**Envent Provides: Total Plant Vapor Control Solutions™**

We service the petrochemical industry with advanced scrubber technology which combines specific chemical scrubbers for the recovery of Hydrogen Sulfide (H₂S), Volatile Organic Compounds (VOCs), Hazardous Air Pollutants (HAPs), Chlorinated Hydrocarbons and a variety of toxic and odor causing chemicals. Since 1992, Envent has provided engineered vapor control solutions to meet the most stringent EPA, State and Local regulatory requirements.

Combine these solutions with our Envent Mobile Thermal Oxidization Systems (EMTOS), Envent Mobile Emissions Control Unit (EMECS) and our Vapor Bladder System (VBS) for the largest and most versatile fleet in North America.

This is what we do all day long, every day, for customers like these...

- **Refineries & Chemical Plants**
- **Tank Farms & Terminals**
- **Pipelines**
- **Oil Field / Production**
- **Municipalities**

**SCRUBBER APPLICATIONS**
- Centrifuge / Sludge Processing Vapor Control
- Carbon Minimization
- H₂S & Ammonia Controls
- Sewer / Digestor Vapor Control
- Unit Depressurizations & De-inventory
- Vacuum Truck - Air Mover Loading Operation
- Flare Gas Minimization
- Tank Vent Emissions & Frac Tanks
- Sulfur Pit Controls
- Acid Gas Controls
- Chemical Cleaning
- Oil Field & Tank Farm Vapor Recovery
- Marine Vapor Recovery
- Truck & Rail Car Loading
- Pipeline Cleaning / Pigging
- Remediation & Soil Vapor Extraction
- MSS & Title V Emissions Controls
- API Sumps & Separators (NESHAP & BWON)
- Tank Degassing & Tank Cleaning Support
- Refinery Turnarounds
- Natural Gas Line Purging

**CASE STUDY #1**

**JOB:** Sludge Processing / Tank Cleaning Vapor Control

**LOCATION:** California Refinery

**PRODUCT:** Crude Oil Tank – California Refinery

A refinery contracted Envent to use our EVAC-1000 unit to do temporary odor and vapor control for its sludge processing centrifuge operations. We brought out three scrubbers; the first scrubber was a dual GAC passive scrubber, the second was a dual GAC passive scrubber following Diesel sponge oil, and the third was our EVAC-1000, with our custom formulated VapoScrubH₂S5 scrubbing solution. With carbon following our VapoScrubH₂S5 solution we were able to make the GAC last approximately 3 times longer.

**SAVINGS:** Approximately $150,000

**CASE STUDY #2**

**JOB:** Sulfur Loading

**LOCATION:** Texas City, TX

**PRODUCT:** H2S and Mercaptans

The sulfur unit in a refinery needed back-up for its existing odor control system which was no longer handling its load due to particulate clogging. We spec’ed out three solutions; the first was 4 k lbs. of darco carbon, the second was our custom formulated VapoScrubH₂S5 in a passive chemical scrubber, and the third was a sodium hydroxide solution (Caustic). VapoScrubH₂S yielded the best and most economical option.

**SAVINGS:** $200,000 over life of the project.

**CASE STUDY #3**

**JOB:** Liquid Ring – High Volume – Vacuum Truck Vapor Control

**LOCATION:** Port Arthur, TX

**PRODUCT:** Sour water with high levels of residual hydrocarbons

A refinery needed to abate vapors following a super-sucker vacuum truck (3,000 CFM) containing high concentrations of H₂S and residual VOCs. The unit specified was our high-performance and high-flow EVAC-6000, which delivered a higher efficiency and a longer life time, vastly out-performing our competitor’s scrubber.

**SAVINGS:** Approximately $100,000

**CASE STUDY #4**

**JOB:** Frac Tanks Vapor Control

**LOCATION:** North Dakota

**PRODUCT:** Shale Oil

A petroleum manufacturer contracted Envent to do vapor control on a series of frac tanks being filled with shale oil from a pipeline. Our stand alone passive chemical scrubber filled with VapoScrubH₂S5 did better than a stand-alone carbon vessel.

**SAVINGS:** $312,000, from the price of the solution and from the absorption capacity.
### ESCRUB-500-P
**Scrubber Type:** Single Column, Chemical, Passive  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Sulfur Units, Alkylation Units, Sour Crude Tanks, Centrifuge Operations

### ESCRUB-750-P
**Scrubber Type:** Single Column, Chemical, Passive  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Sulfur Units, Alkylation Units, Sour Crude Tanks, Centrifuge Operations

### ESCRUB-1000-1-SS
**Scrubber Type:** Recirculating Chemical Scrubber  
**Vapors Treated:** H₂S, Mercaptans  
**Uses:** Sulfur Units, Alkylation Units, Sour Crude Tanks, Centrifuge Operations

### ESCRUB-1000-P
**Scrubber Type:** Single Column, Chemical, Passive  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Sulfur Units, Alkylation Units, Sour Crude Tanks, Centrifuge Operations

### ESCRUB-2000-SS
**Scrubber Type:** Dual Recirculating Chemical Scrubber  
**Vapors Treated:** H₂S, Mercaptans  
**Uses:** Sulfur Units, Alkylation Units, Sour Crude Tanks, Centrifuge Operations

### ESCRUB-6000-1-SS
**Scrubber Type:** Single Recirculating Chemical Scrubber  
**Vapors Treated:** H₂S, Mercaptans  
**Uses:** Sulfur Units, Alkylation Units, Sour Crude Tanks, Centrifuge Operations

### EVAC-1000
**Scrubber Type:** Combo - 1 Liquid, 2 x 1,000 lb. Carbon  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Vents, Tanks

### EVAC-2000
**Scrubber Type:** Combo - 1 Liquid, 2 x 1,000 lb. Carbon  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Vents, Tanks

### EVAC-5000
**Scrubber Type:** Dual, 2 x 5,000 lb. Carbon  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Blowdowns, Tanks

### EVAC-6000
**Scrubber Type:** Recirculating Chemical Scrubber followed by Dual, 2 x 6,000 lb. Carbon  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Sulfur Units, Alkylation Units, Sour Crude Tanks, Centrifuge Operations

### EVAP-5500
**Scrubber Type:** 5,500 Gallon Liquid Scrubber  
**Vapors Treated:** H₂S, Mercaptans  
**Uses:** Vacuum Trucks, Pipeline Vents, Tanks

### EC-250
**Scrubber Type:** 250 lb. Carbon Vessel  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Vents, Tanks

### EC-1000
**Scrubber Type:** Liquid Scrubber or Carbon Vessel  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Vents, Tanks

### EC-2000
**Scrubber Type:** 2,000 lb. Carbon or 250 Gallon Liquid Scrubber  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Vents, Tanks

### EC-5000
**Scrubber Type:** 5,000 lb. Capacity Carbon Vessel  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Blowdowns, Tanks

### BD-6000
**Scrubber Type:** Dual 3,000 lb. Capacity Carbon Vessel Scrubber  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Blowdowns, Tanks

### BD-8000
**Scrubber Type:** 8,000 lb. Capacity Carbon Scrubber  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Blowdowns, Tanks

### BD-16000
**Scrubber Type:** 16,000 lb. Capacity Carbon Scrubber  
**Vapors Treated:** H₂S, Mercaptans, VOC’s, Benzene  
**Uses:** Vacuum Trucks, Pipeline Blowdowns, Tanks