



# Department of Environmental Quality



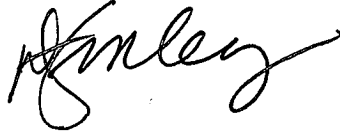
To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Dave Freudenthal, Governor

John Corra, Director

## MEMORANDUM

To: Chuck Otto, Field Office Manager, Pinedale BLM

From: Dave Finley, Administrator, WDEQ-AQD 

Date: July 17, 2009

Subject: Pinedale Anticline Record of Decision – Methodology for Development of Liquids Gathering System Equivalent Emission Reduction

In order to develop a VOC emission reduction comparable to that which would be obtained by installation of a liquids gathering system (LGS), and in consideration of Anschutz', Yates' and Newfield's operations, several in-house applications were reviewed for comparability of operations.

To arrive at an LGS-equivalent emissions reduction, permit applications received by the Air Quality Division (AQD) from the Shell North Liquids Processing Facility (AP-8637), Ultra Central Gathering Facility #3 (AP-8764) and Ultra Central Gathering Facility #1 (AP-8765) were considered. These applications include reductions in emissions from vehicle miles traveled (VMT), elimination of well-site truck load-out emissions, and elimination of well-site flashing emissions. They also include an increase in emissions generated by the operation of central gathering and processing facilities (Table 1). Proposed emissions from the central gathering and processing facilities are based on the estimated maximum throughput of liquids for each facility. Differences in proposed emission levels between permits can be attributed to variable system operations, design efficiencies, and maximum throughput.

Note that the Net Offset Credits Earned would be credited to each company's Offset Bank Spreadsheet, as maintained by the AQD. The resulting offset credits will only be earned for the existing wells included in each respective LGS application. Future wells being tied into an LGS will not be eligible for credits associated with LGS-related emission reductions.



Table 1			
Source	VOC [tpy]		
	AP-8637	AP-8764	AP-8765
Proposed Emissions from LGS central facility	19.4	15.8	15.0
Offset Factor	1.5	1.5	1.5
<b>a. Offset Credits Required for Permitting the LGS facility</b>	<b>29.1</b>	<b>23.7</b>	<b>22.5</b>
Reduction of VMT	-7.8	-6.2	-2.4
Elimination of Well-site Truck Load-out	-21.0	-36.7	-19.2
Elimination of Well-site Flashing Emissions	-24.8	-76.7	-40.1
<b>b. Offsets Credits Earned for Installation of the LGS facility</b>	<b>-53.6</b>	<b>-119.6</b>	<b>-61.7</b>
<b>Net Offset Credits Earned (a+b)</b>	<b>-24.5</b>	<b>-95.9</b>	<b>-39.2</b>

\* tons per year

A consistent VOC emission factor associated with an LGS system was developed by averaging the overall annual emission reduction associated with each application and dividing by the average daily liquids production, including condensate and water, associated with each proposed LGS facility based on Wyoming Oil and Gas Conservation Commission (WOGCC) data from January through March 2008 (Table 2).

Table 2			
Source	VOC [tpy]	Liquids to Pipeline	
		Total BPD*	VOC [tpy/BPD]
Shell North Liquids Processing Facility (AP-8637)	-24.5	4640.4	-0.0053
Ultra Central Gathering Facility #3 (AP-8764)	-95.9	9880.9	-0.0097
Ultra Central Gathering Facility #1 (AP-8765)	-39.2	3328.0	-0.0118
<b>Average</b>	<b>-53.2</b>	<b>5949.8</b>	<b>-0.0089</b>

\* Barrels Per Day

This factor was then applied to each company's average daily liquids production, including condensate and water, based on WOGCC data from January through March 2008 (Table 3).

Table 3			
Company	Reduction Factor	Historical Production	Proposed Reduction
	VOC [tpy/BPD]	Total BPD	VOC [tpy]
Anschutz	-0.0089	196.2	-1.7
Newfield	-0.0089	1312.1	-11.7
Yates	-0.0089	792.6	-7.1

The resulting estimated reduction in VOCs comparable to that obtained by the installation of an LGS for Anschutz Pinedale Corporation would be **1.7 tons per year**. For Newfield, the reduction would be **11.7 tons per year**, and for Yates, the reduction would be **7.1 tons per year**.

Chuck Otto, BLM/PFO  
PAPA ROD/LGS Equivalent Emission Reduction Methodology  
July 17, 2009

In accordance with the Interim Policy on Demonstration of Compliance with WAQSR Chapter 6, Section 2(c)(ii) for sources in Sublette County (Interim Policy), dated July 21, 2008, offsets would be credited by AQD for these reductions. Currently, Anschutz has a permit application into AQD (AP-8921), for which they will have to offset an estimated 3 tons per year of VOCs. Newfield and Yates also have applications (AP-9206 and AP-9355, respectively) into AQD, though those applications are still under review. However, it can be assumed that Newfield and Yates will be required to offset emissions comparable to those required of Anschutz.

The LGS-equivalent emission reductions calculated for Anschutz, Newfield and Yates will be treated as "Offsets Required" (i.e., each company must modify one or more existing permits in Sublette County such that they reduce emissions equivalent to their calculated LGS equivalent reduction). As such, this "Offset Required" will be included in each company's Offset Bank Spreadsheet (maintained by AQD), and companies will be required to ensure that the required offsets have been implemented by September 2010 in order to satisfy conditions of the ROD. Companies should be required to submit a letter by September 2009 acknowledging this requirement and describing ways in which they will meet this requirement. The AQD will review Anschutz', Yates' and Newfield's Offset Bank Spreadsheets in September 2010 and report those results to the BLM so that the BLM can verify that conditions of the ROD have been met.

The Interim Policy will require all companies operating in Sublette County to reduce overall emissions over time. In order to obtain air quality permits for new sources in Sublette County, including production sites, companies will need to offset the associated VOC emissions by a factor of 1.5. For companies with fewer existing sources, options for applying additional controls to achieve emission reductions for use as offset credits dwindle as new production sites come online. Therefore, all oil and gas companies with operations in Sublette County should consider the installation of an LGS as a good candidate for generation of offset credits in the long run. Having an LGS in place also means that future air quality permit applications for production sites being tied into that LGS would include lower associated emissions needing to be offset.

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