's design incorporates a wet scrubber, which was not able to perform as well as originally expected. CLI proposed that the emission limit be increased from 1.5 lb/hr to 3.0 lb/hr. The proposal would increase the allowable PM_{10} emissions from the facility by 4.2 tons/year. This permit also authorized the extension of the hydrator stack to 94 feet. Modeling performed on the hydrator emissions had shown there would not be a significant impact on the local air quality.

Because the hydrator had not yet been tested to demonstrate compliance with the particulate emission limits established during the original permitting action (MAQP #1554-04), emission changes authorized by this action were considered part of the original permitting action to determine PSD applicability. If permitted for unlimited hours of operation, the potential to emit of the hydrator facility would exceed the PSD significant level of 15 tons/year of PM_{10}. This permitting action established a limit of 7400 hours of operation per year on the lime hydrator. This limit brought the potential to emit for the entire hydrator unit to less than 15 tons/year of PM_{10} and the hydrator was not subject to the requirements of the PSD program.

On March 23, 1997, CLI was issued **MAQP #1554-08**, which was a modification of their existing permit to allow for a test burn using petroleum coke at the facility. This allowed CLI to conduct the test burn using 744 tons of petroleum coke. The test burn had to be completed by October 1, 1997. The emissions from this test burn did not exceed 15 tons of SO_2; therefore, this test burn was completed according to Administrative Rules of Montana (ARM) 17.8.705(1)(q). However, as described in ARM 17.8.733(1)(c), the permit did need to be modified to allow the temporary burning of the petroleum coke. CLI was still required to comply with their existing SO_2 emission limitation and with the sulfur-in-fuel requirements contained in ARM 17.8.322(6)(c). Some of the equipment installed as a result of this test burn was a coke lump breaker and some conveying equipment. This equipment was retained by the facility to be used when the permanent use of coke is approved.

On June 20, 1997, CLI was issued **MAQP #1554-09** to use petroleum coke as fuel for the kilns at the plant. This resulted in a significant increase in the allowable SO_2 emissions from the kilns. The significant increase in SO_2 required that a PSD review be conducted for SO_2 by the Department for this permit. There was also a slight increase in the amount of PM_{10} emissions generated from the facility by the installation of some additional fuel handling equipment for the coke fuel for this project. The increase in PM_{10} emissions did not exceed PSD significance levels for this pollutant. Allowable emissions of NO_x and CO did not increase as a result of this permitting action.

Along with the request to use petroleum coke in the kilns, CLI also proposed to install additional limestone processing equipment near the existing crusher at the limestone quarry. This limestone processing operation would allow CLI to screen larger pieces of limestone as a product. This proposal was a separate project from the use of petroleum coke in the kilns, but was incorporated into the permitting action. The only emissions from the limestone processing proposal were particulate emissions. The amount of particulate emissions generated from the limestone proposal did not exceed PSD significant levels by themselves, or when added to the amount of particulate emissions generated from the proposed petroleum coke project.

The proposed equipment covered by the permitting action is as follows:

1. Coke/coal blending system consisting of a lump breaker, two hoppers, and conveying equipment; and

2. Limestone processing equipment consisting of a screen (S2) and three new conveyors (C6, C7, and C9).

As part of the permitting action, the Department also updated the permit to reflect that CLI completed a source test on the kilns in 1995 to demonstrate compliance with the particulate limit of 0.50 lb/ton of limestone feed. The air quality permit had required CLI to install a device capable of measuring the mass rate of stone feed to the kilns. Because of the design and configuration of CLI's facility, it was impossible for the measuring device to be installed prior to the kilns; however, the device was installed after the kilns to measure the amount of lime produced from the kilns. This device was used during the required source test to determine compliance with the kiln's particulate limit. The Department accepted this configuration and the corresponding permit condition was revised to reflect the current configuration of the measuring device.

On May 9, 1997, CLI requested that the Department delay the issuance of the Department Decision on MAQP #1554-09 to allow for the completion of a source test on Kiln #1. This delay was not a problem because the Department Decision would still be issued in compliance with the statutorily mandated time frames. This source test was required by MAQP #1554-08 and it would be extremely awkward to issue MAQP #1554-09, because a new emission limit would be in effect while a source test was conducted to demonstrate compliance with an older emission limit. CLI conducted the source test on Kiln #1 on May 13, 1997, and demonstrated compliance with the applicable NO_x, SO_2, and CO emission limits. Kiln #2 never did burn petroleum coke during the test burn; therefore, Kiln #2 was not required to be tested during the test burn. The petroleum coke test burn was completed and all references to the test burn in the permit were removed from the permit.

On September 18, 1997, the Department received a request from CLI to modify MAQP #1554-09. **MAQP #1554-10** removed the requirement for CLI to send the lime kiln dust through a pugmill prior to transportation for on-site disposal. This was necessary because the pugmill was not very effective for controlling emissions and the added water reduced the quality of the lime kiln dust so it could not be readily sold as a product. Instead of operating the pugmill, CLI would be required to

comply with the following conditions whenever lime kiln dust is loaded into trucks. These requirements would actually result in a decrease in emissions from more effective control of the handling of lime kiln dust while maintaining the product quality.

1. CLI shall provide a partial enclosure of the lime kiln dust silo (T-89) and surge bin loadout area (N-280) by installing wind guards on the sides of the silo and surge bin.

2. CLI shall unload from the lime kiln dust silo (T-89) and the surge bin (N-280) to the trucks using a telescopic system that has partial air return through an existing baghouse.

3. All trucks hauling lime kiln dust must be covered.

4. CLI shall provide for water to be applied at the storage site when it is necessary to meet the reasonable precaution requirements of ARM 17.8.308(1).

Because there was not an increase in emissions, the proposal was completed according to ARM 17.8.705(1)(q). However, as described in ARM 17.8.733(1)(c), the permit did not need to be modified to allow CLI to replace the pugmill with the above-mentioned requirements.

On December 31, 1998, **MAQP #1554-11** was issued to CLI, which removed the requirement for CLI to operate ambient PM-10 monitors at their facility. This action was conducted in accordance with the October 9, 1998, guideline developed by the Department and the requirements of Attachment 1 were removed from CLI's permit. The ambient monitoring requirements can be reinstated in the future if the Department determines it is necessary.

This permitting action also added some miscellaneous equipment to the list of permitted equipment in the permit analysis. The equipment included a roll crusher, conveyors, and feeders added for the fuel-blending project. This project could have been conducted without a permit, pursuant to ARM 17.8.705(1)(r); however, the equipment was added to the permitted equipment list to avoid any future confusion over these emission sources.

On September 12, 1999, CLI was issued an alteration to Permit #1554-11 allowing CLI to replace the existing 700-horse power (hp) DC fan motor on Kiln #1 with a 900-hp AC motor. The new motor allowed CLI to increase the revolutions per minute RPM on the fan, which allowed more air to be pulled through the system. This could result in an increase in emissions. However, the new fan was limited by permit to 1750 RPM, which was the maximum RPM the existing motor could achieve. CLI was required to record the fan motor RPM from their computerized system to demonstrate compliance with this condition. Because of the RPM restriction, there was not an increase in potential emissions as a result of the permitting action. **MAQP #1554-12** replaced MAQP #1554-11.

On August 30, 2000, CLI submitted a complete permit application for the alteration of MAQP #1554-12. Under this permit action, CLI proposed the following changes:

- A facility name change from Continental Lime, Inc., - Indian Creek Facility, to Graymont Western U.S., Inc., - Indian Creek Facility
- Increasing the horsepower on the rotary Lime Kiln #2 I.D. fan motor from 700 hp to 900 hp and restricting the allowable RPM for the motor to 1750 rpm
- Increasing the NO_x emission limit/rate from 77.5 lb/hr to 100 lb/hr for rotary Lime Kiln #1 and rotary Lime Kiln #2

Graymont requested the increase in horsepower on the rotary Lime Kiln #2 I.D. fan motor from 700-hp to 900-hp for the purpose of operational flexibility and reliability of equipment. Because Graymont proposed a 1750-RPM restriction for the 900-hp rotary Lime Kiln #2 I.D. fan motor, the proposed motor change would not increase potential air flow through the kiln and thus would not increase kiln production capacity. The proposed RPM restriction is identical to the existing restriction placed on the smaller motor for rotary Lime Kiln #1.

Because the above proposed changes would not increase production capacity, this permit action did not result in a significant net increase in emissions of PM_{10}, SO_2,Volatile Organic Compounds (VOC), and CO as defined under the New Source Review PSD program. However, Graymont was proposing an increase in allowable NO_x emissions from 77.5 lb/hr/kiln to 100 lb/hr/kiln. The proposed changes would increase Graymont's potential NO_x emissions by 197.10 tons per year, resulting in a significant net emission increase.

Graymont is a major source of emissions and is located in an area considered either attainment or unclassified for NO_x. Therefore, because the proposed changes would result in a potential NO_x emission increase of greater than 40 tons per year (PSD significance level for NO_x), the proposed changes constituted a major modification and this permit action required a PSD review. In accordance with the PSD regulations, Graymont was required, among other things, to demonstrate compliance with National Ambient Air Quality Standards (NAAQS), Montana Ambient Air Quality Standards (MAAQS), and the PSD NO_x increment of 2.5 micrograms per cubic meter (ug/m^3). In addition, the PSD regulations required that Graymont analyze the cumulative NO_x impact from the existing plant and surrounding sources of NO_x emissions.

Graymont demonstrated compliance with the PSD NO_x increment by modeling NO_x emission impacts for the existing plant, the proposed changes to the plant, and surrounding sources of additional NO_x emissions. The modeling exercise demonstrated that the proposed change would not violate the NAAQS or MAAQS and did not consume the available NO_x increment .

A complete copy of the Graymont PSD application, including all applicable modeling and modeling results, is on file with the Department. **MAQP #1554-13** replaced MAQP #1554-12.

On January 29, 2001, the Department received a de minimis determination request from Graymont. For the purpose of improving silo ventilation, Graymont proposed the installation and operation of a second silo vent on the existing syncoal silo #T-290. Graymont proposed that particulate emissions from the proposed vent be controlled by a 1000 actual cubic feet per minute (acfm) fabric filter baghouse. However, because potential uncontrolled emissions from the proposed vent were less than the de minimis threshold of 15 ton/yr, the Department determined that the current permit action could be accomplished under the provisions of the ARM 17.8.705(1)(r). Calculations demonstrating compliance with the ARM 17.8.705(1)(r) are contained in Section III.H of the permit analysis. **MAQP #1554-14** replaced MAQP #1554-13.

On May 22, 2002, the Department received a permit modification request from Graymont. The proposed permit change involved modification of the existing lime kiln dust (LKD) unloading operations to achieve compliance with the condition in Section II.A.23. of Graymont's MAQP #1554-14 and Section III.D.16. of Graymont's Operating Permit #OP1554-02. The existing condition required that Graymont utilize telescoping spouts with partial air return to an existing baghouse for the control of particulate emissions from LKD unloading operations at the facility. While existing LKD unloading operations did utilize telescoping spouts, Graymont did not incorporate partial air return through a baghouse to control particulate emissions from LKD unloading operations, as required by permit. The proposed action required a BACT analysis.

Under the permit modification, Graymont proposed to remove the existing Aeropulse baghouse equipped with a 900 cubic feet per minute (cfm) fan from the coal/coke/syncoal silo (T-290) and re-install the baghouse with associated inlet header and ductwork, on the South #1 Kiln Cyclone Silo to achieve compliance with the previously cited condition(s). Silo T-290 utilized two baghouses, a 1000 cfm Micropul baghouse, permitted under MAQP #1554-14, and the previously described 900 cfm Aeropulse baghouse. Fuel loading operations at silo T-290 do not require the use of both baghouses and the existing 1000 cfm Micropul baghouse is sufficient to effectively control particulate emissions from fuel transfer operations to the silo. Installation and operation of the 900 cfm Aeropulse baghouse brought Graymont into compliance with the previously cited permitted requirements.

Further, on May 31, 2002, the Department received a second request for permit modification under ARM 17.8.705(1)(r)(i). In the second modification request, Graymont proposed the use of on-specification used oil to fire the rotary lime kilns at the facility. Subsequently, on July 18, 2002, the Department received notification from Graymont that the proposal to fire the kilns with on-specification used oil was withdrawn. **MAQP #1554-15** replaced MAQP #1554-14.

On September 2, 2004, the Department received notification from Graymont of facility changes in accordance with the provisions of ARM 17.8.745(1) (de minimis rule). Specifically, existing coal handling operations involved truck unloading/dumping of coal and transfer of coal to a coal stockpile via a front-end loader. Under the de minimis action, Graymont added two portable coal conveyors to accommodate a portion of coal handling activities. Incorporation of the 2 new portable conveyors resulted in the addition of 3 new coal material transfer points. The permit action added the portable conveyors to the list of equipment at the Graymon0t facility. An emission inventory demonstrating compliance with the de minimis rule is contained in Section III, Emission Inventory, of the permit analysis to MAQP #1554-15.

In addition to the above cited de minimis notification, Graymont proposed an administrative amendment (AA) to Permit #1554-15 to allow for cyclone/fabric filter control of quarry drilling operations. Under Permit #1554-15, Graymont was required to use skirting and water spray to control fugitive dust emissions resulting from drilling operations. Under the AA, Graymont permitted the ability to utilize skirting and cyclone/fabric filter control for certain drilling operations and skirting and water spray for other operations. Since the use of skirting and cyclone/fabric filter control would provide equivalent or greater control of fugitive dust when compared to skirting and water spray, the Department determined that this proposed change could be accomplished under an AA. Under the permit action, Section II.A.4 was modified to accommodate this operating change. **MAQP #1554-16** replaced MAQP #1554-15.

On July 21, 2006, the Department received a de minimis notification from Bison Engineering, Inc. (Bison) on behalf of Graymont for the addition of an additional hydrated lime truck loadout. The new equipment included two screw conveyors and a telescoping chute truck loading spout. The capacity of the new system was 60 tons per hour (TPH). The entire system was enclosed and PM emissions were controlled by an existing hydrate system baghouse. The Department approved the de minimis change in an August 16, 2006 correspondence and indicated that the MAQP would be updated to reflect this new equipment as time allowed; however, the MAQP had not been opened again until this modification. Graymont proceeded with this project upon its approval. A future permit modification included the addition of a new hydrated lime truck loadout that replaced the truck loadout from this de minimis action. Therefore, the equipment associated with the July 21, 2006 de minimis notification was not ever incorporated into the MAQP.

On May 19, 2008, Graymont notified the Department of a discrepancy in PM stack testing intervals for the kilns between the Title V Operating Permit that had recently been renewed (#OP1554-04) and MAQP #1554-16. #OP1554-04 indicated that PM stack tests on the kilns shall occur on an every 5-year basis, whereas MAQP #1554-16 indicated that the PM stack tests shall occur on an every 4-year basis. Graymont assumed that the every 5-year test schedule was the appropriate interval and sought concurrence from the Department. The Department replied via email on May 20, 2008 that the MAQP #1554-16 testing schedule was in error and that a 5-year test schedule is the correct interval between PM stack tests. The Department agreed to update the MAQP with the appropriate 5-year test interval the next time it was modified or amended. The Graymont Title V Operating Permit was renewed again on April 9, 2013 (#OP1554-06) and maintains the every 5-year PM stack test schedule for the kilns.

On April 11, 2013, the Department received an MAQP application from Bison on behalf of Graymont for a hydrator project. This project includes:

- Upgrading the PM control technology associated with the Cimprogetti hydrator from a wet scrubber to a fabric filter baghouse that would exhaust through the repurposed wet scrubber emissions stack.
- Seven (7) new fully enclosed screw conveyors.
- One (1) new screw pump and one (1) new flow diverter, all sealed with no emission points.
- One (1) new product recovery cyclone, which would be controlled by an existing dust collector. There would be no change in baghouse airflow and no change in emissions from the baghouse.
- One (1) new Roller Mill rated up to 10 TPH, controlled by an existing dust collector. The Roller Mill would be completely enclosed within the Hydrate Building. There would be no change in dust collector air flow and no change in emissions from the dust collector.
- A new hydrate truck loadout station which would include a 500-ton capacity storage silo and truck loading spouts controlled by a new 3,000 actual cubic feet per minute (acfm) dust collector. Hydrate would be offloaded to enclosed trucks for hauling via extendable vacuum-boot loadout spouts to ensure maximum control of dust emissions during product loading. Any recovered product from the dust collector is dropped back into the storage silo.
- A new hydrate rail loadout terminal which would include a 78-ton capacity storage silo and railcar loading spouts controlled by a new 3,000 acfm dust collector. The railcar loadout terminal is located about four miles east of the plant. Hydrate is transported to the railcar loadout terminal via enclosed trucks which is then transferred pneumatically via the truck blowers through completely enclosed piping to the new 78-ton hydrate storage silo. The hydrate is offloaded from the silo to enclosed railcars via an extendable vacuum-boot loadout spout to ensure maximum control of dust emissions. Any recovered product from the dust collector is dropped back into the loadout spout piping.
- A new hydrate reject bin with associated transfer point. The reject bin is periodically collected and emptied onsite. The reject system would be completely enclosed within the Hydrate Building.

Graymont is a major stationary source of criteria pollutant emissions from applicable sources based on the Federal Clean Air Act (FCAA) PSD program and ARM 17.8 Subchapter 8. Therefore, a PSD permit application is required if the facility undergoes a *major modification* which is defined in ARM 17.8.801(20) as "any physical change in, or change in the method of operation of, a major stationary

source that would result in a significant net emissions increase of any pollutant subject to regulation under the FCAA…" The term *significant*, as used in this setting, is defined in ARM 17.8.801(27)(a) as in reference to a net emissions increase or the potential of a source to emit any pollutant in excess of the rates listed in that definition.

For the current hydrator project, the new equipment has potential emissions of PM, PM_{10}, and PM with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$). There are no combustion processes associated with the new equipment; therefore, these are the only pollutants that would be generated. Bison chose to present the hydrator project emissions in a conservative manner by basing the net emissions increase analysis on the maximum potential emissions from the new equipment as if it was an entirely new hydrator system and not a modification of components of the current hydrator system. Accounting for the emissions in this manner does not consider any facility emissions reductions from equipment that would be removed as part of the project. Based on this conservative accounting of the net emissions increase, the hydrator project does not represent a significant emissions increase at the facility as defined in ARM 17.8.801(27)(a).

Another concept that may need to be addressed for modifications at major sources is referred to as "debottlenecking." While this term does not have a formal regulatory definition, a debottlenecking analysis refers to determining which other unmodified units within a facility would experience an increase in emissions as a result of a physical change or change in the method of operation at a major source. EPA described debottlenecking in a February 24, 2005 "Murphy Oil Memo" to the Wisconsin Department of Natural Resources as applying "to a unit that has not been modified, but which experiences an increase in its effective capacity due to the removal of a capacity limitation on an associated unit." If a unit is determined to be debottlenecked by a modification, then the associated emissions from that increase in effective capacity of that unit must be included as part of the net emissions increase from a project.

The Graymont hydrator project warrants a debottlenecking analysis because while there are no changes proposed to the existing hydrator annual production limit, the replacement of the wet scrubber with a baghouse would allow for Graymont to produce more hydrate on a short-term basis than it can currently produce. This is because the current wet scrubber requires that the hydrator be shut down for 4-5 hours every 3-4 days for cleaning to maintain efficiency. The proposed fabric filter baghouse that would replace the wet scrubber would not require this same level of downtime for maintenance. Even though it has been determined that the maximum potential emission increases from the proposed hydrator system fall below any corresponding significant emission rate that would trigger a major modification, the increase in hydrator utilization would require a corresponding increase in lime feed from the kilns on a short-term basis. The kilns are capable of producing this volume of hydrate-feedstock on both a short-term and a long-term basis as currently permitted and no changes to any facility production limits are proposed. The upgraded hydrator system would not represent an increase in effective capacity of the kilns because the hydrator system is not the only outlet for the lime feed from the kilns. Production records indicate that most of the lime produced by the kilns does not feed the hydrator; most of it flows to other silos and loadouts as market conditions dictate. The kilns have been previously permitted under PSD regulations based on their maximum potential capacities of 500 tons per day and each kiln regularly operates at, or nearly at, that capacity. When the hydrator system PM emission limits were modified in MAQP #1554-07, the facility accepted a PSD avoidance production limit of no more than 111,000 tons per year of lime hydrate. No changes to this hydrate production limit are proposed and the permit condition remains in place. Because the facility as currently configured can utilize the maximum capacity of kilns, and does so routinely on a short-term basis, the hydrator is not a bottleneck to kiln operation and an increased utilization of the hydrator does not represent an increase in effective capacity of the kilns.

This permit action incorporated the new equipment from the April 11, 2013 application for the hydrator project, corrected the PM stack testing schedule for the kilns, corrected erroneous language in PM testing requirements for the kilns, and updated the permit to reflect the current language used by the Department. **MAQP #1554-17** replaced MAQP #1554-16.

Title V Operating Permit History

On June 11, 2001, Graymont was issued final and effective **Operating MAQP #OP1554-00** for the Indian Creek facility.

On August 13, 2001, the Department received a request, from Graymont, for an administrative amendment to air quality Operating Permit #OP1554-00. Graymont requested that the Department modify Section V.B.2 to indicate the proper semi-annual report due date as February 28 rather than January 31. The Department concurred that the appropriate semi-annual report due date is February 28th and the permit was modified accordingly. In addition, Graymont requested that the Department incorporate weekly visual inspection requirements into Section III.F (Hydrated Lime Product Operations). Because Section III.F already included Method 9 source testing, as required by the Department, for Hydrated Lime Product Operations, the Department did not include this requirement under the permit action. **Operating MAQP #OP1554-01** replaced Operating MAQP #OP1554-00.

On May 6, 2004, the Department received notification from Graymont of a change in responsible official from Herb Herman, Vice President of U.S. Manufacturing, to Elton Chorney, Plant Manager. **Operating Permit #OP1554-02** provided this change and replaced Operating Permit #OP1554-01.

On September 21, 2004, the Department received an application for a significant modification of Title V Operating Permit #OP1554-02. The proposed changes were previously incorporated into Graymont's MAQP #1554-16 under an administrative amendment issued final on October 13, 2004. Specifically, the modification allowed for cyclone and fabric filter control of quarry drilling operations. Under the existing permitted quarry drilling operations, Graymont was required to use skirting and water spray to control fugitive dust emissions resulting from drilling operations. The modification allowed Graymont to utilize skirting and cyclone/fabric filter control for certain quarry drilling operations and skirting and water spray for other quarry drilling operations. Since the use of skirting and cyclone/fabric filter control would provide equivalent or greater control of fugitive dust emissions from quarry drilling operations, when compared to skirting and water spray, the Department determined that the proposed change was appropriate. Section III.B.5, and the associated compliance demonstration, recordkeeping, and reporting requirements, were modified to accommodate this operating change.

In addition, the insignificant emitting unit list was updated to include a portable coal conveyor system (IEU007) recently added to Graymont operations under ARM 17.8.745 (de minimis rule). Also, the permit action updated the language contained in Section III.C.18 and Section III.F.17 to reflect current recordkeeping language used by the Department for rolling 12-month permit limits. Finally, for the purpose of maintaining consistency among regulated Title V sources, the Department changed the semiannual reporting requirements indicating due dates of February 28 and August 31 to February 15 and August 15. All affected permit conditions were updated to reflect the changed reporting dates. **Operating Permit #OP1554-03** replaced Operating Permit #1554-02.

As required under ARM 17.8.1205(d), on October 7, 2005, Graymont submitted to the Department an application for Title V Operating Permit renewal. The application was deemed technically complete on December 14, 2005, with the submittal of the required Compliance Assurance

Monitoring (CAM) Plan. In accordance with the ARM 17.8.1509, the permit action incorporated a CAM Plan for PM emissions from Rotary Lime Kiln #1 and #2 (see Appendix E of Permit #OP1554-04). In addition permit language was updated. The permit action renewed Graymont's Title V Operating Permit. **Operating Permit #OP1554-04** replaced Operating Permit #OP1554-03.

As required under ARM 17.8.1205(d), on August 16, 2011, Graymont submitted to the Department an application for Title V Operating Permit renewal. The application was deemed technically complete on September 15, 2011. Graymont requested the removal of EU10, Sugar Stone Screen and Associated Equipment, from the permit. EU10 was permitted, but never installed and will not be installed in the future. In addition, the current permit action updated permit language currently used by the Department for Title V Operating Permits. Since issuance of Title V Operating Permit #OP1554-04, there have been no significant modifications to permitted operations at the Graymont facility; therefore, the permit action does not include any additional changes to permitted operations. The permit action renewed Graymont's Title V Operating Permit. **Operating Permit #OP1554-05** replaced Operating Permit #OP1554-04.

On February 13, 2013, the Department received a request from Graymont, for an administrative amendment to air quality Operating Permit #OP1554-05. Graymont requested that the Department modify the visual survey requirements for the majority of emitting units from weekly to biweekly. The Department concurred that the request was merited based on previous discussions with Graymont preceding the official administrative amendment request. **Operating Permit #OP1554-06** replaced Operating Permit #OP1554-05.

On January 7, 2013, the Department received a request from Graymont for an administrative amendment to Operating Permit #OP1554-06. Graymont requested that the Department update the permit to reflect a change in Responsible Official to Blake Bills and facility contact person to Steven Ciccarelli. **Operating Permit #OP1554-07** replaced Operating Permit #OP1554-06.

Upon issuance of #OP1554-07, Graymont pointed out an administrative error in the Section I of the Operating Permit which listed an incorrect job title for the facility contact person. In accordance with ARM 17.8.1225, this administrative permit amendment corrects this error. **Operating Permit #OP1554-08** replaced Operating Permit #OP1554-07.

On August 10, 2015, the Department received a request from Graymont for a significant modification to Operating Permit OP#1554-08. The significant modification updated the permit to reflect conditions associated with the upgrade of the particulate control system of the existing Lime Hydrator, associated hydrated lime processing, transfer and loadout equipment, as well as the removal of contradictory language.
On January 8, 2016, the Department received an Administrative Amendment request from Graymont to change the Facility Contact Person to Blake Bills. **Operating Permit #1554-09** replaced Operating Permit #1554-08.

D. Current Permit Action

On June 20, 2016, the Department received an Administrative Amendment request from Graymont addressing clerical errors in the Operating Permit #1554-09. The current permitting action corrects the "Expiration Date" located on page *i* of the Operating Permit to reflect the correct expiration date. The request also notes that the operating permit states that the application type is a "Renewal". The Department recognizes that the previous permitting action for OP#1554-09 is an Administrative Amendment and not a Title V Renewal. **Operating Permit #1554-10** replaces Operating Permit #1554-09.

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 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

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)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

F. Compliance Designation

Graymont was last inspected on August 15, 2015. A full compliance evaluation was issued on September 15, 2015. Graymont was found to be in compliance with all applicable requirements.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

Graymont's existing limestone quarry, lime manufacturing plant, and proposed additions are located in Broadwater County, Montana, approximately 4.5 miles west of Townsend on Indian Creek Road. The quarry is located in Section 33, Township 7 North, Range 1 East, and the lime manufacturing facility is located in Section 28, Township 7 North, Range 1 East. A railroad loadout facility is located 1 mile north of Townsend in Section 25, Township 7 North, Range 1 East. The nearest PSD Class I area is the Gates of the Mountains Wilderness, approximately 28 miles north of Graymont's existing Indian Creek plant. Graymont is approximately 130 kilometers from Yellowstone National Park. A more detailed site description is contained in Permit Application #1554A-2.

The primary raw material for the lime manufacturing process is limestone. The limestone for this plant is obtained from the quarry located about 1 mile south of the plant area.

The process of obtaining limestone first begins with drilling and blasting. The blasted limestone is loaded into trucks using a front-end loader. The broken material is transported by truck to a hopper and from there it is crushed and screened. The screened limestone is then conveyed to storage piles using a long conveying system. From the storage piles, the limestone passes over a screen and is then conveyed into the two kiln preheaters.

The preheaters, located above the kilns, are used to preheat the limestone and to control the feed rate to the kiln. The stone that is added to the kilns is subjected to heat and a gentle tumbling action.

As the limestone "falls" down through the kiln, the temperature increases as it gets closer to the flame. This heating action converts the limestone ($CaCO_3$) to lime (CaO) and carbon dioxide (CO_2).

Once the lime reaches the end of the kiln, it is cooled and crushed to its final size. The lime is conveyed to one of several possible lime storage silos. Some of the lime will be processed through the lime hydrator to produce hydrated lime. The product lime is then loaded into trucks for transport to various markets.

The product lime is loaded into standard over-the-road covered trucks. These trucks are able to haul approximately 35 tons of lime. The loading occurs at the new and existing lime loadout facilities. The trucks proceed down an unpaved road until they reach Highway 12 and/or the railroad loadout facility. The rail loadout facility is located about 150 meters from the highway. The unpaved road is watered and treated with chemical suppressant (usually Magnesium Chloride ($MgCl_2$)).

B. Emission Units and Pollution Control Device Identification

The following table lists the emitting units regulated by Operating Permit #OP1554-09. These sources are considered significant sources of emissions at the Graymont facility (ARM 17.8.1211).

Emission Unit ID	Description	Pollution Control Device/Practice
EU001	Quarry Blasting	Work Practices
EU002	Quarry Drilling	Water and/or Baghouse
EU003	Wind Erosion - Stockpiles	Water
EU004	Fugitive Emissions – Disturbed Areas	Water and/or Chemical Dust Suppressant and/or Re-Vegetation, Coverings
EU005	Fugitive Emissions – Haul Roads	Water and/or Chemical Dust Suppressant
EU006	Limestone Dumping and Primary Crushing	Water and Baghouse
EU007	Limestone Screening - Quarry	Water and/or Baghouse
EU008	Raw Material Transfer and Stacker	Water
EU009	Limestone Dressing, Screening and Conveying	Water and/or Baghouse
EU011	Lime Kiln #1	Baghouse
EU012	Lime Kiln #2	Baghouse
EU013	Kiln Dust Storage (baghouse) and Handling	Baghouse
EU014	Lime Crushing, Screening and Transfer	Baghouse
EU015	Lime Product Load-out	Baghouse
EU016	Railroad Lime Loadout	Baghouse
EU017	Railroad Unload	Baghouse
EU018	Lime Hydrator Surge Bin	Baghouse
EU019	Lime Hydrator	Wet Scrubber
EU020	Hydrated Lime Pulverizing, Storage, and Transfer	Baghouse
EU021	Hydrated Lime Load-out	Baghouse
EU022	Coal Unloading Handling and Storage	Baghouse (on storage)
EU023	Coal, Syncoal, Petroleum Coke Handling and Blending	Baghouse
EU024	Coal, Syncoal, Petroleum Coke Crushing and Handling	Baghouse
EU025	Fuel Use – Diesel Fuel	None
EU026	Fuel Use – Gasoline	None

C. Categorically Insignificant Sources/Activities

The following table of insignificant sources and/or activities was provided by Graymont to assist in understanding the facility's layout. Because there are no requirements to update such a list, the emission units and/or activities may change from those specified in the table.

Emission Unit ID	Description
IEU001	Limestone Removal / Loading
IEU002	Waste (fines) Removal and Loading
IEU003	Removal to Dressing Screen Stockpile
IEU004	Fuel Storage Tanks
IEU005	Diesel Garage Heaters
IEU006	Core Bin/Bunker Loadout
IEU007	Portable Coal Conveyor System

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

The Department has determined that the emission limits that apply to EU001, EU002, EU003, EU004, EU005 – Quarry Blasting; Quarry Drilling; Wind Erosion – Stockpiles; Fugitive Emissions – Disturbed Areas; Fugitive Emissions – Haul Roads are as follows: The particulate matter limit is established using the particulate matter calculation for new equipment (ARM 17.8.309). Opacity is limited to 20%.

The Department has determined that the emission limits that apply to EU006, EU007, EU008, EU009, EU010 – Limestone Dumping and Primary Crushing, Limestone Screening, Raw Material Transfer and Stacker, and Limestone Dressing, Screening and Conveying: The particulate matter limit is established using the particulate calculation for new equipment (ARM 17.8.309). For all these sources the opacity is limited to 20%.

The Department has determined that the emission limits that apply to EU011, EU012, EU013 – Lime Kiln #1, Lime Kiln #2, and Kiln Dust Storage (baghouse and silo) and Handling are as follows: the particulate matter limit for the rotary lime kilns is 0.5 lb/ton of lime produced. The opacity limit that applies to the baghouses controlling the rotary lime kilns is 15%. The opacity limit applicable to all associated sources excluding the baghouse stacks, as previously discussed, is 20% established through reasonable precautions (ARM 17.8.308). The NO_x limit that applies to the rotary lime kilns is 100 lb/hr. The SO_2 limit applicable to rotary lime kilns is 63.5 lb/hr. The CO limit that applies to the rotary lime kilns is 131 lb/hr. The VOC limit applicable to the rotary lime kilns is 1.25 lb/hr.

The Department has determined that the emission limits that apply to EU014, EU015, EU016, EU017 – Lime Product Crushing, Screening and Transfer, Lime Product Load-out, Railroad Lime Load-out, Railroad Un-Load are as follows: The particulate matter emissions from the lime baghouse are limited to 0.0027 lb/ton of lime produced. The opacity limit applicable to the lime baghouse is 20%. The opacity limit applicable to all associated lime product sources excluding the baghouse stack, as previously discussed, is 20% established through reasonable precautions (ARM 17.8.308).

The Department has determined that the emission limits that apply to EU018, EU019, EU020, EU021 – Lime Hydrator Surge Bin; Lime Hydrator; Hydrated Lime Pulverizing, Storage and Transfer; and Hydrated Lime Load-out are as follows: Particulate matter emissions from the lime hydrator are limited to 3 lb/hr of operation (ARM 17.8.715). Particulate emissions from the lime handling bin vent (controlling the surge bin); the hydrated lime product handling dust collector (controlling the bucket conveyor, oversize pulverizer, and hydrate storage silo); and the truck loading filter module (controlling the hydrated lime truck load-out) are limited to 0.020 gr/dscf (ARM 17.8.715). The opacity limit applicable to the lime hydrator; the lime handling bin vent (controlling the surge bin); the hydrated lime product handling dust collector (controlling the bucket conveyor, oversize pulverizer, and hydrate storage silo); and the truck loading filter module (controlling the hydrated lime truck load-out) is 15% (ARM 17.8.715). The opacity limit applicable to all other associated hydrated lime product sources, excluding those sources previously discussed, is 20% established through reasonable precautions (ARM 17.8.308).

The Department has determined that the emission limits that apply to EU022, EU023, EU024 – Coal Unloading, Handling, and Storage; Coal, Syncoal, and Petroleum Coke Handling and Blending; and Coal, Syncoal, and Petroleum Coke Crushing and Handling are as follows: Particulate emissions from the coal baghouse (Micropul, Model 8-B, 400 acfm) are limited to 0.0001 lb/ton coal fired. The opacity limit applicable to all associated sources is limited to 20% established through BACT determinations (ARM 17.8.715), applicable Federal requirements (40 CFR 60, Subpart Y), and reasonable precautions (ARM 17.8.308).

The Department has determined that the emission limits that apply to EU025, EU026 – Diesel Fuel Use, Gasoline Fuel Use are as follows: The particulate matter limit is established using the particulate matter calculation for new equipment (ARM 17.8.309). The opacity limit applicable to all affected sources is 20% established through BACT (ARM 17.8.715) and reasonable precautions limits (ARM 17.8.308).

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 do not require the permit to impose the same level of rigor for all emission units. Furthermore, they do not require extensive testing or monitoring to assure compliance with the applicable requirements for emissions 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 request additional testing to determine compliance with the emission limits and standards. Further, a CAM Plan for PM emissions resulting from the Rotary Lime Kiln operations Kiln #1 and #2) is included in Appendix E to Permit #OP1554-06.

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

Graymont is required to keep all records listed in the operating permit as a permanent business record for at least five 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.

SECTION IV. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

As of the date of issuance of this operating permit, the Department is not aware of any proposed or pending MACT standards that may be applicable.

B. NESHAP Standards

As of the date of issuance date of this operating permit, the Department is unaware of any future NESHAP Standards that may be promulgated that will affect this facility.

C. NSPS Standards

As of the date of issuance date of this operating permit, the Department is unaware of any future NSPS Standards that may be promulgated that will affect this facility.

D. Risk Management Plan

As of the date of issuance of this operating permit, 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 (unless the limitation or standard that is exempt under ARM 17.8.1503(2));
- 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 pollutant that is greater than major source thresholds.

Graymont has in place CAM plans for Emission Units EU011 and EU012 as required.

F. Prevention of Significant Deterioration and Title V Greenhouse Gas 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 was not final prior to 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) emissions. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. 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 exceed the 100,000 TPY CO2e threshold under Title V would be required to obtain a Title V Operating Permit if they were not already subject.

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 PSD may still be required to comply with BACT for GHG emissions.