

**L**ike shipbuilders and sailors preparing a tanker for its maiden voyage,

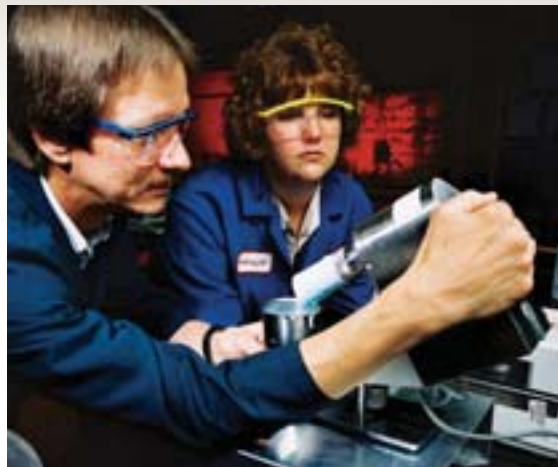
*by Jacqueline Davis*

a handful of individuals, scattered across the company and around the world, have worked quietly for the past two years to get ConocoPhillips' business units ready for a groundbreaking regulation.

## **REACHing** across the world:



Research Technician Robert Humble and Research Engineer Rena Armstrong in the Ponca City Research and Development laboratory



# One mission, many hands

The impetus: a Dec. 1, 2008, deadline to pre-register chemical substances for REACH – a new European Union (EU) regulation on existing and new chemicals that became law in June 2007.

REACH stands for the registration, evaluation, authorization and restriction of chemical substances. This new regulatory system for chemicals and their safe use replaces approximately 40 different regulations. And it is expected to impact more than 30,000 substances manufactured or imported into the European Economic Area (27 EU member countries plus Norway, Liechtenstein and Iceland).

“REACH is, without a doubt, the single largest

piece of chemical regulation in the world today,” said Mike Thomas, London-based product stewardship manager for European downstream.

Thomas joined ConocoPhillips in January 2007, after more than 25 years of related experience at ICI, BP Oil and Lyondell Chemical Company. A toxicologist from the University of Wales, Thomas immediately was tasked with preparing EU downstream for REACH compliance.

“No other chemical regulation comes close to its scope or depth of coverage,” Thomas



**Above right:** Associate Research Technician Karen Holmes

**Right:** Team members in London, (from left, standing) Alan Green, HSE manager, Europe and Asia Pacific; Mike Thomas, Product Stewardship manager, European Leveraged Services; (seated) Jim Matheson, Global Regulatory Affairs specialist; and Phyllida Wilson, HSE administration coordinator, European Leveraged services



**Above:** Mike Thomas, Product Stewardship manager is based in London, England.

said. “This complex regulation runs into several hundreds of pages and the technical guidance runs into thousands of pages.”

REACH firmly places the onus on industry to gather and maintain information about each substance; its chemical identities, including toxicity; and every identified use. All manufacturers and importers will be required to register this information – not only for base and finished products, but also for all chemical components within a formulation – in a central database run by the newly formed European Chemicals Agency (ECHA) in Helsinki, Finland.

Based in Washington, D.C., Strategy, Integration and Specialty Businesses Global Regulatory Affairs Specialist Jim Matheson has been with the company for 30 years. He explained the historic and global implications of REACH. “In the early ’70s, the U.S. Toxic Substances Control Act (TSCA) ‘grandfathered’ (in effect, exempted) all existing chemicals in commerce at the time it was enacted,” Matheson said. “On the other hand, REACH only grandfathers a minimal number of substances that have gone through the formal European chemical notification process in the past few years. In addition, those chemicals were only grandfathered for the companies that provided notification – not for all companies that manufacture or import the substance.”

Both Thomas and Matheson agree that REACH is likely to become a model for other countries. “We are seeing consideration in other countries, including some discussions in the U.S. at the federal and state levels, for adopting REACH-like regulations,” Matheson said.

#### GETTING THE RIGHT CREW ABOARD

Thomas and Matheson are just two members of ConocoPhillips’ REACH Global Product Stewardship Team, a new task force established in November 2007 to spearhead and coordinate



compliance strategies and information resources for affected groups.

The multidisciplinary global team comprises about 30 specialists in five locations representing 13 groups. It includes not only product managers and toxicologists but also technical experts from Legal, Export and Import Compliance, Procurement and Information Services.

Team members also work closely with external industry organizations, such as the American Petroleum Institute (API) and CONCAWE, the European association for environment, health and safety in oil refining and distribution.

Jennifer Galvin, Industrial Hygiene and Toxicology manager, Health, Safety and Environment, Bartlesville, Okla., was the first person involved, gathering scarce information in the pre-legislation days. The 18-year company veteran and seasoned traveler went on numerous fact-finding missions to Europe. A board-certified toxicologist who grew up on a family farm in Oklahoma, but was educated at the University of Liverpool, U.K., Galvin personifies the REACH team’s take-charge, can-do attitude.

Early on, Galvin recognized that the new regulation would pose a huge challenge to

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numerous groups within ConocoPhillips and reached out to them.

“From the start, we decided the REACH team would be very proactive and drive the strategic compliance process,” Galvin said. “We didn’t want to sit back and wait for individual groups to ask questions and seek out our expertise on a case-by-case basis.”

The REACH team is led by a four-member steering committee – Jennifer Galvin, Tracy Hammon, Jim Matheson and Mike Thomas. All four are quick to credit the entire team’s extraordinary collaboration for the successful preregistration of more than 200 substances by November, ahead of deadline.

“We tackle everything, from identifying high-level strategies to coordinating down-in-the-weeds details,” Thomas said. “But the decisions always remain in the hands of the individual business group.”

#### GENEROUSLY SHARING KNOWLEDGE

**I**t became obvious that we must draw upon the varied experience and knowledge of team members and leverage our efforts across business units,” Matheson said. “We quickly found no one

person has all the answers; collectively we have been able to develop a cohesive and defined approach.”

The ConocoPhillips REACH Global Product Stewardship Team meets monthly, but discussions and collaboration are continuous.

“Constant communication is absolutely critical to what our team does,” said Tracy Hammon, a trained toxicologist from Colorado State University, who joined ConocoPhillips in 2005 after eight years as a consultant to the U.S. Environmental Protection Agency and three years at the Colorado Department of Public Health and Environment. “By sharing and leveraging knowledge from one work group, the team helped answer similar questions and accelerate the learning for other groups,” Hammon said.

“The reality is that as important as the REACH work is, it’s an extra responsibility on top of my regular job,” said Phil Griffith, director, Technical, Base Oils and Specialty Products for ConocoPhillips Strategy, Integration and Specialty Businesses. “It was only through the combined efforts of the team that we were able to meet the deadline and requirements of the EU regulation, as well as the needs of our customers.”

#### NO DATA, NO MARKET

**T**he catchy phrase “no data, no market” is not just a political slogan, but is embedded in Article 5 of REACH legislation.

The API further emphasized the business impact in its REACH guide: “REACH easily translates into ‘No registration – no global markets’ in today’s economy, where materials are supplied on a worldwide basis rather than a regional one.”

In addition to affecting direct sales into the EU market, many ConocoPhillips products are part of the supply chains of others. For example, ConocoPhillips supplies automakers with lubricants that go into automobiles that are exported to



**Above: Trond Schei, chief occupational hygienist, is based in Tananger, Norway.**

**Above left: Team members in Houston, (from left) Vien Nguyen, Legal/HSE BP supervisor; Jane Embry, Regulatory Reporting director; Jonathan Miller, regulatory analyst; Jennifer Galvin, Industrial Hygiene and Toxicology manager; and Steve Moore, principal consultant**

*“Ultimately, better knowledge about chemicals and potential hazards will help protect human health and the environment.” – Tracy Hammon*



**Phil Griffith, director, Technical, Base Oils and Specialty Products**

international markets like the EU.

For ConocoPhillips, at risk were \$43 billion annual sales into the EU market with \$1.6 billion ConocoPhillips U.S. exports to the EU.

The issue for ConocoPhillips business groups outside the EU was not whether to, but how best to register their chemical exports. After evaluating three options, the choice was clear: ConocoPhillips Limited in U.K. would act as the company’s “Only Representative,” and this model would ensure seamless service to customers.

One group that has gone the extra mile is the Lubricants, Specialty Products group. In addition to producing base oils (primary components for lubricants, etc.), process oils and finished lubricants, the group also purchases base oils from external

suppliers for blending finished lubricants because of geographical considerations and different quality levels needed. To ensure all its supplies are covered, the group chose to preregister not only its own products, but also all procured base oils.

Several of ConocoPhillips’ major competitors apparently have chosen not to submit their products directly for REACH.

“Every advantage we have to market our products, such as registering our products, is going to be increasingly important in a more challenging economic climate,” Griffith said. “We stand to lose business if we are not REACH-compliant. We are getting more and more REACH-related questions from customers seeking assurances. One of our base oils and specialty products customers

## REACH: By the numbers

**30,000-plus:** Estimated number of chemicals in the European Union (EU) market.

**30-plus:** Members in ConocoPhillips’ REACH Global Product Stewardship Team, representing 13 groups and five locations.

**\$43 billion:** ConocoPhillips’ global sales into the EU market at risk.

**\$1.578 billion:** ConocoPhillips U.S. exports to the EU.

**\$47 million:** Strategy, Integration and Specialty Businesses (SISB) EU sales at risk.

**6 months:** Time frame for preregistration (June–November 2008).

**2 years:** Time frame for actual registration in first category, including substances with over 1,000 tonnes

traded (December 2008–November 2010). Note: Most ConocoPhillips substances are in this category.

**10 years:** Estimated timeline for completing REACH registration of all 30,000-plus and increasing number of substances (2008–2018).

**\$50,000:** Fee for registering single substance using the Only Representative model.

**\$75,000–\$250,000:** Estimated one-time cost (based on tonnage) of data research, system administration and toxicity studies. Note: Most studies have been done, and results from studies done in the U.S. will be shared with EU counterparts.

**\$5,000–\$15,000 per year:** Anticipated recurring administrative cost per substance (based on tonnage). Note: Projected figures are expected to change as new interpretations and regulatory mechanisms evolve.



even asked if they needed to start looking for alternate suppliers!”

Griffith received positive customer feedback at the annual meeting of the Independent Lubricants Manufacturers Association (ConocoPhillips is a supplier member) in October. “There was a real sense of relief that ConocoPhillips had already taken care of REACH requirements. This not only reassured our customers but also strengthened relationships at an important time,” Griffith said.

“We’ve already started seeing the benefits of going the extra mile. And our customers do too,” Matheson said.

Matheson shared an early success story: “A European customer was only planning to renew its LiquidPower™ Flow Improver contract for one year, but by providing them assurance that our products would be compliant with REACH requirements, they agreed to a two-year contract extension.”

### CHARTING THE COURSE

Preregistration is just the initial step in the 11-year phased implementation of REACH and provides an extended time period for the actual registration. Since most ConocoPhillips substances are in the first category with more than 1,000 tonnes traded annually, ConocoPhillips has two years to complete the extensive registration process by November 2010.

“Preregistration’s like the tip of the iceberg. About 5 percent is done. The work’s only just beginning,” Galvin said. “Now that we have inventoried and preregistered, we are moving on to the main task – the process of collecting data,

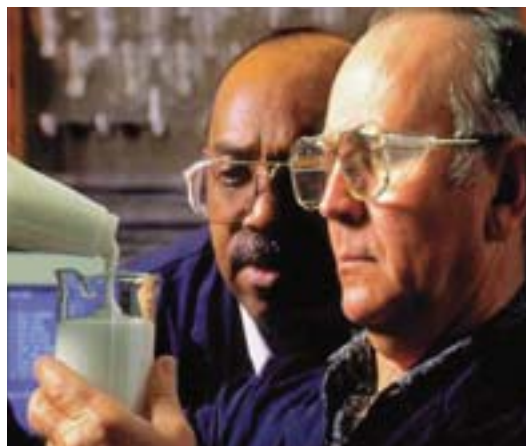
preparing dossiers and ensuring every use for every chemical component will be registered.”

The expert manpower and resources needed for REACH compliance is staggering. Costs range from an initial fee of \$50,000 for registering a single substance to a one-time estimate of \$75,000 to \$250,000 for information required for preparing the dossier. And those figures don’t include recurring administrative costs estimated at \$5,000 to \$15,000.

“This is such a new initiative that there are no proven strategies, only different approaches,” Thomas said. “As it stands, no one really knows what form REACH will take on. As REACH evolves, so will the regulatory requirements and technical guidance. We will have to learn about REACH as we navigate through it. And we will have to constantly monitor and adjust our strategy accordingly.”

“Ultimately, better knowledge about chemicals and potential hazards will help protect human health and the environment,” Hammon said. “REACH compliance is a difficult, complex process. Moving ahead, we undoubtedly will have some rough seas to navigate. However, in the long run, it will be a big step forward in chemical safety.” ■

**Top left: Team members in Bartlesville, (from left) Tina Seale, Export Compliance analyst; Gregory Herzog, Export Compliance manager; Kathy Morrow, Product Safety Database specialist; Romel Chatterjee, senior analyst; and Tracy Hammon, toxicologist. Morrow and Chatterjee are the wheels behind the electronic efforts for REACH. They mapped and implemented a new process that enabled the online pre-registration of substances. This REACH work is expected to change the way ConocoPhillips manages its product information databases globally.**



**Left: Research Technicians Jon Barnhart and Leo Haynes**