TEXAS OIL & GAS ASSOCIATION

April 30, 2008

*Submitted **VIA** email to aforbes@tceq.state.tx.us*

Ms. Ashley Forbes
Air Quality Planning: Stationary Sources (MC-206)
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, TX 78711-3087

RE: Texas Oil & Gas Association (TxOGA) Comments on Texas Commission on Environmental Quality (TCEQ) Houston-Galveston-Brazoria (HGB) Eight-Hour Ozone Nonattainment Area, Stationary Source Control Strategy Planning, Draft Initial Concept List

Dear Ms. Forbes:

Texas Oil & Gas Association (TxOGA) appreciates the opportunity to provide comments on the draft Houston-Galveston-Brazoria (HGB) Eight-Hour Ozone stationary source control concept list. TxOGA is a multi-purpose trade association representing all segments of the oil and gas industry operating in Texas. The membership of TxOGA, over 3,500 strong, produces in excess of 92 percent of Texas' crude oil and natural gas, is responsible for some 95 percent of the state's refining capacity, and operates a vast majority of the state's pipeline mileage.

TxOGA applauds and supports TCEQ's ongoing efforts to develop innovative avenues to ensure Texas air quality standards are met or exceeded. TxOGA supports the comments submitted by the Texas Chemical Council related to the draft concept list for stationary sources. In addition, we would like to address the concept related to refinery coker emission controls for Volatile Organic Compounds (VOCs).

As referenced in Petroleum Refining by William L. Leffler, 3rd Edition, 2000, three types of coking designs exist which include delayed cokers, fluid cokers, and flexi-cokers.

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> The predominant type of coker design in the United States is the delayed coker. Delayed coking is a thermal cracking process that converts residuum bottoms into gas product streams and concentrated carbon petroleum coke. It is called "delayed coking" because cracking takes place in a coke drum rather than in a furnace or reactor. In this process, the feed to the coker is heated and charged to the bottom of the coke drum. The cracked light product is drawn off and sent to a fractionator. The carbon left behind, the "coke", is removed in the decoking process. The fractionator yields gasoline, naptha, gas oil and lighter products which can be further separated with additional vapor recovery.
>
> Fluid coking separates the coke from the hydrocarbon using cyclones, somewhat like a Fluidized Catalytic Cracking Unit (FCCU).
>
> Flexi-coking converts most of the coke to Carbon Monoxide (CO). The CO is then mixed with C2 and lighter by-products to produce low quality fuel gas for market.

Coker VOC controls could vary from coker-to-coker. Additionally, data reveals that actual costs of pollution controls per ton of pollutant removed vary from project-to-project. The actual costs are as much as 50 to 100 times higher than the original cost-effective analysis made in proposed standards. We highly recommend that any controls considered undergo a thorough analysis of cost effectiveness and technical feasibility prior to being considered as a control.

For example, in regard to the few Fluidized Cokers (FCU) operating in the United States, the Environmental Protection Agency's estimated total capital investment for a scrubber on an existing FCU is between $13-$14 million, an amount which is significantly underestimated. Due to wastewater discharge limitations, a conventional wet scrubber cannot be installed on some FCUs. Instead, more expensive regenerative scrubbers have recently been installed on a refinery FCU and cost over $200 million. A similar scrubber is currently being installed at another refinery, and it is expected to cost $250 million. The few FCUs existing are already controlled to a great extent, and additional controls would not be cost-effective.

Outside of the arguments related to unreasonable costs and technical infeasibility, many refineries face significant constraints on available space. Refinery designers located process units based upon the known spatial requirements for the original design of the unit and the interrelationship of such components with other process units at the facility. Therefore, in many instances, facilities face severe physical constraints in the ability to locate additional equipment in the vicinity of relevant process units.

A draft report from a differential absorption light detection and ranging (DIAL) study conducted at an HGB refinery does not support suggestions by some that refinery cokers emit several hundred pounds per hour of VOC emissions. In fact, the testing done at one refinery in the HGB area suggests that emissions are significantly below this suggested threshold. TxOGA believes that the controls in place to date will assist the HGB area in meeting its air quality ozone standards prior to the 2018 date. Those controls need to be recognized before placing additional controls on stationary sources and constraints on units which are already being controlled. Specifically, TxOGA believes that the TCEQ should document that VOC refinery cokers are a significant contributor to ozone prior to placing those units on the Control Strategy listing. In addition, the cost/ton should be evaluated to ensure that reductions are economically feasible as compared to other control strategy options.

Thank you for your time and consideration of these comments. Should you need additional clarifications, please contact me at 512/478-6631 or by e-mail **dhastings@txoga.org**,

Sincerely,

Debbie Hastings
Vice President for Environmental Affairs

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