

EPG

# CONNECTION

Your Resource For Environmental Pollution Solutions!

## Quality Products Available from EPG

### IN THIS ISSUE

Page 2

Sales Rep Highlight

Testing the Level  
Control System

Page 3

Thermal Oxidation:  
A Brief Explanation

EPG People

Page 4

Product Highlights

#### Landfill Products:

- Patented Wheeled Sump Drainer
- Vertical Sump Drainer
- Portable Leachate Collection System
- LRSMaster Leachate Recirculation System
- Controllerless Pneumatic Pumps for Monitoring and Gas Condensate
- Pneumatic Pumps and Controls
- PumpMaster™ UL Listed Control Panels and Telemetry Systems
- LevelMaster™ Level Monitoring and Control Systems
- Flow Meter Systems & Controls
- Process and Storage Tanks
- Tank Seals
- Guided & Non-Guided Pump Disconnects
- E-Wave Wireless Switches
- Breakout Junction Boxes for Sensor and Power Connection NEMA 4X/6
- Nasty Gas Blowers
- Blowers for Vapor Extraction & Aeration
- Oxidair™ Thermal & Catalytic Oxidizers for Vapor Destruction
- Scrubbers for Off-Gases
- Carbon for Vapors and Liquids
- Control Valves
- Stainless Steel Piping
- Rental Equipment

#### Industrial Products:

- UL Listed Control Panels, Telemetry Systems and PLCs.
- Explosion-Proof Controls and Instrumentation
- Tanks and Agitators
- Process Pumps
- Pneumatic Pumps and Controls
- Air Compressor Packages
- Oil/Water Separators
- Flow Meter Systems
- Packed Tower & Low-Profile Tray Air Strippers
- Control Valves
- Carbon for Vapors and Liquids
- LevelMaster™ Level Monitoring & Control Systems
- Liquid Level Sensors
- Pressure Transmitters
- E-Wave Wireless Switches
- Vacuum Drying Equipment
- Process Blowers
- Nasty Gas Blowers
- CS Series Condensate Filter Separators
- Oxidair™ Thermal & Catalytic Oxidizers for Vapor Destruction
- Scrubbers for Off-Gases
- Custom-Built Piping Systems
- Process Gauges
- Rental Equipment

#### Remediation Products:

- TSP Submersible Pumps
- Vertical Sump Drainer
- Controllerless Pneumatic Pumps for Total Fluids or Product Pumping
- UL Listed Control Panels and Remote Monitoring Systems
- Process Water and Product Storage Tanks
- Transfer Pumps
- E-Wave Wireless Switches
- Oil/Water Separators
- Stand Alone Flow Meter Systems
- Packed Tower & Low-Profile Tray Air Strippers
- Control Valves
- Carbon for Vapor and Liquids
- Liquid Level Sensor
- Breakout Junction Boxes for Sensor and Power Connections
- Vapor Extraction Blowers
- Nasty Gas Blowers
- CS Series Condensate Filter Separators
- Oxidair™ Thermal & Catalytic Oxidizers for Vapor Destruction
- Scrubbers for Off-Gas Treatment
- Air Sparging Packages
- Leachate Pumping Systems
- Process Gauges
- Rental Equipment

## 2001 Service School was a Success!

EPG Companies Inc. would like to thank everyone who attended the 2001 Leachate Pumps and Controls School held March 21<sup>st</sup>–23<sup>rd</sup>. The service school covered many topics including pump and electricity basics, hands on pump assembly/disassembly, meter programming, use of electrical test equipment, troubleshooting, maintenance, and more. Here is what a few of the attendees said about their experience at service school.

*"I really enjoyed the hands on with the pumps and controls, and it was also very helpful to have the EPG experts nearby to answer any questions. The service school was very informative and I will surely recommend EPG to all of my clients."*

— Engineer, Michigan

*"After attending the service school I now have a better understanding of the control panels. I found it to be very helpful and interesting when we used the test meters to troubleshoot the panels."*

— Landfill Operator, Minnesota

*"I am currently working on our pumps and I didn't know very much about the electrical side of them until I attended the service school. Now I feel that I can go back to our site and find almost any problem that we may have on my own. I can also say that I have never felt as welcome as I did at EPG. The hospitality was and is excellent."*

— Landfill Operator, Florida

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# Sales Representative Highlight

The Reich Company, Inc. was founded in 1975 as a representative to assist leading manufacturers in marketing water, wastewater, remediation and air treatment equipment and systems.

In October of 1995, Reich was recommended to EPG Companies as a possible representative by an EPG user and Reich was signed on as the EPG sales representative for Texas. The addition of the EPG product line created a new market for Reich at landfill sites and provided additional products to market for groundwater remediation.

The success of the EPG leachate pumping line has grown each year in Texas. Presently 30 landfill sites use one or more EPG systems and new ones are added each year. Charles Reich, president of the rep firm states, "Eventually landfill

owners and operators come to the realization that spending more money initially to purchase better designed systems, with better materials of construction, can more than pay for themselves by providing longer service life with minimum unscheduled downtime".

In 2000 it became apparent that some type of factory authorized service would be advantageous to the multitude of EPG users in Texas and Reich assisted EPG in establishing a factory trained service representative to repair systems on site and provide periodic maintenance contracts.

"As communities continue to grow, the need for additional landfill cells must be met, and the requirements for dependable, well-built leachate pumping systems will not diminish", Reich points out. EPG and Reich look forward to continuing their



**Charles Reich**

relationship in providing to landfills the best leachate pumping system available.

The Reich Company, Inc. has offices in Austin, Houston, and Humble, Texas and can be reached at 281-852-7206 or by e-mail at [cereich@aol.com](mailto:cereich@aol.com).

## Testing the Level Control System



**Level Simulator**

The new level simulator is now standard on all EPG "L" Series Controllers with the LevelMaster™ level control system.

The level simulator is a built-in test circuit designed to simulate the 4-20mA signal from a pressure transmitter. This verifies the integrity of the LevelMaster™ level control meter, identifies the programmed level settings, and aids in troubleshooting the level sensor.

The level simulator is quick, easy, and simple to use. It immediately provides pertinent information directly related to the operation of the meter and to the functionality of the pressure transmitter.

For those facilities that are equipped with an earlier model control panel(s) and do not have the built-in level simulator, there is also a similar hand held model available. The Model TS-1 Test Simulator is a dual function simulator that simulates both the 4-20mA signal for testing level meters, and also simulates pulse output for testing flow meters. The unit is loop powered so there is no need for batteries. The TS-1 Test Simulator includes, test leads, alligator clips, clip on test pins, instructions, and a protective carrying case.

# Thermal Oxidation: A Brief Explanation

Thermal oxidation is the chemical mixing of long chain hydrocarbons and air, producing water vapor and carbon dioxide. This chemical process is achieved by the addition of heat in a controlled atmosphere. The equipment in which this reaction takes place is a thermal oxidizer, where contaminated vapors are destroyed at an efficiency of 99+%.

The thermal oxidizer controls the ratio of air and fuel, temperature, and the actual mixing of the streams.

The oxidizer controls the ratio of air and fuel by measuring temperature and adding more fuel or reducing the airflow. As the temperature starts to decline, the auxiliary fuel control valve opens, increasing the amount of fuel. The temperature is measured and controlled by a thermocouple

located near the exit of the combustion chamber in the oxidizer.

The mixing of the streams is accomplished by the shape of the burner and the speed, or velocity, of introduction. EPG Companies uses a venturi shaped tile to promote mixing. The venturi shape restricts the flow through a throat, then lets the flow rate accelerate as it passes through this orifice. This increases the velocity, therefore increasing turbulence, or mixing.

There are two areas of concern with thermal oxidizers. They are safety and operating economy. The safety issue is addressed using a system of checks including temperature control, mentioned earlier, high and low fuel pressure switches, flame verification with an ultra violet sensor, a high temperature limit and the burner design. The venturi burner design adds to the safety of the equipment by eliminating the occurrence of flash back. This is done by accelerating the fume stream so rapidly from high velocity to low velocity through the throat of the burner tile that the flame cannot flashback and return toward the source of ignition.

Operating economy can be broken down into two segments, fuel cost and maintenance. To lower fuel costs, EPG introduces the fume stream through the burner, therefore using the heating value of the fumes



**Trailer Mounted Thermal Oxidizer**

(expressed in BTUs) along with the oxygen present. The higher the BTU value of the fume stream the less auxiliary fuel needed to be added. Also, in the attempt to lower costs, EPG Companies uses a cast burner tile. Using a cast burner tile instead of a metal burner and removing the analyzers, not only lowers the operating costs but also reduces the amount of maintenance needed. Analyzers are necessary on other oxidizers to measure the LEL (lower explosive limit) and oxygen because of the possibility of flashback, which is possible because of their burner design.

In conclusion, the EPG Oxidair™ thermal oxidizer is a system of controlling the burning of contaminants, efficiently and safely.

**Short and long term rental units are currently available!**



**Skid Mounted Thermal Oxidizer**

## EPG People...

Joe Hasslen is the Customer Service Manager at EPG Companies Inc. He has been involved in customer service, troubleshooting, and equipment repair for more than 16 years.

There is no doubt that Joe has a knack for making things work and for inventing numerous sensors and

products for mechanical process systems. Joe has conducted on-site equipment startup supervision and training throughout the U.S.

When Joe is not busy building his house and keeping up with his three daughters, he enjoys travel and fishing.



**Joe Hasslen**

# Product Highlights



**Disconnects**

EPG's disconnects are designed to fasten through a riser or sump wall for quick and easy pump disconnect applications, which eliminates the entrance of personnel into hazardous locations to make a pump connection and disconnection. They are constructed from high quality high strength electroless nickel-plated brass alloy castings, which are corrosion resistant. A tapered slide/funnel fitting and Teflon coated neoprene O-ring maximize liquid tight slip joint sealing. There are several configurations and sizes available to fit 1" - 6" discharge pipe.



**E-Series Liquid Flow Sensor**

One major problem with most paddlewheel flow sensors having magnets in the paddles is that metal particles tend to stick to the magnets. The collecting material then causes a change in the flow characteristics in the paddle, in which case you get an inaccurate reading. To eliminate this problem, EPG Companies' flow sensors use a special axle and dual magnet drum design. This takes the magnets out of the paddles. By using the dual magnetic drum design (rapidly changing polarity) this, along with fluid velocity, causes the metallic particles to drop off into the flow and be swept away. The E-Series flow sensor fits pipe sizes from 3/4" - 14".

## Upcoming Events

**AUGUST 28-30**  
*Quad State SWANA*  
*Myrtle Beach, SC*

**SEPTEMBER 16-18**  
*Alabama SWANA*  
*Orange Beach, Alabama*

**OCTOBER 15-18**  
*WASTECON 2001*  
*Baltimore, MD*

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