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west virginia department of environmental protection

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Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
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### PERMIT DETERMINATION MEMORANDUM

**To:** Bev McKeone  
**From:** Jerry Williams *JW*  
**Date:** February 11, 2015  
**Subject:** PD15-011, Allmine Paving – Inwood Facility (003-00137)

UTM Northing: 4365.70 km  
UTM Easting: 757.59 km  
Latitude: 39.402368  
Longitude: -78.008484  
Location: Inwood, Berkeley County



## SUMMARY

Allmine Paving submitted PD15-011 on February 3, 2015. PD15-011 was submitted to request a change in the cooling process at the facility. The four (4) process vessels were initially operated with external cooling using water jacketing to apply/manage the cooling water at the process vessel shell. Due to a recent malfunction in the water jacket on process vessel #2, Allmine proposes to modify the cooling process to bypass the cooling jackets and apply the external cooling water using a spray system and manage the excess water without the cooling jackets. The elimination of the cooling jackets will have no effect on the emissions from the process vessels and/or control provided by the direct fired thermal oxidizers (DFTOs). Allmine can also utilize the option of injecting cooling water internally to the process vessels using the catalyst injection system. Internal cooling can change the moisture content and volume of the emission stream from the process vessels.

The DFTOs were designed to control the emissions from the tanks and the process vessels. Allmine contacted the DFTO manufacturer to determine whether or not the DFTO performance would be affected by the change in cooling process. The manufacturer stated that their analysis has shown that the DFTOs still meet the permitted limits (minimum residence time of 0.75 seconds and minimum control efficiency of 98% for VOC and HAPs). However, certain operating adjustments must be made to the DFTO/Heat Recovery Unit to provide for additional heating and heat dissipation associated with the increase in moisture.

Allmine plans to begin a series of internal cooling trials using Process Vessel #4 and controlled by the DFTOs. Upon successful completion of the trials and full implementation of the operating change, Allmine will complete engineering testing to allow the DFTO manufacturer to provide the final destruction reduction efficiency guarantee. Any deviation in the DFTO performance must be reported in accordance with Permit R13-2828E Condition 5.5.1.

Allmine operates this same process at another facility in Missouri. The conducted compliance testing there demonstrates that the emissions from the DFTOs while operating with internal cooling will not cause emissions to exceed permitted limits.

There are no emission increases associated with this proposed process. Furthermore, this proposal does not alter prior permit applications, nor would there be any necessary changes made to current Permit R13-2828E.

45CSR13 Section 2.17 defines a 'modification' as any physical change in or change in the method of operation of any existing stationary source, excluding any emissions unit which meets or falls below the criteria delineated in Table 45-13B (de minimis sources), which:

- Results in an emissions increase of six (6) pounds per hour and ten (10) tons per year or more, or more than 144 pounds per calendar day, of any regulated air pollutant
- Results in an emissions increase of 2 pounds per hour or 5 tons per year of hazardous air pollutants considered on an aggregated basis
- Results in an increase in emissions of an air pollutant listed in Table 45-13A of 10 percent or more of the amount set forth in Table 45-13A at a facility which, prior to the physical change or change in method of operation, has the potential to emit the air

pollutant at or above the amount set forth in Table 45-13A; provided that nothing in this subdivision shall affect the facility's obligation to comply with 45CSR27

- Results in an increase in emissions of any air pollutant listed in Table 45-13A that would in turn result in total emissions of the air pollutant at the stationary source equal to or greater than the amounts in Table 45-13A
- Results in any regulated air pollutant emissions increase for which the owner or operator of a source voluntarily chooses to obtain a modification permit pursuant to this rule, even though the owner or operator is not otherwise required to do so

It is my opinion that a permit is not required for the proposed cooling process change based upon the submitted permit determination which indicates that there will be no increase in emissions; or, trigger a substantive requirement of any State or Federal air quality regulation.