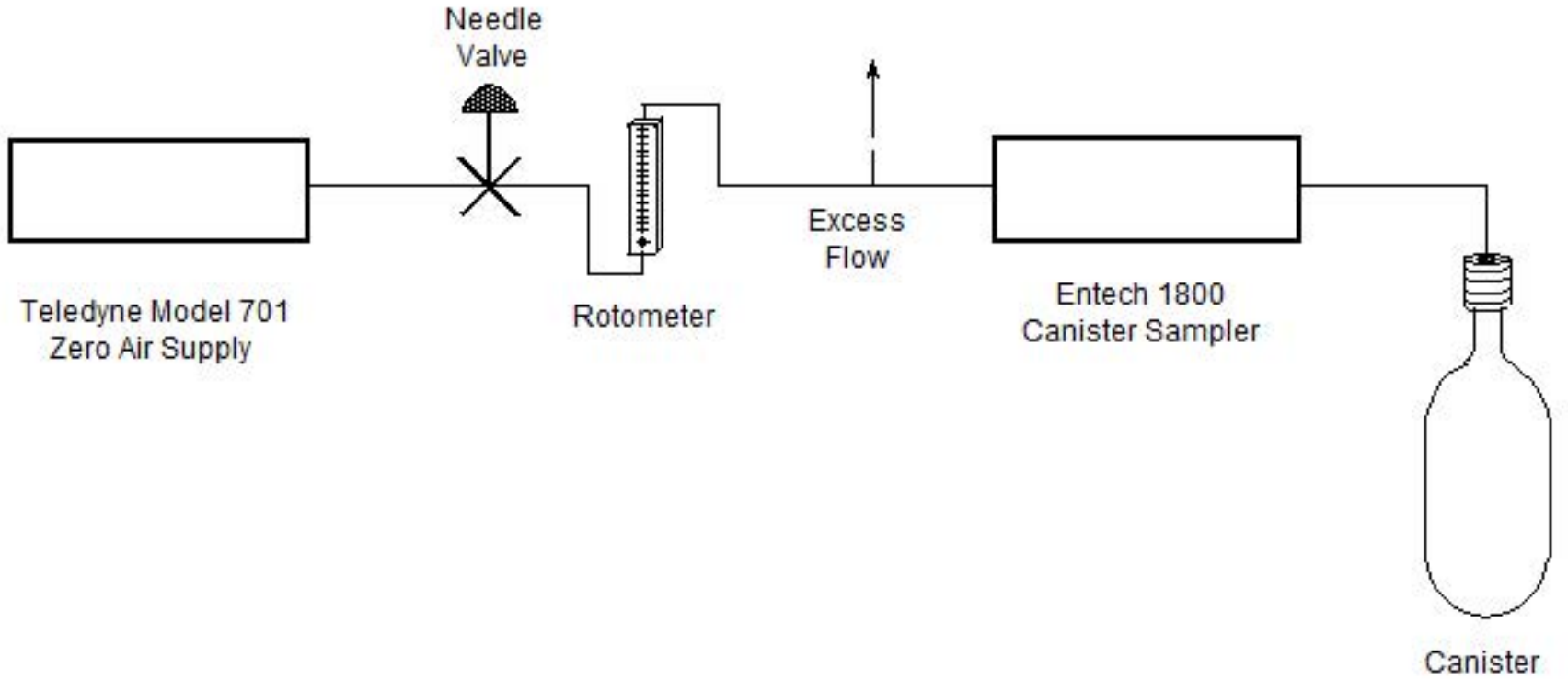

Drawn by: Steve Orwick	University of Texas at Austin
Reviewed by: Edward Michel	Title: Blanking System
File: SMO_Desktop/Edit/Drawings/Blanking System	Dwg. #Blanking System Rev. 0 Rev. Date: 7-09-09
Release Date: 7/09/2009	Size: 8.5 x 11 Sheet: 1 of 1

Document Name	Creation Date	Revision Date	Revision #
Teqcom_interconnect	2-15-08	N/A	0
Entech 1800 to Zeno	2-28-08	N/A	0
UTCC_Plumbing	2-14-08	N/A	0
TECO to ZENO	2-19-08	N/A	0
MetOne to Zeno Wiring	2-18-08	N/A	0
Site Shut Down	1-09-09	N/A	0
EM2analysis process	12-17-08	1-06-09	1
Blanking System	7-28-08	N/A	0
Digital Camera System	5-5-08	N/A	0
Met System	5-5-08	N/A	0
Manifold	5-5-08	N/A	0
Rack Mounting System	5-5-08	N/A	0

Corpus Christi Canister Pre-Analysis Sample Assessment Process

After a canister sample has been collected, shipped by the field technician and received by the laboratory an assessment of the merits of analyzing the canister sample is conducted to ensure that the project funds are expended wisely. The Sample Assessment Process is described below.

It is assumed that all canister samples will be analyzed unless the characteristics of the sample satisfy at least one of the following: (Note: When a request from David Turner, TCEQ Region 14 Air Section Manager, is received with instructions to analyze one or more canister samples, those samples will be analyzed and no assessment of the characteristics of the sample needs to be conducted.)

The Quality Assurance Data Reviewer (QADR) will review the wind direction and the TNMOC data associated with the sampling and triggering periods to determine if the sample should be analyzed or discarded.

Wind Direction Assessment:

1. If a wind shift occurred during the 20 minute sample, resulting in a very low (400 ppb) hydrocarbon concentration in the sample, this sample will not be analyzed.

2. Alternatively, if a wind shift occurred during the 20 minute sample, resulting in a very low hydrocarbon concentration (400 ppb) in the sample, the QADR may want to analyze this sample to understand the background hydrocarbon concentrations at the sampling location.

3. If the wind direction is consistent during sampling and triggering periods and at least one of the five minute averages during sampling is above 1000ppb, this sample will be analyzed.

4. Alternatively, if the wind direction is consistent during sampling and triggering periods and at least one of the five minute averages during sampling is above 1000ppb, although sufficient data already exists from a site, the QADR may decide not to analyze this sample.

TNMOC Concentration Assessment:

1. If the average TNMOC concentration for the twenty minute sample is at or above 1000 ppb, this sample will be analyzed.

2. Alternatively, if the average TNMOC concentration for the twenty minute sample is at or above 1000 ppb, although sufficient data already exists from a site, the QADR may decide not to analyze this sample.

Background Concentration Assessment:

1. If Gary McGaughey or Dave Sullivan decides that the forecast wind direction for a site will produce a canister sample that will capture the back ground hydrocarbon concentration they will contact the QADR. The QADR will coordinate with the field technician to schedule a canister sample to be taken during this back ground condition.

If the QADR has determined that a sample should not be analyzed, these samples shall be stored for no longer than 21 days in a secure location to allow time for the TCEQ or other interested parties to contact the QADR and request analysis of the samples. This location will be determined by the analytical laboratory chemist. 21 days is the total length of time a sample may remain in a canister to be considered valid per Section B2.2.1 of the project QAPP. This time clock begins when the sample is collected. Samples older than 21 days may be discarded by the laboratory, and the canister may be cleaned.

Corpus Christi Monitoring Site Shut Down
And Re-Start Process

When the forecast predicts a hurricane will make land fall in or near the City of Corpus Christi and the UT Project Manager make the decision to secure all sites for hurricane precaution, the following procedure shall be followed to prepare the monitoring sites for the storm.

Three days before the storm is predicted to make land fall, the contractors will communicate with the Field Operations Manager, UT Austin, Edward Michel, to get direction how to prepare for the storm. Once the decision is made to begin the shut down process, the contractors shall complete this process within 36 hours so that they may evacuate the city in advance of the storm.

NOTE: Once this process begins, please be aware of the weather so that the contractors are not ever put in an unsafe situation. Your safety is the most important issue, we can replace the equipment. Use the following web site to obtain information on the impending storms location:

www.nhc.noaa.gov

The following are the UT Austin site elevations, above mean sea level. Start the shut down process with the lowest elevation and finish with the highest elevation.

Port Grain: 11 feet.
J.I. Hailey: 12 feet.
Inner Harbor: 13 feet.
Dona Park: 21 feet.
Oak Park: 35 feet.
Flint Hills: 60 feet.
Solar Estates: 66 feet.

SITE SHUT DOWN PROCESS

This process describes how to shut down and leave in place the H2S, SO2, H2S Converter, TNMHC, WS, WD, Ambient Temperature and Relative Humidity sensors, gas dilution system (calibrator), zero air supply, canister sampler, battery back up modules, zeno data logger, modem and digital camera system. This equipment will not be removed from the station. The equipment on the lower rack spaces may be placed on a folding table as needed to elevate the equipment from the floor.

The Gas Chromatograph (GC) shut down process will be completed by the GC contractor. The test trailer that is collocated at the Solar Estates site, will be the base of operations for the shut down process.

Step 1. Log into the zeno data logger and "P" code all of equipment at the site. Make a log entry describing that the site is being shut down until further notice. Turn the power switch to the **OFF** position for the computer, monitor and then unplug the monitor and computer.

Step 2. Turn the power switch to the **OFF** position on the H2S, SO2, H2S Converter, TNMOC, calibrator, canister sampler, modem, digital camera hard drive, camera streamer and battery back up units.

Step 3. On the zero air supply, turn the knob counter clock wise to release the pressure. Once the pressure is released, turn the power switch to the **OFF** position.

Step 4. Unplug all the equipment at the site from the wall. This includes the fan and light bulbs for the sampling manifold, the ambient temperature/ relative humidity sensors and the battery back up units.

Step 5. Turn **OFF** all compressed gas cylinders, leave pressure on both stages of the regulators. Be sure to coordinate with the GC contractor before you turn **OFF** the Hydrogen and Helium compressed gases.

Step 6. Lower the meteorological tower. Disconnect the signal cable from the WS and WD sensors and wrap the ends neatly in a new site plastic garbage bag to prevent contact with moisture. Remove the WS cup anemometer and WD vane from the sensor and the store inside the station. Remove the WS and WD sensors from the cross arm, store the sensors inside the station. Leave the camera installed as is, do not disconnect the signal cables, these are weather proof.

Step 7. Disconnect the ambient temperature/relative humidity signal cable and wrap in a new site plastic garbage bag to protect the ends from moisture. Remove the ambient temperature/relative humidity boom and store inside the station.

Step 8. Survey the outside of the station for any lose items, such as an empty compressed gas cylinder. Bring any items inside the station and secure these items.

Step 9. Turn **OFF** the A/C and then unplug the unit.

Step 10. Turn **OFF** the lights, lock the door and then turn **OFF** the power switch to the station at the power pole.

Repeat these steps at the remaining sites.

SITE RE-START PROCESS

Once it is safe to return to the City of Corpus Christi and the power has been restored to the monitoring sites the UT Austin Field Operations Manager, Edward Michel will coordinate with the contractor to begin the start up process. Do not go to any of the monitoring sites without permission from UT Austin. To assess the condition of the sites, UT Austin will accompany the contractor to all the sites before this start up process is to begin.

Step 1.Survey the outside area of the monitoring site for lose debris and clean up the area as necessary. Be mindful of any unsafe conditions while conducting this survey. Report any unsafe conditions to Edward Michel.

Step 2. Turn the power switch **ON** at the power pole. Enter the station and look for unsafe or sifted equipment before proceeding. Report any unsafe conditions to Edward Michel.

Step 3. Plug the A/C into the electrical outlet and turn the A/C to the **ON** position.

Step 4. Plug all equipment in the station into the electrical outlets and turn the power switch **ON** each item. Turn the knob to increase the pressure to 45 psi on the zero air supply.

Step 5. Reinstall the ambient temperature/relative humidity boom. Reinstall the WS and WD sensors in the cross arm. Reinstall the cup anemometer and wind vane. Reconnect the signal cables for the ambient temperature, relative humidity, WS and WD sensors.

Step 6. Open all compressed gas cylinders. Put H2S, SO2, TNMHC monitors in the **RUN** mode.

Step 7. Wait 24 hours for the equipment to warm up before you begin any QC activities.

Step 8. Follow all published Standard Operating Procedures (SOP) for calibration of each sensor at the site. After the WS/WD sensors have been calibrated raise the mast. Log into the TCEQ web site to see if the digital camera images are being published live, if not work with the camera vendor and the TCEQ to get the digital camera images on the web.

Step 9. Once all sensors have been calibrated and producing quality data, make a log entry describing what was calibrated, that the site is back on line and put all sensors in the "K" code.

Repeat these steps at the remaining sites. Report to Edward Michel a verbal summary of these activities once completed.