

Feb 24, 2009

Director of Southern Region  
Alberta Environment  
Regulatory Approvals Centre  
9<sup>th</sup> Floor, 9820 – 106 Street  
Edmonton, Alberta T5K 2J6



\*\*\* VIA FAX 780-422-0154 \*\*\*

Dear Director:

**Re: Application for Renewal – Application No. 013-227  
Graymont Exshaw Lime Plant  
Exshaw Alberta**

We have reviewed the subject application for Graymont’s renewal and have a number of concerns as outlined in this letter.

Many of our concerns stem from the fact that this application, if approved, will set the operating limits to which Graymont will be required to run for the next 10 years. To be consistent with Alberta Environment’s approach of continuous improvement at each facility renewal, we believe that Graymont should demonstrate a more substantial improvement than what they are proposing in this application.

Our statement of concern is organized in the same order as Graymont’s renewal application document. We have tried to reference the relevant sections or tables where possible, but some references may not be included because of the repetitive nature of the application. We have also provided comments to the PGL Air Quality Assessment report. We have some significant concerns with the conclusions from the Air Quality Assessment report.

1. Section 6.3.1 Fuel Supply - The application indicates that Graymont will only burn “clean wood material only” such as “pallets, sawdust, off-cuts from saw mills, hog fuel, wood chips”. This was further confirmed at the Graymont open house on Feb 17, 2009, namely that Graymont would not burn wood waste that contained preservative, glues or paints. Please ensure that the renewal approval reflects this commitment to burn pure wood products only (with no additives) and that no other alternate fuel products will be burned without a more rigorous environmental impact assessment.

Also, please include a requirement in the approval that if an alternate wood fuel has a better use such as being re-used or recycled (instead of burned) then it should not be burned. This is a requirement of Lafarge’s fuel flexibility protocol and should also be included for Graymont.

Also, at the open house, Graymont indicated that truck transport (2-5 trucks per day) would be used to bring in wood fuel. Graymont should be encouraged to utilize rail transport for wood fuel.

2. Section 6.20 - the wattages shown for numerous space heaters are very large, i.e. 26 MW to 178 MW. These cannot be correct. If they were, these space heaters as listed would be using about as much power as the Genessee Power Plant produces.

3. Section 6.27 and Section 18.1.1 - Ambient Ground Level Concentrations and Air Monitoring Equipment

We are pleased to hear that Graymont has committed to an ambient air monitoring plan. The ambient air monitoring should utilize a continuous monitor and should test for both acute and chronic exposure of fine particulates (PM2.5, PM10), total particulates and any other potential pollutants of concern such as but not limited to SO<sub>2</sub>, NO<sub>x</sub> and CO. Also, testing for mercury, heavy metals and other pollutants of concern should be conducted on a regular basis and such testing should be included in the renewal approval.

As part of the air monitoring plan, please ensure that Graymont is required to operate the continuous monitor for the duration of the permit not just for one year as indicated in Section 6.27 of the application.

Also, at the open house on Feb 17, 2009, Graymont committed to installing air monitoring equipment for NO<sub>x</sub> and SO<sub>x</sub>. Please ensure that the renewal permit includes this requirement for the duration of the permit. Ideally, NO<sub>x</sub> and SO<sub>x</sub> testing should be done with continuous monitoring equipment.

And, most importantly, please ensure that Graymont be required to do whatever is needed to meet all relevant guidelines if any of the data from the air monitoring stations shows exceedances.

4. Pollution Reduction Plan (from Open House) - At the open house on Feb 17, 2009 and in letters received from Graymont, Graymont indicated that they would commit to implement an air pollution reduction plan. As part of that plan, Graymont indicated at the open house that they would implement any action items that come out of that plan. Please include language in the renewal approval that commits Graymont to submit a pollution reduction plan by a certain date and then to implement all action items that come out of the plan within a specified time limit.

5. Section 15.4.1 Air Contaminants - This section describes stack sampling that has clearly showed exceedances of approval release limits on Kiln 1. Exceedances occurred in July 2007 and then again on a subsequent test in Sept 2007. It was not until Nov 2007 that Graymont was able to get a stack test that did not show exceedances. This is unacceptable and indicates that the plant likely ran for many months with exceedances of the approval release limits. Clearly stack surveys every 1-2 years are not adequate to monitor proper operation of emission reduction equipment. As such, with this renewal, we believe Graymont should be required to install and operate continuous source emission monitoring.

6. Section 24.1 New Technology

- a. Baghouses - We are pleased that a bag house is being installed on Kiln 2 but we also feel that a bag house should be installed on Kiln 1. A bag house would be considered Best Available Technology (BAT). In fact, Tables 47 and 48 show that a bag house emits 1/100<sup>th</sup> of the particulate emissions that a wet scrubber emits. We also understand from the open house that a bag house may not be as effective at scrubbing SO<sub>2</sub>, but based on the data presented in the renewal application, SO<sub>2</sub> is much less of a problem than particulate matter, therefore installing a baghouse on Kiln 1 would be a reasonable trade off. A baghouse on Kiln 1 should therefore be included as a requirement of this renewal.

- b. Wind fences - Although windfences are a good start (and should have been installed many years ago), wind fences would not be considered BAT. Graymont should be required to install BAT for better fugitive dust control on the various rock piles.
  - c. Covered Conveyers and Minimize Front End loading Activities – Graymont should be striving to cover all conveyers and minimize front end loader activities.
7. Air Modeling Report - Section 6.4 - Modeling Domain (refer also to Fig 6-3) – We do not believe that the air modeling results extend sufficiently far away from the plant site especially given the mountainous nature of the terrain. A radius of 1 km would not cover a number of the recreational areas around the plant such as Jura Creek, Quait Valley, Yamnuska Wildlands. It would also not cover much of the topography above valley bottom, some of which topography is heavily used by recreationalists such as hikers and climbers. We request that Graymont be required to present modeling data that goes beyond 1 km and that covers higher elevations to ensure that all areas have been represented.
  8. Air Modeling Report - Section 2.1.3 - Emergency Upsets – it seems that emergency upset conditions are not always of short duration given that the stack testing done in Jul 2007 through to Nov 2007 showed many months (possibly since the last stack test two years prior) in an upset mode of operation. We therefore request that Graymont be required to model upset conditions.
  9. Air Modeling Report - Table 3-1 Summary of Air Quality Objectives - This table does not include a 1 hour limit for TSP and PM2.5. The 1 hour duration limit is more indicative of acute effects, especially for those people that suffer from asthma or other breathing ailments. Please ensure that Graymont provide a guideline for 1 hour periods. Also, please have Graymont comment on why Health Canada’s guidelines were not used as they are generally lower than Alberta’s guidelines (e.g. Health Canada recommends 15 microgr/m3 for PM2.5).
  10. Air Modeling Report – Section 4.0 - Background Levels of Contaminants – We do not believe that the background data set for emissions is valid. The data for background levels are from a completely different part of the province relative to the Graymont plant, e.g. the High Tower site is approx. 400 km away from Graymont and is in a much wetter, more treed (and hence likely less dusty) part of the province. There have been numerous air quality studies done in the Bow Valley which have gathered data from locations upwind of the rock industry in the Bow Valley. That upwind data would provide a better representation of background levels. Such approach has been used by other industries in the Bow Valley. It is also worth noting that other industry studies in the Bow Valley have determined that background levels of particulates have, at times, come close to exceeding the guidelines without any contribution from industry so clearly the background levels can be significant. Graymont should consider local upwind data to determine if a more suitable background data set is available. If local data is more suitable, then Graymont should use this data in all of their air modeling.
  11. Air Modeling Report - Table 7-1, 7-5 - Particulate Results - These tables do not include the “1<sup>st</sup> highest” values. We understand the logic behind the 8<sup>th</sup> highest value being used as a proxy for a 24 hour prediction, however, the 1<sup>st</sup> highest value would be representative of a 1 hour case and should therefore be included and then compared to a suitable guideline.
  12. Air Modeling Report - Table 7-1, 7-5 - Particulate Results - It is unclear as to whether these numbers include the contribution from background sources. Our interpretation of the tables and the report would indicate that the back ground numbers need to be added to the modeling results.

If that's the case, then much of the particulate results would exceed the guidelines even more than shown. This is unacceptable and Graymont should not be allowed to exceed the guidelines.

13. Air Modeling Report - Table 7-1, 7-5 - Particulate Results -The data in this table indicates that Graymont has exceeded and is predicting more exceedances of the guidelines for particulates off Graymont property. This is unacceptable. Especially since the isopleths would indicate that the exceedances are occurring along Highway 1A and where people often park to access the Jura Creek trails. To say that these exceedances are not significant is not correct.
14. Air Modeling Report – Section 7.2.2 – NO<sub>2</sub> -The isopleths for NO<sub>2</sub>/NO<sub>x</sub> (including those in Appendix E) would appear to exceed the guidelines by a considerable margin beyond the plant fence line. This is the same for SO<sub>2</sub> (refer Fig 8-20). How is Graymont addressing this?
15. Air Modeling Report - Section 9.0 - Fugitive Dust – Table 9-1 would indicate that fugitive particulate matter is significant at 16 microgr/m<sup>3</sup> so why is it dismissed? It should be included in the cumulative assessment. Graymont should be required to include fugitive dust in its modeling.
16. Air Modeling Report – Section 8.0 and 8.1 and 9.0 - There is no table similar to Table 7-1 and 7-5 that summaries all of the effects for contributions from the (1) Graymont plant plus (2) background plus (3) fugitive plus (4) highway plus (5) other industry. The purpose of doing a cumulative analysis is to add up all of the various sources to see what they add up to, not to dismiss the results. Please provide such a table, especially since the addition of all these effects would seem to result in further exceedances.
17. Air Modeling Report – Section 10.2 – Conclusions - This conclusion is not valid without a presentation and discussion of the summation of the cumulative results. Dismissing the cumulative results because individual contributions are small at the Graymont site is unacceptable. Please ensure that Graymont present tabular data of the cumulative analysis which should include (1) Graymont plant plus (2) background plus (3) fugitive plus (4) highway plus (5) other industry.
18. CO<sub>2</sub> – Graymont has not presented any plans to reduce absolute levels of CO<sub>2</sub> emissions with this renewal. We believe Graymont should develop a plan to reduce CO<sub>2</sub> as a result of their operations at Exshaw.
19. Blue Haze – Graymont has still no plans to reduce blue haze. Graymont should put in place a plan to bring down its contribution to blue haze in the Bow Valley.

We look forward to a response to the above.

Sincerely,  
Bow Valley Clean Air Society



Hal Retzer

Cc: Rob Beleutz, Graymont  
Sabastien Villeneuve, Graymont  
Joe Feehan, AE