

---

---

**CITY OF TEXAS CITY  
UTILITY DEPARTMENT - WASTEWATER DIVISION  
INTEROFFICE MEMORANDUM**

---

---

**DATE:** 2/12/2009  
**TO:** MIKE HOGAN P.E., DIRECTOR OF UTILITIES  
**CC:** FILE  
**FROM:** CALVIN D. BREMER, WASTEWATER SUPERINTENDENT  
**RE:** VAPEX SYSTEM

---

This purchase will be for two systems, one for lift station #30 and #10, for odor and corrosion control. Both odor and corrosion are a major issue at both stations. Last year we ran a pilot program for lift station #30 with astounding results. For many years we have battled this problem at both stations. During the time we ran the pilot we received no odor complaints for lift station #30.

We set aside \$145,000.00 of capital to purchase these systems in account #510-706-55685-09604. The actual cost of the system installed is \$135,000.00. Both systems come with a five year warranty for parts and labor. The system requires no chemicals or media replacement to be purchased. All the system will require is an electrical connection and a water source. After the purchase of the system we will have \$10,000.00 left in the account. This will be more than enough to hire an electrician to set up the electrical. Each of these stations already has a water connection.

In the past we have tried using a bio-filter that we constructed using bark mulch. This system did work, however not very well and done nothing for the corrosion problem and required constant maintenance. In 2007, Environmental Improvements, Inc (EI<sub>2</sub>) also ran a pilot test with their version of a bio-filter this system worked much better than our homemade bio-filter. However it required the media to be replaced on an annual basis and would cost more than \$5000.00 at both locations each time it is replaced. As with our homemade system it also did not address the corrosion problem. The system that EI<sub>2</sub> proposed would initially cost \$200,000.00 for lift station #30 and \$175,000.00 for lift station #10. Since their system did not address all of our concerns I decided to look for a better system.

I feel that the Vapex system is our best alternative. The initial cost is much lower, and as stated above requires no media change. The system creates a Hydroxyl Ion fog within the wet well using water and ozone. This fog neutralizes the hydrogen sulfide, which is the odor and corrosion causing gas, and puts it back in solution. The sulfides then are treated at the wastewater plant.

CDB



**HARTWELL  
ENVIRONMENTAL  
CORPORATION**

Houston  
Austin  
Dallas  
Tulsa

22115 Hufsmith Kohrville Rd  
Tomball. TX 77375

281-351-8501 Tel  
281-351-8323 Fax  
[www.hartwellenv.com](http://www.hartwellenv.com)

Proposal No.: HEC002-006-09

February 9, 2009

Calvin Bremer  
City of Texas City  
3901 Bay Street Extension  
Texas City, TX 77592

**Subject: Vapex Hydroxyl Ion Fog Odor Control Sysytem**

Calvin,

Thank you for your interest in our Vapex Odor Control technology, we appreciate the opportunity to provide this proposal to control odors at your lift stations. For each Lift Station we recommend a dual nozzle Vapex model V-800.

The scope of work for each site of less than 15,000 cubic feet is as follow:

1. Hartwell to provide one (1) Vapex V-800 Hydroxyl Ion Fog Odor Control System with two fogging nozzles. One nozzle will be placed in each end of the wetwell.
2. Owner to provide two 6" access ports into the pump station wetwell for nozzle access and an 8" access port for the reactor vent, if required.
3. Owner to provide for the following dedicated electrical circuit within 36" of the equipment location: 120v, 1 phase, 20 amp.
4. Owner to provide a potable water hose bib within 36" of the equipment location to provide a maximum flow of 15 gallons per hour at 20 psi. Reuse water is not acceptable.
5. Energy costs will vary with local kWh cost.

Model	Volts	Amps.	kWh/yr	.04	.07	.10	.13
800	120	17	17,800	\$712	\$1,246	\$1,780	\$2,314

*Example: The annual operating cost of the models 800 assuming \$0.07 per kWh on an annual basis.*

6. Hartwell to provide for a turnkey installation for the specified above equipment.
7. All equipment and installation to be warranted to be free for defects for a period of thirty six (36) months from startup. Any warranty coverage will include all costs of material and labor. Abuse or damage caused to the equipment or installation by others will not be covered under the warranty. However Hartwell will provide any needed repairs or service on a time and materials basis.
8. This project can be initiated within forty five (45) days of notice to proceed and field activities will take no longer that two (2) working days.

**Pump Station Budgetary Cost:**

The cost of the and similar sized projects including freight and excluding sales tax is:

Two (2) Vapex V-800 Systems @ Sixty Seven Thousand Dollars (\$67,500.00) Each

**Total Proposed Price: \$135,000.00**

Calvin, we appreciate your interested in the Vapex System and look forward to working with you on this project.

Sincerely:

Matt Davis  
Hartwell Environmental Corp



February 9, 2009

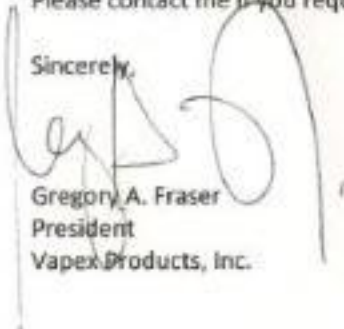
To whom it may concern:

This letter is to confirm that Vapex Products, Inc. is the sole source for Vapex Hydroxyl Ion Fog products including Vapex patented nozzle attachments. These products are protected under US Patent numbers 5,337,962 and 6,076,748.

To maintain warranty eligibility, only Vapex or a Vapex authorized service representative may perform repairs and major service on Vapex products.

To the best of our knowledge, no other vendor manufactures and distributes these or similar products. Please contact me if you require further information.

Sincerely,



Gregory A. Fraser  
President  
Vapex Products, Inc.

**Vapex**

5850 S Semoran Blvd., Orlando, Florida 32822  
Tel 407 277 0900, Fax 407 277 8847  
info@vapex.com, www.vapex.com