CHEMICAL DIVISION
STANDARD EXEMPTION REGISTRATION REVIEW

Company: Chesapeake Operating, Inc. College Station, Texas
Registration Number: X **Record Number:** 57055
Contact Name: Mr. David Wittman, Production Superintendent
Contact Name: Mr. Jeff Shiver, Consulting Engineer, KW Brown Engineering, College Station, Tx(409)690-9280
Phone: (409)696-5882 ext. 221 for Mr. Wittman **Fax:** Not Given

Description of Overall Unit: This registration request is for the new construction/installation and operation of the Tyler County Gas Enhancement facility located near Woodville, in Tyler County. This is a follow-up request to an earlier sent deficient letter. All requested process/emissions, with supporting calculations, have been submitted. This proposed facility will be utilized for gas treatment and conditioning of the raw gas stream from nearby producing wells. The sweet inlet gas stream contains 3 ppm v H2S detection. The facility has a maximum capability of 25 million standard cubic feet throughput when fully operational. Emission estimates are based upon 25 million cubic feet/day throughput. The primary components listed in this facility's process description and plot plan depict two production separators, one condenser/flare controlled glycol dehydration unit with its associated 0.75 MMBTU/Hr reboiler unit, one flare controlled amine treatment unit with two 4.7 MMBTU/Hr reboiler units, one continuously burning process flare, and associated process fugitives.

Description of Facilities/Processes Claimed in this Registration and Exemptions Claimed: Chesapeake Operating, Inc. proposes concurrence (X-2 letter) for the operation of this facility under Sections 106.352 and 106.492. There has been no Form PI-7 submitted in this request. This facility handles only sweet (3 ppm v H2S) natural gas. Sections 352 and 492 only require registration if sour.

After inlet separation sweet natural gas is glycol dehydrated to remove entrained water, amine treated to remove excessive CO2, and then routed back into the pipeline for transmission to another facility (no compression needed). All produced liquid hydrocarbons and water are pipeline routed out to another downstream facility for further processing. There is no liquid hydrocarbon storage at this facility.

The emissions from the glycol unit's regenerator vent are controlled by routing the emissions through a condenser (80 percent credit taken). The non-condensible gas from the condenser is then routed to the facility flare for an additional 98 percent VOC destruction efficiency. The glycol unit's flash tank off-gas is routed to the glycol unit's firebox or to the flare for use as fuel gas (98 percent credit taken).

The emissions from the amine unit's regenerator vent are controlled by routing the emissions to the facility flare (98 percent credit taken). All BTEX emissions have each been speciated and the emissions calculated per the appropriate factors.

There are no internal combustion or turbine driven compressors operating at this facility.

Sources, Emissions and Control Summary: The overall routine emissions associated with this facility have been estimated at 4.7115 tons/year of VOCs, 0.0263 tons/year of SO2, 4.1434 tons/year of NOX, 0.8717 tons/year of CO and 0.4949 tons/year of PM.

PSD or Nonattainment Netting Required? N/A **Submitted?** N/A

NSPS: N/A **NESHAPS:** N/A

All General and Specific Conditions are met? YES

Emission Reductions due to the New Source Review: YES - Due to the glycol dehydration unit's regenerator vent gas being condensed and then routed to the facility flare the NSR has saved 306.08 tons/year of VOCs. In addition, due to the glycol unit's flash tank off-gas being routed to either the reboiler firebox or to the facility flare the NSR has saved an additional 28.0767 tons/year of VOCs. Due to the amine regenerator vent gas being routed to the facility flare for destruction the NSR has saved an additional 0.0198 tons/year of VOCs.

Savings totals: 334.1765 tons/year of VOCs

Reviewed By:_____ **Team Leader:**_____
Date: March 10, 1998 **Date:**_____