



**SIEMENS**

Water Technologies

Working To Keep  
The Air Fresh.

Siemens Odor  
Control and  
Corrosion Protection

# Vapor Phase Technologies That Clear The Air.



Chemical scrubber products include LO/PRO<sup>®</sup>, Poly-Stage<sup>™</sup> and Packed Tower Systems.

Biological odor control products include ZABOCS<sup>®</sup> Biofilters and ZABOCS<sup>®</sup> BTF (Bio-Trickling Filter).



Adsorbers/Dry Scrubber products include Midas<sup>®</sup> OCM (Odor Control Media) and conventional Activated Carbon Systems.

- **Chemical Scrubber Odor Control Systems** This family of technologies uses chemicals to react with and neutralize offensive compounds. Multiple stage designs are available for the treatment of H<sub>2</sub>S, NH<sub>3</sub> and organics at high concentration levels. Achieving better than 99.9 percent removal efficiency, these systems can treat large air volumes in excess of 30,000 cfm, in a small unit footprint.
- **Biological Treatment Systems** This "green technology" uses sulfur oxidizing bacteria to remove odors. Systems are capable of treating up to 17,000 cfm. Multistage can be utilized to target H<sub>2</sub>S, ammonia and organic odors. In addition to eliminating hazardous chemicals, these systems have low installation and operating costs.
- **Adsorbers/Dry Scrubbers** These are technologies by which odorous compounds are removed by adsorption onto a porous carbon surface. Systems efficiently remove a variety of organic and inorganic compounds and can be designed to treat in excess of 17,000 cfm of air. Midas<sup>®</sup> OCM is a high capacity odor control media with up to 10 times the capacity of conventional activated carbon.



## Wastewater Treatment Plants

- ✓ LO/PRO<sup>®</sup> & Poly-Stage<sup>™</sup> Scrubbers
- ✓ ZABOCS<sup>®</sup> Biofilters
- ✓ ZABOCS<sup>®</sup> BTF (Bio-Trickling Filters)
- ✓ Carbon Adsorbers
- ✓ Midas<sup>®</sup> OCM (Odor Control Media)
- ✓ Emergency Vapor Scrubber Systems
- L BIOXIDE<sup>®</sup> / BIOXIDE-AQ<sup>®</sup> Process
- L AQUIT<sup>®</sup> Process
- L ODOPHOS<sup>®</sup> / ODO-FREE<sup>™</sup> Treatment
- L Hydrogen Peroxide
- L VX-456<sup>™</sup> Product
- L PRI-SC<sup>™</sup> Product



## Major Wastewater Collection Systems & Pump Stations

- ✓ LO/PRO<sup>®</sup> & Poly-Stage<sup>™</sup> Scrubbers
- ✓ ZABOCS<sup>®</sup> Biofilters
- ✓ ZABOCS<sup>®</sup> BTF (Bio-Trickling Filters)
- ✓ Carbon Adsorbers
- L BIOXIDE<sup>®</sup> / BIOXIDE-AQ<sup>®</sup> Process
- L BIOXIDE<sup>®</sup> AE Process
- L ODOPHOS<sup>®</sup> / ODO-FREE<sup>™</sup> Treatment
- L VersaDose<sup>™</sup> Controller
- L Hydrogen Peroxide
- L PRI-SC<sup>™</sup> Product

Residential  
Community  
Collection  
Systems/Pump  
Stations

The Siemens Team offers multiple approaches to solve odor and corrosion problems safely and efficiently in complex sewage collection and treatment systems. Siemens has a base of over 2,000 installations that safely store and feed liquid products for odor control worldwide.



# Liquid Phase Technologies That Go To The Source.

- **Biochemical Technologies** Siemens is a leader in the application of products to biochemically prevent and remove hydrogen sulfide. Biochemical options for liquid phase odor control include the Bioxide®, AQUIT®, and Bioxide® AE processes. Biochemical products are not hazardous to transport and store, have long shelf lives, and no impacts to downstream treatment processes.
- **Chemical Technologies** Siemens has 25 years of application experience in safely using chemical technologies for odor control. Chemical technologies include the use of iron salts, hydrogen peroxide, and sodium chlorite to control odors generated in wastewater collection and treatment processes. Combination technologies such as PRI-SC™ and VX-456™ products offer greater efficiency.
- **Chemical Storage and Feed Packages** The Siemens Team offers chemical storage and feed packages tailored to the odor control program. This ranges from simple single pump arrangements to fully automated dose-to-demand systems utilizing the VersaDose™ Controller. Advanced control can provide a great savings in dosage and improved performance.



- ✓ Poly-Stage™ Scrubbers
- ✓ Custom Air Strippers
- ✓ Carbon Adsorbers
- ✓ ZABOCS® Biofilters
- L BIOXIDE® / BIOXIDE-AQ® Process
- L BIOXIDE® AE Process
- L VersaDose™ Controller
- L ODOPHOS® / ODO-FREE™ Treatment
- L AQUIT® Process
- L Hydrogen Peroxide



## Industrial Collection & Treatment Systems

- ✓ LO/PRO® & Poly-Stage™ Scrubbers
- ✓ ZABOCS® Biofilters
- ✓ ZABOCS® BTF (Bio-Trickling Filters)
- ✓ Carbon Adsorbers
- ✓ Fume Scrubbers
- ✓ Emergency Vapor Scrubber Systems
- ✓ Custom Air Pollution Control Systems
- L BIOXIDE® AE Process
- L BIOXIDE® / BIOXIDE-AQ® Process
- L VersaDose™ Controller
- L Hydrogen Peroxide



## Potable Water Treatment Plants

- ✓ LO/PRO® & Poly-Stage™ Scrubbers
- ✓ Emergency Vapor Scrubber Systems
- ✓ Carbon Adsorbers
- ✓ Custom Degasifiers
- L Hydrogen Peroxide

- ✓ VAPOR PHASE
- L LIQUID PHASE

# Comprehensive Solutions From A Single Source.



## Full Service Odor Control

A service program is an integral part of a Siemens odor control program. It is imperative that inventory is controlled well, storage and feed systems function properly, pumps are calibrated periodically, dosages are regularly adjusted and performance is measured for an odor control program to meet objectives. The Siemens Team can provide the manpower and technologies to efficiently manage your odor control program and report results with high integrity.

The Siemens Team can offer you the unique advantage of single-source accountability, as well as, complete programs of long-term odor control.

Only the Siemens Team provides complete product capabilities, expertise and support.



The Siemens Team is flexible in providing payment methods. Creative approaches to financing may involve equipment rental, lease-to-own, and/or a structured contract including liquid products and capital rolled into one not-to-exceed price.

## VAPOR PHASE:

### Chemical Scrubbers

- LO/PRO® Multi-Stage Scrubber
- Emergency Vapor Scrubber System
- Poly-Stage™ Modular System
- DD71 Poly-Stage™ Scrubber
- Custom Packed Towers

### Adsorbers/Dry Scrubbers - Carbon

- Midas® OCM (Odor Control Media)
- Virgin Activated Carbon
- Alkaline Impregnated Carbon
- Canister & Skid-Mounted
- Single/Dual Bed Systems

### Biological Treatment

- ZABOCS® Biofilter
- ZABOCS® BTF (Bio-Trickling Filter)

## LIQUID PHASE:

### Iron Salts

- ODOPHOS® Treatment
- ODO-FREE™ Treatment
- PRI-SC™ Product

### Biochemical

- BIOXIDE® Process
- BIOXIDE-AQ® Process
- BIOXIDE® AE Process
- AQUIT® Process

### Oxidizers

- VX-456™ Product
- Hydrogen Peroxide

### Chemical Feed Systems

- Above Ground
- Under Ground
- Turnkey Installation
- VersaDose™ Controller

### Instrumentation

- Remote Monitoring
- H<sub>2</sub>S Monitors

# Advanced Technologies That Have Proven Results



## Upper Olentangy WRC Ohio, USA

ZABOCS® BTB  
(Bio-Trickling Filter)  
12,000 cfm  
>99 percent H<sub>2</sub>S Removal  
Green technology and low  
operating costs.



## Bedok STW Singapore

Chemical Scrubber &  
Activated Carbon Odor  
Control Facility  
160,000 cfm capacity



## Los Angeles WWTP California

LO/PRO® 2000  
Scrubber Systems  
20,000 cfm  
99.95 percent H<sub>2</sub>S  
Removal



## Pump Station 312.00 Collier County, FL

ZABOCS® 5000 Biofilter  
500 cfm  
99 percent H<sub>2</sub>S Removal  
90 percent Odor Control  
Removal



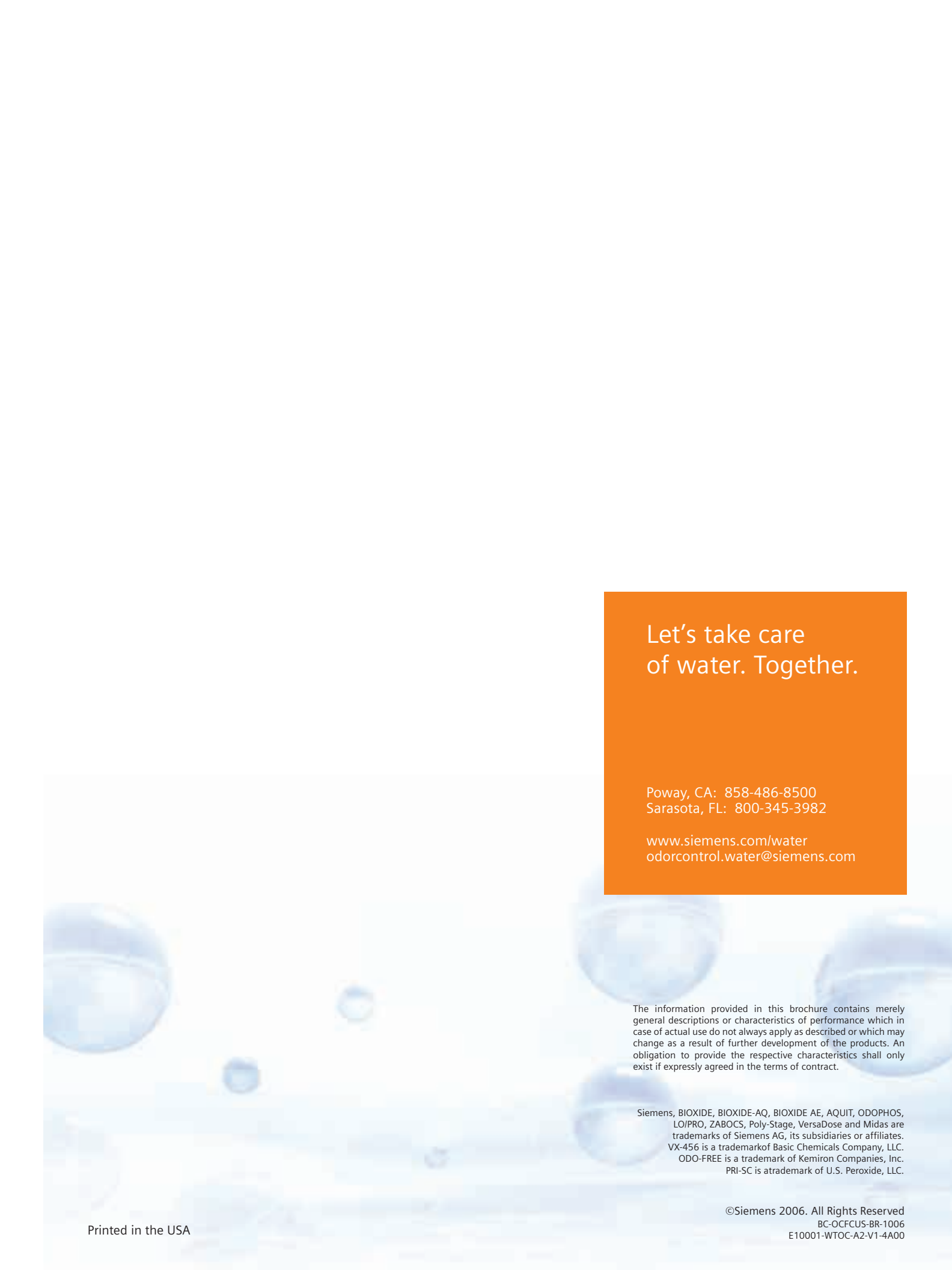
## Wastewater Treatment & Collection Department Florida, USA

Siemens liquid and vapor  
phase technologies are  
employed at various sites  
around the 22 mgd system.  
Consumer complaints have  
been effectively pre-empted.



## Integrated Chemical Dosing California, USA

Advanced dosing  
controller integrated with  
customer SCADA system  
and telemetry controls a  
chemical feed system 6  
miles upstream of WWTP.

The background of the entire page is a soft-focus image of numerous water droplets of various sizes, creating a clean and refreshing aesthetic. The droplets are rendered in shades of light blue and white, with some showing highlights and shadows that give them a three-dimensional appearance. They are scattered across the page, with a higher concentration in the lower half.

Let's take care  
of water. Together.

Poway, CA: 858-486-8500  
Sarasota, FL: 800-345-3982

[www.siemens.com/water](http://www.siemens.com/water)  
[odorcontrol.water@siemens.com](mailto:odorcontrol.water@siemens.com)

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

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