The use of kerosene lamps may substantially increase the risk of tuberculosis (TB), according to a new study.

In Nepal, UC Berkeley researchers found the odds of having TB were more than nine times greater for women using kerosene lamps for indoor lighting, rather than electricity, and 3.5 times greater for women using biomass fuel for household heating, compared to those using clean-burning fuel stoves.

The study, published in the April issue of *Environmental Health Perspectives*, provides the first evidence that exposure to kerosene stoves or lamps and biomass fuel for heating may play a role in increasing TB risk.¹

TB is a major health issue in the developing world. In 2008, there were over 9 million new cases and 1.3 million TB-related deaths.² People spread the bacteria through the air when they talk, cough, spit or sneeze. Not everyone infected will develop the disease, although people with compromised immune systems are more vulnerable. Globally, TB infection spreads once every second.³

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Letter from the Director

For several months many of us were horrified by the environmental devastation wrought by the oil continually flowing from the uncapped BP well in the Gulf of Mexico. Images of blackened birds, turtles and beaches were as stirring as the testimony of impacted coastal residents. While most people were paying attention to the ecologic and economic consequences of the largest accidental marine oil spill in history, the occupational safety and health issues created by this catastrophe were largely unnoticed by the public.

The Deepwater Horizon drilling rig explosion on April 20, 2010, killed 11 platform workers and injured 17 others. Work-related fatalities still occur in this country at an alarming rate. The preliminary count for US fatal work injuries in 2009 was 4,340, down from a total of 5,214 in 2008. Decreased employment due to the recession, especially in the construction industry, is thought to have played a major role in the lower number of fatal work injuries in 2009, continuing a trend that began in 2007. Natural resources and mining remains one of the industrial sectors with the highest risk of fatal injury; 15% of the deaths reported in 2009 were in this sector. In my view, any number of occupational fatalities is too many because all could be prevented.

Preliminary reports of the events leading to the Deepwater Horizon explosion suggest corners were cut by corporate entities involved in the drilling of the Macondo well that put workers on the rig at risk. There had been previous spills and fires on the Deepwater Horizon, including one reported in 2008 to the Minerals Management Service (MMS) where 77 people were evacuated. The platform listed and began to sink after a section of pipe was accidentally removed from the platform’s ballast system. By the time of the explosion, the Deepwater Horizon well operation was already running 5 weeks late. Internal BP documents show engineers had concerns as early as 2009 that the metal casing BP wanted to use might collapse under high pressure. In March 2010, the rig experienced problems that included drilling mud falling into the undersea oil formation, sudden gas releases, a pipe falling into the well and at least three occasions of the blowout preventing leaking fluid. After the rig sank, the rig’s mechanic told CNN that the well had problems for months and that the drill repeatedly “kicked” due to high gas pressure.

Preliminary findings from BP’s internal investigation released by the House Committee on Energy and Commerce indicated several serious warning signs in the hours just prior to the explosion. Equipment readings indicated gas bubbling into the well, which could signal an impending blowout. A BP official on board the rig directed the crew to replace the drilling mud, which is used to keep the well’s pressure down, with lighter seawater even though the rig’s chief driller protested. As reported by CNN, workers on the rig understood that they could get fired for raising safety concerns that might delay drilling. A House Energy and Commerce Committee statement in June 2010 noted that in a number of cases leading up to the explosion, BP appears to have chosen riskier procedures to save time or money, sometimes against the advice of its staff or contractors.

It now appears that fires and accidents on oil rigs in the Gulf are fairly frequent. A Mariner Energy-owned production platform, Vermilion, situated in the Gulf of Mexico 100 miles off the Louisiana coast, exploded and caught on fire on September 2, 2010. Thirteen workers were occupying the platform at the time of the explosion and leapt into the surrounding water in flotation suits. All of the workers were rescued from the ocean, with one person sustaining injuries. According to the Los Angeles Times, the Vermilion platform was the scene of a drilling accident in 2008 that resulted in a serious injury to a crew member. The Times also reported that Mariner Energy had been involved in more than a dozen offshore accidents in the Gulf over the last 4 years, including at least four fires and a well blowout.

According to the National Oceanic Atmospheric Administration there are nearly 4,000 active oil and gas platforms in the Gulf of Mexico off the southern US coast. Accidents appear to be a regular feature of offshore oil production. The National Wildlife Federation recently released a report claiming more than 1,400 offshore-oil-related accidents occurred from 2000 to 2007, killing 41 people.

A bipartisan effort to encourage deepwater oil drilling in the Gulf of Mexico has been evident over the past two decades. The Deepwater Royalty Relief Act, signed into law by former

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Solomon Testifies About Worker Health Effects of the BP Oil Spill

In June, COEH member Gina Solomon was one of three scientists to provide testimony to the US Congress Sub-committee on Energy and Environment on the health and environmental effects of the British Petroleum (BP) oil spill. Solomon told Congress her main health concerns were air quality for workers and communities, the toxicity of direct skin contact with the oil and seafood contamination. She also emphasized that workers hired to clean the spill face the greatest health risks.

In her testimony, Solomon cited a report from the National Academy of Sciences (NAS) that estimates up to 70% of the oil that bubbles to the ocean’s surface evaporates into vapor, dispersing harmful chemicals into the air.1 Volatile and semi-volatile organic compounds contained in crude oil may exert acute and long-term health impacts.2 Workers in close contact with the oil can experience nausea, respiratory symptoms, headaches and dizziness. But these chemicals are also associated with neurologic and reproductive illnesses, and cancer.3

Through July 24, the Louisiana Department of Health and Hospitals reported 324 health complaints at medical facilities attributable to pollution exposures from the oil spill, reports Solomon. Of those, 74% were from workers. Over 120 workers sought care in emergency departments and 17 workers were hospitalized for exposure inhalation.

Since the explosion on April 20th, Solomon’s frequent posts on the Natural Resources Defense Council’s (NRDC) blog Switchboard have presented an independent view to help the public sort through numerous conflicting media stories about the spill. She analyzes the latest scientific data on topics ranging from chemical dispersants to seafood safety. The latter issue will remain a focus over the coming months as more fisheries open.

For example, Solomon has pointed to flaws in the Food and Drug Administration’s (FDA) risk assessment of ‘acceptable’ levels of polycyclic aromatic hydrocarbons (PAHs) in seafood. “They assumed people eat about 0.4 ounces of shrimp per serving, which is about one shrimp,” said Solomon. “They also assumed the average body weight of people eating Gulf seafood was 80 kilograms or 178 pounds.” She questions whether this weight estimate is high for a population of concern that includes women and children.

“They also assume that the risk will linger for only 5 years,” said Solomon. “But research studies have shown PAH contamination after the Exxon Valdez disaster lingering in oysters for at least 8 years.”

Based on limited data so far, Solomon says there is no clear evidence of a problem, and most consumers need not worry. “Obviously the advice is different for people eating fish in areas of contamination and eating locally caught fish, shrimp, crab and oysters.”

The unprecedented use of dispersants to break down oil into smaller particles leaves more questions unanswered about environmental health risks in the Gulf. Dispersants help protect the marshlands and the birds to some degree, Solomon says, but they may help drive the oil beneath the surface and break it up into smaller particles that may be a greater hazard to fish and other wildlife.

“Dispersed oil particles are in the range of 10 microns,” said Solomon, “which is a range that can be absorbed in fish, crustaceans and other invertebrates. In 1995, NAS concluded there was a hypothetical possibility that dispersants could increase the uptake of oil into the food chain. Still, it’s an issue we don’t have a lot of data on.”

Solomon and her team, which includes UC Berkeley Environmental Health Sciences (EHS) graduate Miriam Rotkin-Ellman and current EHS student Kathleen Navarro, have been downloading US Environmental Protection Agency (EPA) air quality data every week — analyzing the numbers and talking to EPA staff. She’s expecting air quality to improve now that the oil leak is plugged. “The data so far are fairly reassuring,” said Solomon. “We don’t see high levels of the volatile organics, hydrogen sulfide or naphthalene in the air, which are the chemicals I was most concerned about.”

The offshore data are slightly less reassuring. “There are elevated benzene levels in some of the near shore and offshore areas where people are working on the clean-up effort.” She’s found that BP’s air monitoring data indicates some elevated levels that exceed National Institute of Occupational Safety and Health (NIOSH) standards for an 8-hour work day. OSHA has been fairly responsive, reports Solomon, and a multi-agency effort also involving NIOSH and NIEHS has made important progress in protecting worker health and safety in the Gulf.

There is a need for follow-up studies of Gulf workers and residents to look for near- and long-term health effects from the spill, added Solomon. She is currently providing input to the researchers at NIEHS who are designing a study plan.

A senior scientist at NRDC and co-director of the UCSF Occupational and Environmental Medicine Residency Program, Solomon is in high demand by the media and by Congress. She also presented testimony to Congress in February and March of 2010; first on the problem of endocrine disrupting chemicals in US drinking water, and second, the role environmental hazards play in children’s health.

Tuberculosis in Nepal  (continued from cover)

In Nepal, almost half the population of 28 million lives below the international poverty line of $1.25 US per day. Forty-five percent are infected with the TB organism, Mycobacterium tuberculosi,s and 11,000 die annually of TB, according to lead author Amod Pokhrel, a doctoral candidate at UC Berkeley.

Cooking and heating with biomass fuel is common in developing countries, including Nepal and its border countries of China and India, but potentially the practice comes at a high price to public health.

“Right now 2 billion people are infected with the TB organism worldwide, but less than 1% have the disease at any one time. The question is, what are the risk factors that influence its development in those who are already infected?”

Michael Bates

Smoke from poorly ventilated biomass stoves is known to be hazardous, especially for women who do most of the cooking. It’s associated with acute lower respiratory infection in children, chronic obstructive pulmonary disease (COPD) and ischemic heart disease. Adding to the problem, incomplete combustion of biomass fuel produces greenhouse gas pollutants and global warming. In the new study, researchers enrolled 125 women with TB from the Regional Tuberculosis Center and the Manipal Teaching Hospital (MTH) in Pokhara. TB diagnosis was confirmed by chest X-ray and sputum testing. Two-hundred and fifty female outpatients from MTH of similar age and without TB were recruited for the control group.

Six previous studies have examined the link between biomass fuel and TB, with inconsistent results. To address the limitations of these earlier studies, Pokhrel and his colleagues developed a comprehensive questionnaire to account for family income, smoking, alcohol consumption, household stove type, fuel used, kitchen ventilation and indoor lighting. Trained interviewers visited 28 participants at their homes to check the validity of questionnaire responses.

Study authors hypothesized they might find a connection between biomass fuels and TB. But when they examined the role kerosene cooking and lighting played in TB disease, “the results were alarming,” Pokhrel said.

The findings were unexpected but make sense, according to co-author Michael Bates, professor of epidemiology at UC Berkeley. “Kerosene is widely regarded as a preferred alternative to biomass fuel, mainly wood and cow dung, which creates a lot of smoke and burns your eyes. But kerosene, which may appear to be cleaner burning, is actually a dirty fuel that gives off a lot of fine particulate matter.” And people are in close and prolonged contact with the lamps, often in poorly ventilated homes, increasing their exposure.

“Kerosene lamps are linked to socioeconomic status,” noted Pokhrel, who visited Nepal each summer from 2005-08. “They identify whether or not residents have electricity.” He said the government subsidizes kerosene because it is considered a clean fuel, but few studies have examined its impact on health.

“Right now 2 billion people are infected with the TB organism worldwide, but less than 1% have the disease at any one time. The question is, what are the risk factors that influence its development in those who are already infected?” asked Bates. “This study adds to the evidence for the need to reduce biomass fuel use, which is associated with other health outcomes like lower respiratory infections, COPD and possibly cataracts.” Bates said the relationship between kerosene and TB needs to be confirmed through other rigorous studies.

Along with Bates, Pokhrel co-authored the study with Kirk Smith, professor of global environmental health at UC Berkeley and several colleagues in Nepal. He received funding for his research from the NEWAID Foundation, which helps public health students study infectious diseases in the developing world. He was also supported by a NIEHS Fogarty scholarship through the International Training Program in Environmental and Occupational Health at UC Berkeley.

2. World Health Organization

Awards Presented at OEHN Celebration

COEH members Barbara Plog and Sarah Jewell, and alumna Heather Barr, were honored at UCSF’s Occupational and Environmental Health Nursing (OEHN) Celebration on June 10, 2010.

Director OiSaeng Hong presented Plog and Jewell with Occupational Health Nursing Hero Awards, which recognizes outstanding contributions to the field of occupational health and safety. Past recipients include Bob Harrison, Marion Gillen, Suzanne Llewellyn, Julia Faucett and Patricia Quinlan.

Plog, director of COEH’s Continuing Education Program, was chosen for her dedication to teaching occupational health and safety to OEHN graduate students over the past 20 years. “She was also honored as the editor of one the premier industrial hygiene textbooks used by OEHN students,” noted Barbara Burgel, clinical professor in the School of Nursing. In her award letter, Hong called Plog the “rock star of industrial hygiene” for making the safety of workers her top priority.

Jewell, past clinical professor and associate division chief of UCSF’s Division of Occupational and Environmental Medicine (OEM) at San Francisco General Hospital, was honored for teaching and mentoring OEHN students for more than a decade. Her toxicology course was well regarded by students and faculty. Jewell, past co-director of UCSF’s OEM Residency and Fellowship Program, is known for her research that investigates the occupational and environmental risk factors of Parkinson’s disease and other neurodegenerative disorders.

Heather Barr received the Barbara A. Resnik Writing Award, which encourages students and alumni to publish articles relevant to the field of occupational and environmental health nursing. Barr graduated from the OEHN Program in 2009. Her winning manuscript was entitled, “Shiftwork and Cardiovascular Risks.”

The award was established in 1991 to recognize the contributions of Barbara Resnik, professor emeritus, founder and former director of UCSF’s OEHN Program. Resnik, 83 years young, was on hand to present the award to Barr at OEHN’s Spring Celebration, along with a $250 prize.
Obesity Linked With Lower Wages

Story by Karen Finney, UC Davis

A new UC Davis study has found that minimum-wage employees are more likely to be obese than those who earn higher wages, adding to growing evidence that low income may be a risk factor for unhealthy weight.

“Our study clarifies a link that has been assumed but difficult to prove,” said Paul Leigh, senior author of the study and professor in the UC Davis Center for Healthcare Policy and Research. “The correlation between obesity and poverty-level wages was very strong.”

Public health scientists have identified several potential reasons why lower wages could support the tendency for obesity. One is that poorer people tend to live in less-safe neighborhoods with reduced access to parks and other low-cost means of physical activity. Healthy, lower-calorie foods also tend to be more expensive and less available in poorer communities. California’s Obesity Prevention Plan, for instance, notes that many low-income families must travel long distances to find healthier foods at reasonable prices.

“The outcome leads us to believe that raising minimum wages should be part of the solution to the obesity epidemic. Doing so could help increase purchasing power enough to expand access to healthier lifestyle choices,” Leigh said.

Published in the May issue of the Journal of Occupational and Environmental Medicine, the findings are the result of the novel use of a statistical technique known as instrumental variables, which is often used by economists and other social scientists to determine causal rather than coincidental relationships between, for instance, education and earnings.

“Instrumental variables gave us the chance to evaluate an independent factor that is definitely not caused by obesity – minimum wages,” said Leigh, who is an expert in health and labor economics. “After adjusting for inflation, minimum wages have been stagnant or falling over the past three decades, placing most full-time workers near the poverty line. It is also during those same three decades that we have seen the prevalence of obesity soar.”

In gathering data to run using instrumental variables, the team started with the Panel Study of Income Dynamics. This longitudinal, representative sample of people in the United States includes information on height and weight, which were used to calculate body mass index (BMI), in addition to demographics and earnings. The researchers isolated data collected in 2003, 2005 and 2007 from 6,312 full-time workers in over 40 states who were 20-to-64 years of age and identified themselves as heads of household. State established minimum wage data for those same three years was obtained from the US Department of Labor.

The results showed that people earning the lowest wages were more likely to have weights in the obese range, or BMIs of 30 or greater. People living in the southern United States — where state minimum wage levels are among the lowest — were more likely to be obese than people in other regions.

Leigh noted that one limitation of the study is its sample. Those identifying themselves as “heads of household” were 85 percent men and 90 percent Caucasian.

“Future research should address wage and obesity correlations among samples that include more African-Americans, Hispanics, Asians and women,” said Leigh. “Obesity is a complex problem that likely has multiple causes. The more we can pinpoint those causes for specific populations, the greater chances there are for reducing its impact.”

Leigh co-authored the study with Dae-Hwan Kim, who recently obtained his doctorate in economics from UC Davis. He is now a research fellow at the Korea Insurance Research Institutes in Seoul.


A copy of the study can be requested from the journal by e-mailing Marjory Spraycar at m.spraycar@verizon.net

“Obesity is a complex problem that likely has multiple causes. The more we can pinpoint those causes for specific populations, the greater chances there are for reducing its impact.”

Paul Leigh
“No-Sweat” Factory in Dominican Republic Focuses on Worker Safety

LOHP program coordinator Valeria Velazquez and Garrett Brown, SPH alumni and COEH advisory committee member, travelled in June to the Dominican Republic to conduct training and safety inspections at AltaGracia, a groundbreaking “no-sweat” garment factory that produces hooded sweatshirts and t-shirts for the US university apparel market.

The facility now employs 130 workers and has plans to expand further in fall 2010 to fulfill production orders for its niche customer — socially conscious students pouring into university classrooms across the country. In July, the factory was profiled in the New York Times.

AltaGracia is a success story made possible by the Workers Rights Consortium (WRC), a non-governmental labor monitoring organization from Washington, DC. Funded by over 185 US universities and other “no-sweat” purchasing organizations, WRC’s purpose is to combat sweatshops and to ensure companies that produce logo clothing also protect worker rights.

The factory owner, South Carolina-based Knights Apparel, pays workers approximately $2.83 per hour, or three times the prevailing rate offered at other “free trade zone” garment factories in the Dominican Republic, according to Brown, a compliance safety and health officer for Cal/OSHA.

“I feel proud to be part of this change,” an employee told him. “We are going to prove that we can, in fact, work in a free trade zone and earn a living wage.”

Velazquez and Brown were part of an occupational health and safety (OHS) team organized by the Maquiladora Health and Safety Support Network, which Brown coordinates. Their goal at AltaGracia was to disseminate best practices and build institutional capacity for OHS. Mariano Kramer, a retired senior safety engineer from Cal/OSHA who previously coordinated the agency’s sweatshop sweeps in Los Angeles, accompanied Brown on the OHS team’s first site visit in February as well as the second visit in June. Knights Apparel paid lodging and travel costs for both site visits.

The team spotted hazards during the inspections of the new facility: electrical issues, ergonomic risks associated with repetitive machine work, and exposure to “spot remover” solvents and airborne cotton dust. Another concern was heat stress — a problem in tropical factories without air conditioning. Knights Apparel and the employee union dealt rapidly with these issues. “A refreshing change from many garment operations,” noted Brown.

For example, plant management installed a local exhaust system to remove chemical vapors, replaced solvents with less toxic alternatives, changed housekeeping procedures to reduce dust, installed additional roof fans to lower heat within the factory and mandated water breaks during periods of high temperature.

Velazquez led a 3-hour class on the basics of ergonomics and how to run an effective health and safety committee during the June site visit. “We held the class on a Friday when work usually stops at 1:00 p.m., but employees chose to stay until 5:00 p.m. to take part in the training,” said Velazquez.

Her Spanish-language curriculum for the class of 30 was based on Worker Occupational Safety and Health (WOSH) Specialist Training — a program designed for employees with leadership roles in promoting health and safety in their workplace. The materials are funded by the California Commission on Health and Safety and Workers Compensation.

“What is exciting at AltaGracia is that the workers are incredibly dedicated to a sustainable model of employment,” said Velazquez, who plans on keeping in touch with their training needs. She was impressed by their initiative to make workplace health and safety a priority. “It’s hard to know if the seeds you plant will come to fruition, but they have a lot of incentive to make this work.”
Safer Alternatives to Toxic Chemicals Needed

Article in the July edition of Perspectives calls for a coordinated effort by occupational and environmental health professionals to protect workers and communities.

Scientists have shown that toys, cosmetics, food and cleaning products may contain chemicals that are toxic to humans and the environment. Approximately 85,000 chemicals are used commercially in the United States and 2,000 new ones come onto the market each year — most unregulated — leaving workers and everyday consumers in the dark about hazards that may affect their health.1

This data gap is exposed by the authors of an article in the July edition of Perspectives, who compare the European Union’s progressive chemicals policy, REACH (Registration, Evaluation and Authorization of Chemicals) against inadequacies in the United States, where they say harm must be proven before taking action to protect health.

According to the authors, California and Massachusetts have responded to the chemical data gap with state-level initiatives to protect the public. In Massachusetts, the Toxics Use Reduction Act introduced in 1989 requires businesses to report on their use of chemicals and prepare plans for pollution prevention. In 2008, California adopted two laws that are “first steps” in developing the information needed to protect residents from the adverse effects of toxic chemicals. Co-author Julia Quint is a member of California’s Green Ribbon Science Panel, a team of experts that will oversee the development and implementation of chemical policies for the state.

“We need to reframe how we think about the health and safety of chemicals to consider a full cycle of production, use and disposal,” said co-author Margaret Quinn, professor in the Department of Work Environment and co-founder of the Lowell Center for Sustainable Production, University of Massachusetts Lowell.

“Right now, occupational health and environmental health are often managed separately in terms of policy, science and practice,” said Quinn. “We hope this article can show how worker occupational health and safety is directly linked to environmental health and safety. When we do that, we see a much more comprehensive picture of the problem and solution.”

The authors recommend involving occupational health professionals in the development and implementation of environmental policies and programs, which will better protect workers and communities from chemical hazards.

“Workers often get lost in discussions of toxic exposures,” states co-author Holly Brown-Williams, director of policy at Health Research for Action at UC Berkeley. “We are exposed to chemicals in cleaners, paint strippers, pesticides and many consumer products, but frequently forget that they were made in workplaces. We often learn about health risks because workers are the first to become ill.”

Co-author Linda Delp, director of UCLA’s Labor Occupational Safety & Health Program, said her goal is nothing short of educating workers so they can be engaged in decisions at their workplace and at the policy level, whether it is a local ordinance to California’s green chemistry initiative or the Toxic Substances Control Act at the federal level.

She recently led a workshop in Los Angeles, “Decoding Green Chemistry for Workers,” funded by the NIEHS Worker Education & Training Program. Twenty people attended from labor and community groups, including truck drivers who transport hazardous materials, cleaners and car wash workers. Participants identified key chemicals of concern and expressed interest in safer alternatives, “but we don’t have access to that information in a single, comprehensive database,” explained Delp.

She said there is a huge information gap for the average employee — even for someone in local, state or federal government trying to help a particular industry or labor group. “For example, what we’ve found in hospitals — even for the processes or toxic materials where there are alternatives — the information did not exist in a ready format for employees to access and apply it,” said Delp.

This search for safer alternatives can be a spark for innovation and economic development, notes Quinn. The article describes companies that have successfully reduced their use of chemicals in manufacturing production and processes. The changes improved both worker and community health.

For instance, studies that showed how to reduce perchlorothelyene in dry cleaning led to decisions by the South Coast Air Quality Management District and the California Air Resources Board to phase out the toxic chemical. The legislation provided a $10,000 incentive for dry cleaners to switch to nontoxic technologies.2

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Mark Nicas, director of the Industrial Hygiene Program at UC Berkeley and COEH member, has been appointed editor-in-chief of the Journal of Occupational and Environmental Hygiene (JOEH) effective July 1, 2010.

“Dr. Nicas was selected from an outstanding pool of candidates and the Board is looking forward to working with him to continue the tradition of JOEH,” said Thomas E. Bernard, PhD, president of JOEH, LLC. “I would like to acknowledge the work of Dr. Michael Morgan as the first editor-in-chief, and to thank the search committee for finding a great replacement.”

Nicas has been a certified industrial hygienist since 1986. He has more than 30 years of experience in occupational and environmental health in government, industry, labor, and academia. Nicas has served as a JOEH Editorial Board Member since 2004, is a Diplomate of the American Board of Industrial Hygiene, and has been an American Industrial Hygiene Association (AIHA) Fellow since 2003. He received AIHA’s Edward J. Baier Technical Achievement Award in 2001.

As editor-in-chief, Nicas will establish the publication policies and editorial focus of JOEH and work to solicit leading-edge manuscripts from scientists and practitioners.

“I am honored to have been chosen to lead the JOEH into the next decade,” said Nicas. “I will strive to maintain the record of timely review and publication of high quality articles established by Dr. Morgan. I hope to enhance the visibility of the JOEH and provide a forum for discussions such as the role of occupational hygiene in product stewardship and a developing green economy. In turn, my efforts will hopefully promote the occupational hygiene profession.”

JOEH, which debuted in 2004, is a journal for the industrial hygiene and environmental health and safety profession. JOEH enhances the knowledge and practice of occupational and environmental hygiene and safety. It provides a written medium for the communication of ideas, methods, processes, and research in the areas of occupational, industrial, and environmental hygiene; exposure assessment; engineering controls; occupational and environmental epidemiology, medicine, and toxicology; ergonomics; and other related disciplines.

In considering Dr. Nicas’ appointment, Professor Stephen Rappaport of COEH said, “This editorship is an honor for our Center as well as for Dr. Nicas personally. The JOEH, formerly known as the American Industrial Hygiene Association Journal, is the oldest journal of its type in the world. As a scholar who has devoted his career to characterizing the sources and magnitudes of occupational exposures, Dr. Nicas is the perfect choice to ensure that papers of importance to our understanding of occupational exposures will continue to be published in this journal.”

Adapted from a Press Release from AIHA

“Dr. Nicas is the perfect choice to ensure that papers of importance to our understanding of occupational exposures will continue to be published in this journal”

Stephen Rappaport
Spear Honored with Mentorship Award

For those fortunate enough to have studied with Robert Spear, professor emeritus in the School of Public Health at UC Berkeley, his latest accolade will come as no surprise. UC Berkeley honored Spear with the Zak Sabry Mentorship Award at the School of Public Health’s commencement ceremony in May, 2010.

The award, established in 2004, celebrates SPH Emeritus Faculty member Zak Sabry’s commitment to teaching by recognizing faculty who mentor students and encourage creative faculty-student collaborations. Past recipients include Jack Colford, Steve Shortell, Joan Bloom and Carol Langhauser.

Spear was nominated by Joey Zhou, Ph.D. ’88, M.S. ’92, who also presented the award. Zhou first met Spear at a workshop in Chengdu, China, in 1998. The encounter “changed his life” and led him to pursue environmental health studies at UC Berkeley with Spear as his advisor. In his nomination, Zhou recognized Spear’s unique ability to mentor students from diverse scientific and academic backgrounds — from engineering to biology — and his multidisciplinary approach to public health.

Spear engaged Zhou on an international project to control the spread of schistosomiasis, a major parasitic disease in Sichuan, China. Spear’s ongoing work focuses on control and intervention strategies to reduce the incidence of the disease.

Garrett Brown and the Maquiladora Health and Safety Support Network (MHSSN) he helped found are the 2010 winners of the American Industrial Hygiene Association’s (AIHA) Rachel Carson Environmental Service Award.

AIHA’s Environmental Issues Committee presented the award to Brown in May 2010 at its national conference in Denver, Colorado. Each year, AIHA recognizes environmental health science (EHS) professionals who attain outstanding success in their business, profession or life’s work. “The award is the highest honor bestowed upon an EHS professional or group by the Environmental Issues Committee,” according to the AIHA.

Brown is a compliance safety and health officer for the California Division of Occupational Safety and Health (“Cal/OSHA”) and is a COEH Advisory Committee member. He graduated from UC Berkeley’s M.P.H program in 1991. MHSSN, the organization he coordinates, is a volunteer network of 400 EHS professionals who provide information, technical assistance and on-site instruction regarding workplace hazards to worker- and community-based organizations in the developing world. The Network started with workers in foreign-owned assembly plants along the US-Mexico border in 1993, but MHSSN partners have expanded to include projects in Indonesia, China and Central America and the Caribbean.
President Bill Clinton in 1995, was intended to encourage natural gas and oil development in the Gulf in waters at least 200 meters deep by offering royalty relief on qualifying natural gas and oil lease sales. Similar royalty relief incentives have been offered since 2001 to encourage production from wells drilled greater than 4,500 meters total depth on new leases located in shallow waters (less than 200 meters). In 2004, the MMS began to offer similar incentives for existing leases. Former President George W. Bush signed into law the Energy Policy Act of 2005, which includes a provision to increase incentives further on production of deep natural gas in the shallow waters of the Gulf of Mexico. It has been alleged that the MMS presided over a “wild west” approach to oil exploration, encouraged by a Bush administration pro-oil policy to new Obama administration incentives for oil companies to hurry up their exploration of leased lots – the so-called “use it or lose it” policy.

The MMS received billions of dollars a year in royalties from the industry it was supposed to regulate. Staff of the MMS routinely took jobs with oil companies after leaving the agency and oil company executives were appointed to managerial positions in the MMS. The agency relied on industry expertise for environmental impact and assessment data that go into approving drilling permits. Although mismanagement and lax supervision of offshore oil drilling is not the whole story of why the Deepwater Horizon disaster happened, it is clearly a contributing factor. One can only hope that the Obama administration’s decision to create the Bureau of Ocean Energy Management, Regulation and Enforcement will bring more appropriate oversight.

A second less dramatic occupational health and safety issue raised by the Gulf oil spill is protection of the cleanup workers. In an effort to control the extent of environmental damage from the spill, BP used chemical dispersants in unprecedented quantities. The toxicity of these dispersants in terms of human health effects was not adequately documented. Despite this, BP threatened to fire workers who wore respirators, even though their use was recommended by Louisiana state health authorities. Eventually, the US Environmental Protection Agency mandated that BP use less toxic dispersants.

In the aftermath of this disastrous spill, we need to work to hold employers and OSHA accountable for worker safety. Continuous efforts to improve conditions in dangerous industries like deep well oil drilling must be made. A safety culture needs to be fostered such that it becomes unacceptable to cut procedural corners to save either time or money. Worker lives are more important than either. We also need to foster the precautionary principle regarding worker exposures to chemicals of unknown toxicity. Workers wearing respiratory protective gear in such situations should not be threatened with the loss of their jobs.


**Toxic Chemicals**

“We are advocating that we do business in a different way,” said Quinn. “The focus is to shift from controlling a hazardous chemical once it has been dispersed into the workplace and general environment to actually replacing or redesigning the materials, processes and practices involved with it. And this is where occupational health has something significant to contribute. A major principle of the field is called the hierarchy of controls, meaning you always eliminate a hazard as the first choice rather than trying to control or manage it. Currently the first resort is to put workers in goggles, gloves, respirators and full suits, when it should be the last.”

The authors of this issue of *Perspectives* say that, ultimately, a comprehensive federal chemicals management policy is needed. A different, proactive approach would identify toxic chemicals before they are used commercially and force the use of safer alternatives. They also stress the key role that occupational health professionals can play in promoting alternatives.

In the meanwhile, implementing the article’s recommendations would help to protect workers and communities. These include ensuring that public health departments can access manufacturers’ chemical use information; expanding support for the development of safer alternatives and work processes; training for workers, unions, and businesses; and integrating occupational health concerns when developing environmental chemical legislation and regulations.

The Northern California Center for Occupational and Environmental Health (COEH), a multidisciplinary program of the University of California at Berkeley, Davis, and San Francisco, promotes health and safety in workplaces and communities by:

- Educating health professionals in epidemiology, ergonomics, industrial hygiene, medicine, nursing, toxicology, and related fields to be leaders in occupational and environmental health.
- Developing new knowledge through an interdisciplinary research agenda focused on preventing illness and injury.
- Responding to the needs of people affected by hazards in their workplaces or communities, with special attention to vulnerable populations.

Through these activities COEH supports federal, state, and local agencies, health and safety professionals, industry, labor, and community-based organizations in their efforts to prevent occupational and environmental disease and injury.

COEH is an Education and Research Center (ERC) of the National Institute for Occupational Safety and Health (NIOSH).