



July 16, 2020

Jerry Zieg  
 Tintina Montana, Inc.  
 White Sulphur Springs, MT

Sent electronically via email to: [jzieg@sandfireamerica.com](mailto:jzieg@sandfireamerica.com)

**RE: Montana Air Quality Permit (MAQP) #5200-00**

Dear Mr. Zieg:

On July 10, 2020, the Montana Department of Environmental Quality-Air Quality Bureau (Department) received a de minimis notification from Tintina Montana Inc. (Tintina). The request asks for concurrence that the option to use an alternate emulsion-based explosive is a de minimis action as defined under the Administrative Rules of Montana (ARM) 17.8.745. The alternate emulsion-based explosive is similar to ammonium nitrate fuel oil (ANFO) but has a lower emission rate for oxides of nitrogen (NOx). Other pollutants of concern such as for carbon monoxide (CO) are the same as for ANFO. Upon review of the information submitted by Tintina, the Department determined that the project meets the definition of de minimis under ARM 17.8.745, as the potential increase in emissions is less than the established 5 ton per year threshold. The explosive comparison for CO and NOx is shown below.

Blasting for each scenario					
8.5 blasts per day, full production, worst case					
0.5 ton of ANFO or emulsion per blast (1000 lbs)					
Scenario 1 - ANFO use					
		lb/ton of ANFO	Emission factor source (Note 1)	lb/hr (averaged over a day)	tpy
	CO	67	AP-42, Table 13.3-11	11.86	51.97
	NOx	17	AP-42, Table 13.3-1	3.01	13.19
Scenario 2- Emulsion explosives ( <150 mm) w/ dry conditions (ANFO doping)					
		lb/ton of ANFO	Emission factor source (Note 2)	lb/hr (averaged over a day)	tpy
	CO	67	NPI, Expl Det V3.0, Table 7 and 8	11.86	51.97
	NOx	0.8	NPI, Expl Det V3.0, Table 7 and 8	0.14	0.62
1 <a href="https://www3.epa.gov/ttn/chief/ap42/ch13/final/c13s03.pdf">https://www3.epa.gov/ttn/chief/ap42/ch13/final/c13s03.pdf</a>					
2 <a href="http://www.npi.gov.au/sites/www.npi.gov.au/files/resources/e635847a-22ef-9f74-71ba-c10705d09e59/files/fexpls.pdf">http://www.npi.gov.au/sites/www.npi.gov.au/files/resources/e635847a-22ef-9f74-71ba-c10705d09e59/files/fexpls.pdf</a>					

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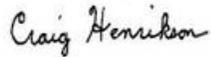
The ability to use this alternate explosive does not require any increase in the mass annual limit of 1,552 tons of explosive as provided by permit condition Section II.A.3. However, the same condition specifies ANFO is the explosive to be used and therefore, a minor change to the language is required to be able to use the alternate emulsion-based explosive.

Under ARM 17.8.764, a Montana air quality permit may be administratively amended, if it meets the conditions under ARM 17.8.745. ARM 17.8.745(2) requires the permission of the owner or operator to administratively open the permit. The July 10<sup>th</sup>, correspondence also included a request to administratively open the permit to address the use of the alternate emulsion-based explosive. Therefore, as required by ARM 17.8.745(2), by requesting the change to the permit, Tintina has satisfied the requirements to administratively open the permit and modify condition Section II.A.3.

Therefore, the approval of the emulsion-based explosive is approved, and the Department will open the permit to modify condition Section II.A.3.

If you have any questions or concerns, please contact me by phone at (406) 444-6711 or by e-mail at [chenrikson@mt.gov](mailto:chenrikson@mt.gov).

Sincerely,



Craig Henrikson, PE  
Environmental Engineer  
Air Quality Bureau

cc: [dskibicki@bison-eng.com](mailto:dskibicki@bison-eng.com)  
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