Comments and Responses on Continental Cement Company's Prevention of Significant Deterioration New Source Review Permit Application

This document responds to comments made to the PSD draft permit. Comments have been summarized or paraphrased for the sake of clarity. The numbers of Special Conditions in the comments may have changed. The numbers referenced in the response reflect the final Special Condition numbering.

Continental Cement Company submitted the following comments to the Air Pollution Control Program.

Special Condition 8.B

Comment:

Continental Cement Company requests that this special condition on non-hazardous waste fuels be removed from the permit and replaced with a requirement that any non-hazardous waste fuel material be managed in accordance with Hazardous Waste Combustor MACT standards. As stated in the application, Continental Cement will utilize non-hazardous waste materials as fuel through the hazardous waste preparation and feed systems. A very thorough and detailed system for testing, monitoring, feeding and recordkeeping is provided under the Hazardous Waste Combustor MACT standards. Utilization of non-hazardous waste, along with the hazardous waste, provides a highly regulated methodology to introduce the non-hazardous waste into the kiln system. By combining non-hazardous fuels with the hazardous waste, the most stringent regulations are followed and can be easily monitored and tracked by the agencies. Adding an additional set of special conditions for non-hazardous waste in this construction air permit complicates compliance and recordkeeping requirements. With the special condition as currently written, it is unclear how Continental Cement would demonstrate compliance. Therefore, Continental Cement requests that the special condition incorporate use of non-hazardous waste with the hazardous waste under the HWC MACT standards.

Air Pollution Control Program's Response:

The list of alternative fuels that Continental has proposed is vast and varied. The Department has concerns that some of the fuels that are listed, although not considered to be hazardous wastes by definition, still have the potential to negatively affect emissions of mercury, semi-volatile metals and low volatile metals. The Hazardous Waste Combustor (HWC) MACT, Subpart EEE, contains emission standards for these pollutants. Yet, particularly for mercury, the limits in the MACT could ignore the pollutant contribution from non-hazardous fuels. Additionally, emissions limits during periods when hazardous wastes were not being combusted were needed. The special condition was drafted to ensure that emissions of mercury, cadmium, lead, arsenic, beryllium and chromium were limited, no matter what type of non-traditional fuel was being combusted. It should be noted that emissions of criteria pollutants are not as great a concern, as they will be controlled to the same extent regardless of fuel using the BACT technologies determined during the permit review.

The Department agrees that the special condition lacks specificity on how compliance will be determined. The special condition has been revised outlining specific compliance procedures. A separate set of emissions limits based on fuel feedrates has also been included (Special Condition 8.B).

Special Condition 11.A

Comment:

Continental Cement requests that this special condition be modified in the permit. The equipment within the primary crusher building (RM9, RM10.1, and RM 10.2) constitute point emission sources which are controlled by baghouse LDC4. Each emission point is ducted to the baghouse. The building serves as the sources' enclosure. No storage occurs in this building. Continental Cement requests that the total enclosure demonstration condition [Draft Special Condition 11. A.1)] be replaced by allowing an alternative means to demonstrate 100% enclosure, that being Method 22 as described in the PC MACT Standard. A Method 22 reading can be taken daily on the enclosure to verify that there are no visible emissions from the crusher building.

The suggested change is more practicable than the proposed use of differential pressure (inside to outside the building). The differential pressure required to totally capture the generated particulate matter is much less than can be readily measured by production-grade differential pressure gauge monitoring equipment. Therefore, the proposed Special Condition 11. A.1 would require Continental Cement to greatly oversize the baghouse, incurring unnecessary cost and energy demand just to achieve the proposed differential pressure requirement. The Method 22 reading is a much more efficient manner to demonstrate complete capture, without requiring wasteful over sizing of the control equipment. Continental Cement requests that this condition be modified.

> *Air Pollution Control Program's Response:*
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> The special condition was written to ensure that 100% capture of emissions from emission points RM-9, RM-10.1 and RM-10.2 occurred. In conversations concerning control of emissions from the Crusher Building with the applicant's representative during the review period, it was initially established that the crusher building would not be considered as a single emission point, but rather three emission points vented to the same baghouse (2/15 email from Greg Haug to Lina Klein). After determining that the Crusher Building housed three independent emission points, clarification was made that the applicant intended to achieve 100% capture of each piece of equipment controlled by a baghouse (3/24 email from Greg Haug to Mike VanCleave).
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> The Portland Cement MACT, Subpart LLL, and subsequently, the Method 22 monitoring, do not apply to the three emission points housed in the Crusher Building. However, use of a visible emissions test would satisfy the Department if conducted on each of the three emission points, rather than on the building itself. Use of a visual negative pressure check on the building would also be satisfactory. The Special Condition 11.A has been revised to provide for visible emissions testing of each of the three emission points (RM-9, RM-10.1 and RM-10.2) on a daily basis or for a visual negative pressure check on the building (Special Condition 11.A).

Special Condition 13.C.2

Comment:

Continental Cement requests that this special condition be modified to allow alternate methods to demonstrate that the storage building is providing total enclosure. The buildings serve as the enclosure for storage of raw materials. Continental Cement requests that the total enclosure demonstration condition [Draft Special Condition 13. C.2)] be replaced by allowing an alternative means to demonstrate 100% enclosure, that being Method 22 as described in the PC MACT Standard. A Method 22 reading can be taken daily on the enclosure to verify that there are no visible emissions from the storage buildings.

The suggested change is more practicable than the proposed use of differential pressure (inside to outside the building). The differential pressure required to totally capture the generated particulate matter is much less than can be readily measured by production-grade differential

pressure gauge monitoring equipment. Therefore, the proposed Special Condition 13. C.2 would require Continental Cement to greatly oversize the baghouses, incurring unnecessary cost and energy demand just to achieve the proposed differential pressure requirement. The Method 22 reading is a much more efficient manner to demonstrate complete capture, without requiring wasteful over sizing of the control equipment. Continental Cement requests that this condition be modified.

Air Pollution Control Program's Response:
The special condition was written to ensure that 100% capture of emissions from the iron ore, shale, clay and limestone storage piles occurred. Special conditions covering control of emissions from these buildings were a result of the BACT analysis conducted on these PM_{10} sources. Again, the Portland Cement MACT, Subpart LLL, and corresponding Method 22 monitoring, do not apply to the storage piles in either the Raw Materials Storage Building or the Limestone Dome.

In conversations concerning control of emissions from the Raw Materials Storage Building with the applicant's representative during the review period, Continental Cement agreed to add inlet vents to each end of the building and modify the baghouses to draw air from the building (2/21 email from Greg Haug to Lina Klein). By operating with the doors closed, negative pressure would result. Further conversations concerning the Limestone Dome resulted in the applicant stating that the baghouse was sized to achieve negative pressure in the Limestone Dome when the doors of the building are shut (2/24 email from Greg Haug to Lina Klein).

Unlike the Crusher Building, both the Raw Materials Storage Building and the Limestone Dome will house storage piles that are sources of fugitive emissions. The Department believes that a visible emissions test conducted on the storage pile would not be a reliable indicator that all emissions are captured. The distance between the storage piles and the inlet to the baghouse preclude any correlation between the lack of visible emissions and complete capture of PM_{10}. However, the Department has allowed for the use of a visual indicator check to insure negative pressure occurs in the buildings. The special condition has been revised accordingly (Special Condition 13.C.2).

Special Conditions 13.E, 14.B, 15.B
Comment:
Continental Cement Company requests that this special condition be eliminated from the permit as the emergency generator is exempt in accordance with 10 CSR 10-6.061 (3) A. 2. BB. Section BB states that Internal Combustion Engines and Gas Turbine Driven Compressors, Electric Generator Sets and Water Pumps Used Only for Portable or Emergency Services Provided that the Maximum Annual Operating Hour Shall not Exceed 500 Hours. Emergency generators are exempt only if their sole function is to provide a back-up power when the electric power from the local utility is interrupted. This exemption only applies if the emergency generators are operated only during emergency situations and for short periods of time to perform maintenance and operational readiness testing. The emergency generator shall be equipped with a non-resettable meter.

Continental Cement has stated in the application that this emergency generator is only for use when the power is not available from the utility company. The generator's purpose is for an orderly shutdown of the kiln system when a power loss occurs. An orderly shutdown avoids catastrophic equipment failure problems and unwanted emission releases from the kiln process when a sudden loss of power occurs. Under draft Special Condition #17, the emergency generator has been limited to 500 hours annually. Therefore, Continental believes that the requirement to perform stack tests on an exempt backed-up unit that will only be used during an emergency is unwarranted. During the application process, Continental Cement agreed to perform a BACT analysis on this unit in order to provide the Best Available Control Technology

for the generator. The unit will be a new unit with best available controls and therefore, being limited to less than 500 hours per year, testing to demonstrate the emission rate is unnecessary and represents a significant cost to perform. This condition was not required of any of Continental Cement's competitors that have received PSD permits. Continental Cement requests that this condition be removed from the permit.

Air Pollution Control Program's Response:
The unit is not exempt from construction permitting requirements. Potential emissions from the emergency generator are considered to be part of the total potential emissions for the project for applicability purposes. Missouri State Rule 10 CSR 10-6.061, Construction Permit Exemptions, contains a paragraph, 10 CSR 10-6.061 (1)(B), that disallows the permitting exemptions for projects undergoing Prevention of Significant Deterioration review:

> *"This rule shall apply to all installations in Missouri. The provisions of section (3) of this rule notwithstanding, 10 CSR 10-6.060 shall apply to any construction, reconstruction, alteration or modification which is subject to federally-mandated construction permitting requirements set forth in sections (7), (8), or (9), or any combination of these, of 10 CSR 10-6.060."*

Stack testing provisions were included in the Special Conditions of the draft permit to ensure that emission rates claimed by Continental Cement in the BACT analysis would indeed be met. Insufficient documentation was included in the BACT analysis to eliminate the need for stack testing of the unit. The generator, operating under emergency generator restrictions, still contributes to the potential emissions from the plant. Since the generator contributes to potential emissions, the unit was required to undergo BACT analysis, despite the magnitude of that potential.

The Department agrees that stack testing a generator that is to be used in emergency situations only is a costly endeavor. Applicants have submitted manufacturer's stack test results in the past for approval by the Compliance Section of the Air Pollution Control Program in lieu of stack testing conditions or use of AP-42 emission factors. No stack testing is required upon approval by the Compliance Section of the manufacturer's stack testing results. The special conditions have been revised to allow Continental Cement the same opportunity. Continental may submit manufacturer's stack test result data for review in lieu of stack testing once Continental Cement decides which particular make and model will be installed at the installation (Special Conditions 13.E, 14.B and 15.B).

Special Condition 16
Comment:
Continental Cement requests that this special condition be eliminated because it is not reasonably related to compliance with the sulfur dioxide emission limit, is not based on actual operating data, and could adversely affect Continental's ability to operate the kiln and maintain compliance with the limits. Continental Cement met with MDNR to explain the fate of sulfur in the cement pyroprocessing system. The ratio of 0.8 to 1.2 was utilized in this discussion to demonstrate that operating very far outside of this range can cause significant operational problems. In effect, the comment was made that the system simply won't operate properly once you get very far outside of these ranges. Until the system is actually constructed and operating with the actual raw materials, the true sulfur-to-alkali ratio won't be known. In fact, the ratio could end up at 0.78 or it could end up at 1.25, and the system may still operate. However, given this special condition that could inappropriately dictate the cement manufacturing process, Continental may not be able to operate with available raw materials. The designers of the pyroprocessing system have utilized the best available information to determine the amount of sulfur that will be emitted from the system under given operating conditions. In the application, Continental has proposed a sulfur emission rate, in pounds per ton of clinker that can be

achieved with the given raw materials, operating systems, temperatures and residence times. Special conditions have been provided in this permit to limit the amount of sulfur dioxide that can be emitted from the system. Continental Cement has agreed to operate within the limitations on emissions from the stack. However, a separate operating condition to further dictate the sulfur-to-alkali ratio could force Continental into extreme measures, such as obtaining higher sulfur feed materials or higher alkali feed materials simply in order to meet an operating limit, even though stack emissions could be adversely impacted. Limiting the operator's ability to control the process is unwarranted and unnecessary given that a specific stack sulfur emission limitation has been set. Therefore, Continental Cement requests that this special condition be eliminated.

Air Pollution Control Program's Response:
Continental Cement intends to utilize a number of different fuels in the kiln system: coal, pet coke, liquid and solid hazardous waste fuels, in addition to the dozens of non-hazardous waste alternate fuels outlined in Special Condition 8.A of the permit. Discussions were held with the applicant on April 19, 2006 concerning the potential need for multiple SO_2 BACT limits for the number of possible fuel combinations that would be fed to the kiln system. Continental Cement at that time provided the Department an explanation as to the importance of the sulfur-to-alkali ratio in the kiln system as justification as to why one SO_2 limit would be sufficient, regardless of the fuel mix being fed to the kiln system. Continental Cement explained that should a low-sulfur fuel be used in the kiln system, higher sulfur raw materials would need to be fed to the kiln to maintain the sulfur-to-alkali ratio. Likewise, if high-sulfur coal would be utilized, the sulfur content of the raw mix would need to be adjusted to stay within the ratio specified by Continental Cement's production manager, equal to the 0.8 – 1.2 level found in the draft permit.

The ratio limit was not placed in the permit as assurance that the sulfur dioxide emission limit would be met. The limit was placed in the special conditions as a way to avoid needing multiple SO_2 emission limits while utilizing fuels of widely varying sulfur content. The Department has revised the special condition to allow Continental Cement opportunity to revise the ratio once the new kiln's particular range is determined. Upon approval of a revised range by the Department, the installation will be required to operate within the given range for compliance. The Department has also included a provision for Continental Cement to provide a demonstration showing the lack of correlation between fuel sulfur content and SO_2 emissions, all other factors constant. The demonstration may use SO_2 CEMS data over a period of time and a range of fuel sulfur content (Special Condition 16).

The following comments were submitted to the Air Pollution Control Program by the Environmental Protection Agency (EPA).

Use of Lambert Field Meteorologocial Data
Comment:
Lambert Field is located in a relatively flat area and about 100 miles away. The Hannibal location is located close to the Mississippi River and the meteorology is influenced by local topographical effects. This situation is not unique to this facility. Whenever a facility locates in a bluff area and/or near a river valley, the meteorology is very different than the meteorology at an airport more than 100 miles away. I believe that the company must justify the use of the St Louis data or redo the modeling.

Air Pollution Control Program's Response:
On March 10, 2005, staff from the Department's Air Pollution Control Program met with Continental Cement to discuss the potential construction of a Portland cement kiln at its existing facility located near Hannibal, Missouri. During the initial discussions with the

facility, it was determined that the air quality analysis was to be conducted according to 40 CFR Part 51 Appendix W, dated April 15, 2003.

As recommended in 40 CFR Part 51 Appendix W, the applicant chose to employ the use of the Industrial Source Complex (ISC) dispersion model to demonstrate compliance with the applicable air quality standards. The ISC dispersion model is a steady-state Gaussian plume model that assumes straight-line transport to all downwind receptors. Although the model can accept site specific meteorological data, it does not have the ability to predict or create temporal or spatial variations in meteorological conditions due to local flows caused by terrain, lake effects or land/sea breezes. The Environmental Protection Agency has not indicated that the ISC dispersion model is inappropriate for use in this application. Given its inability to create three-dimensional meteorological fields, the use of on-site meteorological data in the application of the ISC dispersion model is not likely to result in a significant difference in ambient concentrations. If more calm periods, or lower wind speeds are anticipated, significant differences may result, however, the Environmental Protection Agency has not provided any indication that calm periods or low wind speeds are of any particular concern in this instance.

In addition, staff from the Environmental Protection Agency did not indicate, at any time during the pre-application phase, that the use of existing meteorological data was inappropriate.

On March 31, 2005, staff from the Department's Air Pollution Control Program formally requested the collection of preconstruction ambient air quality data for particulate matter under ten microns for a period of one year as required under the Prevention of Significant Deterioration program. The Environmental Protection Agency Region VII was copied on this correspondence and did not provide any indication that the collection of on-site meteorological data would be required.

Again, on June 15, 2005, staff from the Department's Air Pollution Control Program provided a formal response to the applicant regarding the modeling procedures that were to be employed throughout the course of the modeling study. A protocol document was provided by the applicant and included a description of the proposed meteorological database that was going to be used as input to the air quality model. The Environmental Protection Agency did not provide a response to the protocol document, and did not indicate that the National Weather Service data was inappropriate as described. The Agency was copied on the Department's response to the protocol document.

Lastly, based on previous experience, the Department's Air Pollution Control Program does not believe the use of on-site meteorological data in this instance will yield different results. Therefore, no changes to the permit or ambient air quality impact analysis are required due to this comment.

The citizens of the State of Missouri submitted the following comments to the Air Pollution Control Program during the Public Comment period.

Non-BACT Controls at Saverton Quarry

Comment:

In reviewing the application I noted that the particulate/fugitive emission controls at the quarry were listed as "non-BACT" controls. What does this mean and why is the facility being allowed to operate at what appears to be lower controls (non-BACT) for their quarry than they are at the proposed cement plant itself? How does the quarry plan to keep the fugitive particulate emissions from leaving the property?

Air Pollution Control Program's Response:
Emission points associated with a PSD permit that are new or modified are required to undergo a Best Achievable Control Technology (BACT) review. This review examines the potential control technologies available and feasible to reduce pollutant emissions. The applicant is required to utilize the most effective control option, taking into account economic, environmental and energy impacts.

As some of the equipment at the Saverton Quarry is neither new nor modified, a BACT analysis was not required. The special conditions list the controls as non-BACT controls simply to differentiate them from controls that were required due to a BACT analysis. However, the control methods chosen are not necessarily substandard. In fact, the controls to be used on the haul roads at the quarry are identical to the controls incorporated for the haul roads at the site that were subject to BACT analysis.

The controls for the new crushers (EP-6 and EP-6A) and conveyor screeners (EP-5 and EP-5A) at Saverton Quarry were subject to BACT review.

Haul Road Controls
Comment:
I read in the proposed permit that they are not required to provide dust control during freezing conditions. Does this mean they will be allowed to cover the homes in the area around their quarry with dust during the several months of sub-freezing temperatures in this area?

Air Pollution Control Program's Response:
The special conditions do contain a provision to suspend watering of haul roads during periods when freezing conditions occur. Application of water to roads at those times would result in icy conditions and increase the potential for accidents. Meteorological conditions in Missouri typically do not result in long-lasting periods of sub-freezing temperatures, so prolonged periods of uncontrolled emissions is not expected.

Ambient Air Quality Analysis at Saverton Quarry
Comment:
No one has produced any air quality test results for this quarry operation to insure its safety. Obviously, there should be current test information available but to this date no one directly affected by this decision has been given any of this information. Some private meetings were held in Hannibal with Continental Cement but they are not affected by this quarry opening as we in Ralls County will be.

Comment:
Blasting, drilling, truck hauling and the entire operation of mining these products will be very disruptive to the environment let alone our own personal environment. I for one, have asthma and chronic bronchitis; one reason for us having relocated to this area and setting, so as to be removed from pollution. Now I will have my air quality compromised in my own backyard.

Comment:
I am allergic to dust and you know how dusty it would be if they were mining the quarry.

Comment:
The cost we will pay is not definable in dollars alone. My concern is the change in air quality due to dust from hauling, fuel emissions from the 18-wheelers and death of trees and wildlife that contribute to the health of our air and water. I request you deny or at least delay any approvals until this matter has been properly aired out to everyone's best interest, not just Continental Cement's.

Comment:
The air permit deals almost entirely with the kiln operation at their present site. There is very little mentioned about the air quality at the quarry and the air quality of the 8-mile haul road (Hwy 79). They should be required to state how they plan on impacting the area and also state in detail how they plan on controlling the particulates that are associated with a quarry operation. It should be noted that their permit application has no estimated environmental impact from the proposed quarry. I assume they can't have fugitive emissions leave the quarry property, yet I can't find anywhere in the permit an estimated amount of emissions.

Air Pollution Control Program's Response:
For the purpose of the air permit, Continental Cement and the Saverton Quarry were considered the same facility and therefore the permit and all of the required analyses included the emissions and operations of both the kiln and the quarry.

An Ambient Air Quality Impact Analysis (AAQIA) is required for any air contaminant that exceeds the de minimis emission levels outlined in 10 CSR 10-6.020 (3)(A) Table 1. The AAQIA is completed to determine the ambient impact of a pollutant(s) at or beyond the property boundary of the proposed source or modification. In Continental Cement's case, the AAQIA encompassed the area surrounding the plant in Hannibal, as well as the area outside the property boundary at the Saverton Quarry. The main pollutant of concern from the quarry operation is particulates with diameter less than 10 microns (PM_{10}).

A preliminary analysis determined that a full impact analysis and one year of preconstruction monitoring for PM_{10} were needed. The full impact analysis examined the emissions from the proposed source, the kiln and the quarry, in conjunction with other existing sources. Secondary emissions from residential, commercial and industrial growth due to the new project were also examined.

An increment analysis was also required to determine that there was no deterioration of the air quality beyond the limits outlined in 10 CSR 10-6.060 (11)(A) Table 1. As with the NAAQS analysis, Continental Cement was required to demonstrate that the operations associated with the proposed modification, including those associated with the Saverton quarry, were below the significance thresholds outlined in 10 CSR 10-6.020 (3)(A) Table 1. The analysis included this demonstration.

A discussion of the modeling analysis and the modeling memorandum recommending approval of the air quality analysis was presented in the draft permit during the public comment period. The analysis showed that Continental Cement, including its future operations at the Saverton Quarry did not cause or significantly contribute to any violations of the air quality standards. The analysis included restricted operations at both the Saverton Quarry, as well as the Hannibal site. The hours of operation at the quarry are limited to certain hours of the day. Round-the-clock operation is not allowed. Daily throughput limits are also included. The restrictions were incorporated in the draft special conditions and will remain a part of the final permit.

Post-Construction Monitoring
Comment:
I don't see any plans stated in their air permit for any post monitoring. Without the post monitoring, how will anyone know if they are operating in a correct manner?

Air Pollution Control Program's Response:
Section 165 (a)(7) of the Clean Air Act gives the regulatory agency discretion in requiring the new source or modification to collect post-construction air quality monitoring data. However, this discretion was given with the intention that the collection of post-construction data would only be required if the permit granting authority had valid

concerns regarding the attainment status of the region or lacked confidence in the model results.

Based upon the results obtained from the ambient air quality impact analysis, the impact from the operations at Continental Cement will not cause or contribute to a violation of the air quality standards. As such, Department's Air Pollution Control Program does not believe that a requirement to collect post-construction monitoring data is justified.

Continental Cement is subject to regular inspections by the Department of Natural Resources to verify compliance with applicable regulations. These inspections occur at least once a year. In addition, if any complaints, such as fugitive dust, were received by the department, we would investigate and take appropriate action.

Noise Pollution

Comment:

We need to address the noise pollution: drilling, blasting, transporting the material and the whole process of recovery of this rock is going to be very disruptive to the surrounding neighbors, particularly since the hours of operation at this facility can be 6 a.m. – 11 p.m.

Comment:

My main reason for writing is that I would not be able to live beside a facility that is blasting from 6:00 a.m. until 11:00 p.m.

Comment:

I am concerned about the mining operations proximity to residential areas. There are several residential areas adjacent to the proposed mining area including Riverview Acres, Blackberry Hill and numerous other homes. These residential areas will undoubtedly be negatively impacted by blasting and operational noise and vibration.

Air Pollution Control Program's Response:

Unfortunately, noise pollution is not within the authority of the department. The department respectfully defers to the appropriate local authorities. Many local jurisdictions have city and county noise ordinances and we urge you to check with these agencies to determine the ordinances relating to noise.

No action was taken based on this comment.

Dynamiting Effects

Comment:

I have been told by many people that the dynamiting, etc. from the quarry even cracked some of their home foundations.

Comment:

We were given to understand that after the problems Central Stone has with dynamiting, etc. when they had the quarry open that it would not be reopened.

Comment:

What blasting tests have been performed? We already have cracks from previous blasting.

Air Pollution Control Program's Response:

The department's authority does not extend to the non-air effects of using dynamite for blasting. The department is unable to comment.

No action was taken based on this comment.

River Pollution

Comment:

There is the issue of a "creek" that is currently not flowing but has been in the 4 years we have lived here. When water does flow through that creek (running through the quarry) what chemicals/contamination are sent by the creek into the river?

Comment:

Mining operations at this site in the past have negatively impacted freshwater mussel populations in the immediate vicinity of the mine site. Resumed mining operations will certainly erode these resources further.

> *Air Pollution Control Program's Response:*
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> The maximum ambient concentrations emitted by a facility must be assessed in order to ensure that adverse impacts do not occur on plants, soils, and animals. Concentrations in excess of the screening levels outlined in the document entitled "A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animals" would trigger the requirements of 40 CFR 52.21 (o) and (p). If predicted concentrations do not exceed the screening thresholds no further analysis is required. This analysis was performed and included in the ambient air quality impact analysis.
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> It is important to note that this is a screening procedure and does not address impacts on waterways. The Department's Air Pollution Control Program does not have the authority to require an evaluation of the effects of pollutants on waterways and will defer to the appropriate authority.

Equipment Permitted at Saverton Quarry

Comment:

On page 7 of the draft permit it states that the "Quarry may not be operated after the new PH/PC kiln becomes fully operational without first undergoing New Source Review from the Air Pollution Control Program." Since this quarry is being used as a part of the new project, why don't they have to include the New Source Review in the review of the presently proposed permit? All of the dust that will come from the operation of the quarry will impact the neighbors as soon as the quarry is operated, not some time in the future.

> *Air Pollution Control Program's Response:*
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> The special condition is intended to restrict the pieces of equipment used at the Saverton Quarry to the listed equipment. That equipment was included in the modeling analysis during the permit review. The department agrees the wording of the Special Condition is not clear about what pieces of equipment can be used prior to the start of operation of the new kiln. The Special Condition has been revised to limit the equipment used at the Saverton Quarry at all times.

Cemetery

Comment:

There is a family cemetery on the land between our property and the Saverton Quarry. Surely they will not desecrate this cemetery.

> *Air Pollution Control Program's Response:*
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> Non-air pollution effects on the cemetery are not within the department's authority. The department respectfully defers to the appropriate authorities.
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> No action was taken based on this comment.

Increased Traffic on Hwy 79

Comment:

My concern lies with the opening of the Central Stone Quarry to haul rock at an increased volume of 200-250 trucks per day on Hwy 79. This limestone quarry is located one mile from my house on the Mississippi River on Scenic Hwy 79 part of the Missouri Great River Road. There is an abundance of wildlife and agriculture in this area along with many housing developments.

Comment:

The truck hauling traffic on Hwy 79 will be problematic to locals as well as any tourists, which is a big resource to Hannibal and the surrounding area.

Comment:

Rock is going to be hauled by trucks to new plant. What will this do to Highway 79, which is a nice scenic drive? Also route for school buses and children. Who is going to pay for upkeep on roadway?

Comment:

This area of Highway 79 has become much more populated since the quarry was open before. There are subdivisions all the way from Hannibal to Louisiana with I don't have any idea how many families living in this region. Highway 79 has just been refinished and those big trucks from Continental Cement would tear up the pavement very quickly. Highway 79 is supposed to be the Scenic Route following the Mississippi River. It sure will not be scenic with dust covering all the beautiful trees along the highway. Plus there is a lot of through traffic down Highway 79 from Louisiana to Hannibal. The road to the Saverton Quarry is down in a dip in the road that will cause accidents, not to mention all the animals that are always crossing the road.

Comment:

I am concerned about the manner the drivers will be operating these trucks. Will their speed be limited?

Comment:

Does the permit require the company to control the limestone dust that will accumulate on the several miles of highway from the quarry to the plant? How do they control this without making the highway slick if they use water or other controls?

> *Air Pollution Control Program's Response:*
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> Truck traffic on public roads, highway maintenance and mitigation of emissions (non-exhaust) on public roads is beyond the purview of the Department of Natural Resources. The department respectfully defers to the appropriate agencies, such as the Missouri Department of Transportation.
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> No action was taken based on this comment.

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June 15, 2006

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RE: Response to Comments on the Draft Permit for Continental Cement Company, Project Number 2005-09-092

Dear Mr. Kavanaugh:

Continental Cement Company is submitting a response to comments received from the general public as they relate to the draft air permit for construction of the replacement cement plant at our Hannibal location. Continental Cement believes it is important for our neighbors to understand the efforts made to protect the air and natural resources. Continental offers some background information on why a quarry at Saverton is needed along with addressing specific comments submitted by those impacted by the Saverton Quarry and hauling activities.

Background Information:

It is Continental Cement's plan to eliminate all surface limestone mining activities in the future. The permit application has been submitted to allow underground mining to occur. However, for a period of a few years, Continental will need limestone from off-site quarries until the underground mine can be constructed. In order to develop an underground mine into the usable limestone, over a half-mile tunnel must be bored into the ground. Once the level is reached where usable limestone is available, over a year's time will be required to mine out enough limestone in order to install crushing equipment, conveyors and support facilities. Engineers estimate from three to four years are required in order to provide an underground mine producing sufficient stone to support the cement production facility.

In seeking alternatives for limestone supply, several permitted quarries were contacted. One quarry exists west of Hannibal and the other one south of Hannibal on Highway 79. The existing permits allowed both quarries to provide adequate volumes of limestone to support cement production. The Saverton Quarry became the logical choice due to its closer proximity to the plant.

Hauling by truck, rail and barge were investigated for this site. Given the short duration of this hauling activity (five to seven years) and the limitations to install loading facilities at the Saverton Quarry due to floodplain issues, fresh mussel issues in the Mississippi River and the length of time to obtain permits and construct these loading facilities, trucking of the limestone became the only feasible option. Continental Cement has been working closely with the Missouri Department of Transportation to address highway safety issues, pavement and maintenance issues, truck loading limits and speed limits. These issues are currently being addressed by the Missouri Department of Transportation.

The following is Continental's response to the specific comments raised regarding air permit issues from the Saverton Quarry operation:

1) *Control of Emissions*

   Several comments related to fugitive emissions that may leave the property as well as the types of controls that are placed on the quarrying equipment. New crushing, conveying and loading equipment is proposed for the quarry at Saverton. All of the new equipment is equipped with Best Available Control Technology (BACT). These controls include baghouses on the crushers, drop points on the conveyors and water spray where appropriate. Following drilling and blasting, a crusher will be located near the working face. Stone will be conveyed by conveyor to a stockpile and loading bins. All trucks hauling stone from Saverton to the cement plant will be loaded on a paved haul road. Therefore, as there is no existing equipment at the Saverton Quarry, all new equipment will be provided with the Best Available Control Technology (BACT).

2) *Haul Road Controls*

   To provide the best control for the haul roads, Continental Cement is proposing to pave the haul road that trucks will use to load stone from the Saverton Quarry to the Hannibal plant. This haul road will be water washed in accordance with the special conditions placed in the permit. The trucks hauling stone from Saverton to Hannibal will always be on paved roadways, thereby preventing dust from being carried from non-paved areas onto the highways.

3) *Ambient Air Quality*

   Significant testing and modeling of the ambient air was conducted during the permit application process. Continental installed and operated a particulate monitoring device for one year at a location that would represent background for the area. In addition, modeling was performed to determine the types of controls and emissions that would result from the Saverton Quarry. Haul roads and control equipment were placed on the quarrying operation for prevention of significant deterioration to air quality. Modeling was also performed to show that particulate increment modeling violations did not occur. Both

modeling efforts show that no significant impact is occurring to the air quality with the emission controls and limitations as required in the air permit.

4) *Post-Construction Monitoring*

The permit requires documentation that controls are in place and that the haul road is washed to prevent particulate emissions from leaving the property. MDNR inspects Continental's facilities to ensure that controls and special conditions are being complied with and maintained. As long as special conditions and controls are in place, particulate emissions will remain below significant impact levels.

5) *Noise Pollution*

While the permit will allow Continental to operate between the hours of 6 a.m. and 11 p.m., actual drilling and blasting operations will be limited to a much narrower timeframe. Continental currently operates its quarries at the plant on specific schedules, with blasting occurring during the afternoons at regularly scheduled times. By conveying rock from the working face to the storage and loading area, less noise and air emissions occur. Loading from bins also reduces noise and air emissions from loaders that typically load trucks. Continental has designed the quarry operations to minimize both noise and fugitive emissions.

6) *Dynamiting Effects*

At Continental's existing quarries, significant attention is paid to drilling and blasting to prevent off-site impacts from blasting. A "third party" firm specializing in safe blasting practices will survey the area structures and design a blasting plan that will be safe and conservative. Continental has equipment that can be placed in a neighbor's yard to determine the impact from blasting. Continental's drilling and blasting operators have been trained to prevent off-site impacts from blasting operations.

7) *Water Pollution*

The Saverton Quarry site has existing water pollution control permits and land reclamation permits in place. Continental Cement will follow these permits, including special conditions and best management practices to prevent contamination of waters of the state. Should any new activities require permitting modifications, Continental will work directly with the Water Pollution Control Program at the Missouri Department of Natural Resources or the Corps of Engineers to prevent impacts to water or endangered species, such as freshwater mussels.

8) Cemetery

Continental Cement is aware of the cemetery on the property. Continental will take steps to prevent disturbance of this cemetery as well as provide additional protection of this site.

Continental Cement recognizes that this short-term solution to provide limestone to the plant until the underground mine can be implemented will have an impact on its neighbors. Continental Cement has taken steps to provide the Best Available Control Technology (BACT) to prevent emissions from leaving the site as well as provide for safety, noise control, protection of water and the environment. Continental Cement is willing to meet with anyone impacted by the operation to address specific concerns.

Sincerely,

R. Michael Johnson
President – CCC

cc: Lina Klein, MDNR
Tom Lennon