

**Texas Commission on Environmental Quality  
Air Permits Division**

**New Source Review (NSR) Boilerplate Special Conditions**

This information is maintained by the Chemical NSR Section and is subject to change. Last update was made **October 2006**. These special conditions represent current NSR boilerplate guidelines and are provided for informational purposes only. The special conditions for any permit or amendment are subject to change through TCEQ case by case evaluation procedures [30 TAC 116.111(a)]. Please contact the appropriate Chemical NSR Section management if there are questions related to the boilerplate guidelines.

Absorber-All (A), Water (W), Caustic (C), Batch (B)

- (A) Stack Testing      Stack Sampling      Stack testing should be required when the total controlled emissions are 1 TPY or more (or if uncontrolled HAPS > 10/25 TPY). Parameters to be monitored during stack test should include circulation rate, pH (if applicable), temperature, and exhaust gas flow rate/concentration.
- (A) Control Spec      Absorber (ID) shall operate with no less than 99 (a lower control efficiency may be appropriate for some VOCs that are controlled to minimize impacts) percent removal efficiency for (identify contaminants) on an hourly average.
- (A) Circ Rate      The minimum liquid flow to the absorber shall be (enter gpm) gpm (stop here is sampling is not required) prior to the first stack test performed in accordance with Special Condition #. After the first satisfactory stack test, the flow shall be at least equal to that maintained during last satisfactory stack test. (it is acceptable to allow for indirect measures of flow rate [such as pressures, valve position, pump curves, etc.] as a substitute for a flow meter after you have reviewed them for adequacy) The circulation rate (or equivalent parameter) shall be monitored and recorded at least once an hour.

If a flow meter is used, add:

The flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value.

Quality assured (or valid) data must be generated when the (facility generating emissions) is operating except during the performance of a daily zero check Loss of valid data due to periods of monitor breakdown, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the (facility generating emissions) operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

- (W) Specific Gravity      The maximum absorber liquid specific gravity shall not exceed # prior to the first stack test performed in accordance with Special Condition #. After the stack test has been

completed, the specific gravity shall not exceed the average specific gravity maintained during the last stack test. (if stack testing is not available insert "...as determined by vendor data or an approved absorber modeling program"). (This condition is not required for once through or caustic scrubbers. An equivalent device that will measure the degree of absorbing liquid saturation may be approved on a case by case basis)

The holder of this permit shall install and maintain a continuous specific gravity monitor. The specific gravity shall be recorded at least every 6 minutes as six minute averages. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to + 0.02 specific gravity units.

Quality assured (or valid) data must be generated when the (facility generating emissions) is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the (facility generating emissions) operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded.

(W) Exhaust Temp     The maximum absorber exhaust temperature shall not exceed (maximum temperature) prior to the initial stack test. After the stack test has been completed, the temperature shall be no greater than the average temperature maintained during the last satisfactory stack test. The exhaust temperature may be allowed to increase up to 10F above that value if satisfactory removal efficiency and emission rates are demonstrated at the higher temperature by using (simulation used to estimate scrubber emissions in permit application such as Aspen) to ratio stack test results to the higher temperature. (This condition is not required for once through scrubbers or scrubbers not subject to stack testing. The control for these should be demonstrated at the maximum liquid temperature.)

The holder of this permit shall install and maintain a continuous temperature monitor for the scrubber exhaust. The temperature shall be recorded at least every 6 minutes as six minute averages. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of the reading or 2.5 degrees Celsius.

Quality assured (or valid) data must be generated when the (facility generating emissions) is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the (facility generating emissions) operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded.

(w) Purge             (This is not necessary if specific gravity is monitored) The minimum fresh water addition rate into absorber (ID) shall be (enter gpm) gpm. (it is acceptable to allow for indirect

measures of flow rate [such as pressures, valve position, pump curves, etc.] as a substitute for a flow meter after you have reviewed them for adequacy) The flow rate (or equivalent parameter) shall be monitored and recorded at least once an hour.

If a flow meter is used, add:

The flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value.

Quality assured (or valid) data must be generated when the (facility generating emissions) is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the (facility generating emissions) operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded.

(C) Caustic pH      The scrubbing solution shall be maintained at or above (or below) a pH of (#) prior to the initial stack test performed in accordance with Special Condition #. After the stack test has been completed, the pH shall be at or above the average pH maintained during the last satisfactory stack test. The pH shall be continuously analyzed and recorded at least once a minute. Each monitoring device shall be cleaned with an automatic cleaning system, or cleaned weekly using hydraulic, chemical, or mechanical cleaning. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least weekly, whichever is more frequent, and shall be accurate to within + 0.5 pH unit.

Quality assured (or valid) data must be generated when the (facility generating emissions) is operating except during the performance of a daily zero and span check Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the (facility generating emissions) operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded.

(B) Caustic Sample      The caustic from absorber (#) shall be purged once every (#) of days and replaced with fresh caustic ((#) percent by weight). A titration test shall be performed on the caustic before each batch purge to verify that the caustic strength has not deviated more than (#) percent from the original batch strength. The permit holder shall record the date and time of each purge as well as the caustic inventory before the purge and the caustic inventory of the fresh caustic.