The PARS Reporter

Fall 2009 Issue

A Quarterly Publication for Clients & Friends

PARS Environmental, Inc. Telephone: 609-890-7277 Fax: 609-890-9116

Kiran Gill Awarded Entrepreneur of the Year

Kiran Gill, President of PARS Environmental, Inc. has recently received several awards for her outstanding business achievements. On October 20, 2009, Kiran was awarded the 2009 Asian Women in Business (AWIB) ***Young Entrepreneurial Leadership Award*** at a gala event in New York.

In 2008, Kiran was named ***Entrepreneur of the Year*** by the New Jersey Business and Industry Association. In March 2009, Kiran received the Environmental Business Journal ***Business Achievement Award*** for outstanding business achievement in 2008.

At 16, Kiran gained hands-on experience in developing and using supply-chain software, as a part-time employee at her uncle's company. Kiran was one of three employees at the time, which gave her the chance to dabble in many different functional areas. She experienced the challenges and gratifying responsibilities of being an entrepreneur, and decided that was what she wanted to do.

While attending New York University, Kiran worked summers at PARS Environmental, during which time she quickly learned all aspects of the business—from sales and project management to operations and finance. After graduating in 2002, Kiran joined PARS full-time.

A year later in 2003, Kiran purchased PARS Environmental with a combination of her own savings and a loan from her entrepreneurial uncle. She had a vision to focus PARS on developing innovative remediation technologies for environmental applications and building the company into a consulting firm that would specialize in solving difficult environmental problems. She understood the importance of government contracting and obtained several state and federal certifications, which have provided PARS with many contracting opportunities.

When Kiran purchased PARS, the company had six employees and annual revenues of $500,000. PARS has now grown to over 45 employees and more than $6 million in annual revenue. Kiran attributes PARS rapid growth to its proprietary technologies and willingness to take on difficult remediation projects. To get the attention of new clients, the firm continues to develop technologies that cleanup sites better, faster, and less expensive than its competitors. Clients include government agencies, manufacturing companies, and major utilities, to name a few.

Environmental consulting is still largely a man's field; competing for work both as a woman and under the age of 30 can be a challenge. "When I walk into a room, I am often not what people expect to see," says Kiran. However, after Kiran makes her presentation and begins discussions with a new client, the fact that she is a young woman is no longer an issue. Kiran's advice to other young women entrepreneurs is, "Understand your business down to the little details, be ready for failures and take big leaps when needed."

Kiran has a Bachelor's from New York University and an MBA from New Jersey Institute of Technology.

-Source: Asian Women in Business Website

Editorial

Welcome to the inaugural issue of the PARS Reporter, a quarterly publication for clients and friends of the firm. PARS Environmental is a full service environmental consulting firm that offers creative solutions to a broad range of engineering, health & safety, and environmental issues. The company combines technical capabilities, with a focus on eco-friendly and pragmatic approaches. PARS has over 45 employees with revenues over $6M and is currently headquartered in Robbinsville, NJ.

The fourth quarter of 2009 has been a beehive of activity for PARS, with new projects coming in daily. From monthly monitoring to asbestos abatement to database compilation, PARS is continually active, with numerous contracts in both the public and private sectors.

One of PARS major changes this quarter is moving from our current location in Robbinsville to a much larger office in the Horizon Center in Hamilton. PARS experienced significant growth this past year and the move will allow for larger offices in addition to accommodating the additional staff that will be hired in the future.

We are pleased to announce that John Mihalich, P.G., joined PARS in October, as Vice President and General Manager. John is a professional geologist with over 20 years of experience in environmental investigation and remediation throughout the United States. In an interview with The PARS Reporter, John said, "I'm delighted to join PARS, I have received a warm welcome from all staff members. The firm has grown significantly in the past few years and one of my objectives is to ensure that we continue to provide quality services to all our clients. This newsletter is a good forum for communication within PARS as well as with our clients and friends."

We welcome any questions, comments, or suggestions you might have—feel free to contact PARS at any time!

-Julian Fernandez-Obregon, Editor, JFernandez@parsenviro.com

-Lisa Keil, Editor, Lkeil@parsenviro.com

What's Happening.....

PARS Recognized by Toll Gate Grammar School

PARS was recently mentioned in a front page Trenton Times article on September 15, 2009 for outstanding work at the Toll Gate Grammar School. Multiple basement classrooms at the grammar school in Pennington were closed in early September to investigate reports of mold found there in late August. Students were relocated to other unaffected parts of the building and as of yet, there have been no confirmed cases of illness in response to the presence of mold in these basement classrooms. PARS was contracted to conduct an investigation into the level of contamination and the best method to remove the mold.

School officials met with Michael Moore, the project manager from PARS, who tested the air quality in the basement and oversaw the remediation work. PARS specifically tested for Aspergillus/Penicillium. Aspergillus, according to the federal Centers for Disease Control can be found in soil, food products, and organic debris; exposure can cause a variety of health problems including asthma, allergic sinusitis, and infection. Moore stated due to frequent rainstorms, many buildings, not just school buildings have had issues with mold in August.

Some of the interim and long-term remediation measures included having dehumidifiers in every room, waterproofing the exterior walls, sealing some of the windows where water could be entering, and changing all heating, ventilation, and air-conditioning filters. Heidi Olson, the president of the Hopewell Valley Education Association stated that many of Toll Gate staff's concerns including any possible health risks have been laid to rest.

-Source: Trenton Times

PARS Working with US EPA Researchers in Edison

The Urban Watershed Research Facility (UWRF) is an isolated, 20-acre open space within EPA's 200 acre Edison facility established to develop and evaluate the performance of storm water management practices under controlled conditions. The UWRF is a contractor operated facility managed by PARS Environmental, Inc. to support the researchers of USEPA Office of Research and Development Urban Stormwater Management Branch. The facility includes greenhouses that allow all-season operation, analytical laboratories for on-site analysis of common chemical and microbial stressors, a high-bay engineering development and support area, automated electronic monitoring and automatic sampling equipment, office spaces, and storage. On-site storage tanks, mixing, transfer, and distribution equipment provide collected stormwater to the practice under evaluation. The facility routinely monitors and records climatic data. Outdoor facilities include pilot-scale swales, wet ponds, and wetlands allowing for controlled-condition evaluations of these common control practices under varying loading and design conditions. The facility provides a safe location to collect engineering data needed for design and evaluation.

-Clarence Smith

Stone Harbor Elementary School thanks PARS

PARS was mentioned in the Cape May County Herald, on September 9, 2009 and later praised in a thank you letter regarding work done at Stone Harbor Elementary School. Mold was discovered August 31 on cold water pipes behind built-in classroom bookcases at the school, causing a one-day opening delay of the start of the school year. Students were scheduled to return on September 9th however, returned September 10th.

Moisture from exterior walls leaked inside and mold appeared on interior wall pipes of four classrooms and the computer lab. The school board contracted PARS and AllRisk, another remediation specialist to remove the mold, clean items and test air quality over the Labor Day weekend.

PARS recommended replacing old insulation with foam insulation and improving air-circulation by leaving classroom doors open. School officials were very satisfied with the response time of the remediation. The school is interested in monitoring for mold every six months.

PARS received a very positive letter from the Stone Harbor School Board Superintendant, David Rauenzahn which specifically mentioned Rafael

Torres, the project manager from PARS who dealt directly with the school. The letter stated, "From Monday's (8/31/09) call for assistance until Tuesday's (9/8/09) final clearance, Rafael has been on top of our situation and provided guidance, expert advice from PARS hygienists, and liaisoned with the AllRisk remediation team on site. We appreciate his willingness to drive down to our site from Winslow almost every day and night. He certainly demonstrates the professionalism of the PARS Company. The Stone Harbor Board of Education, staff, and parents appreciate the 'extra miles' your personnel and labs went to get us a quick remediation to this issue."

-Source: Cape May County Herald

PARS Investigates DNSC site in Indiana

During the week of October 5th through 9th, PARS was on location in Hammond, Indiana at the Defense National Stockpile Center (DNSC). The DNSC is owned by the United States Government and leased by the Defense Logistics Agency and is operated under the National Stockpile Program for the purpose of storing metallurgical ores and other materials necessary for manufacturing defense materials or strategic materials used in national defense. Most ores have been stored outdoors on paved pads or directly on the ground surface. Some of the major materials stored at this site historically are Chrome, Ferrochrome, Ferromanganese, Lead, Tin, Zinc, Aluminum, Rubber, and Tungsten.

PARS is working under contract with the United States Army Corps of Engineers, Louisville, Kentucky to further identify the degree and extent of migration of these metals into the surrounding environment. Wide-spread field sampling was conducted by PARS and sub-contractors, totaling over 80 soil, groundwater, sediment, and surface water samples, to delineate any metal contamination on the grounds. The next stage of

the project will involve PARS to formulate recommendations based on the outcome of the initial field assessment and whether or not remediation is necessary, working towards possible closure of the site.

-Ken Kapcerowski

The New Jersey Site Remediation Reform Act

On May 7, 2009, Governor Corzine Signed the Site Remediation Reform Act (SRRA) into law, hoping to ease the challenge of remediating over 20,000 contaminated sites in New Jersey. Designed in an effort to streamline the oversight of remedial projects, the SRRA will allow licensed site remediation professionals (LSRPs) from the private sector to supervise remedial Actions and certify site closures.

Starting on November 3, 2009, the LSRP Program will put the power to devise the best course of remedial action into the hands of the certified, highly practiced and verifiably responsible professionals, whose decisions will be based on their individual assessments and experience rather than a regulatory standard. Through the SRRA, the New Jersey Department of Environmental Protection (NJDEP) will also authorize LSRPs to sign and certify remediation reports and confirm completion of remediation projects by completing a Response Action Outcome (RAO) document, which will be posted online for the public.

To become an LSRP, each of these professionals will need to meet a list of NJDEP qualifications created to assure a consistency in good judgment, a broad skill set and an upstanding moral commitment to public health and the environment. The LSRP Program is expected to lessen time spent during site investigation and remediation and also allow for more efficient and innovative approaches to each site's specific characteristics.

PARS has anticipated the onset of the new program, and will be following these new procedures as they may be applied to our projects. It is anticipated that the use of LSRPs will permit projects to now move much more quickly from investigation through cleanup and Response Action Outcomes (RAOs) which replace the former No Further Action (NFA) letters.

***Michael Moore PG*, our PARS Environmental Services Director, is one of only 40 people statewide who have been registered with NJDEP to-date as an LSRP. If you have an interest in registering your current NJDEP case under the new SRRA LSRP program, or learning more about this program and its potential impacts, please call Mike Moore at 609-890-7277.**

-Hunter Blair

Milburn Drywell Study

In a collaborative venture with the US Environmental Protection Agency and Township of Milburn, PARS is conducting a study to determine the effectiveness of ordinances in place that require the installation of drywells to capture storm water runoff from roofs and driveways. The initial goal of the ordinance was to reduce flooding on downstream properties, and to decrease the impact on soil erosion and sedimentation.

The first part of the study involves evaluating the drywell system itself through field observations to determine the drawdown rates in various soil conditions. This is a long-term study, and determining maintenance requirements that are needed after 2, 5, and 8 year intervals will also be noted. The ordinance itself will also be examined, to determine if there are any elements that can be improved. This includes the impact on soil erosion, the impact on the storm water sewers. PARS will determine whether additional storm water strategies integrating storage tanks and implementation of 'green roofs' in the public and commercial areas of town would be useful.

The overriding goal of this project is to identify the most effective approach for communities to address water conservation, storm water runoff pollution, and contain costs. This strategy can be applied in communities where there are both combined and separate storm sewer systems. Implementation of this system could greatly reduce the need and cost of large storm water treatment systems, water filtration systems, and flood control projects.

Identifying methods that strive to achieve a green strategy are a necessity in today's world, and the benefits of such strategies, such as potentially saving taxpayers millions of dollars being spent in current flood control and water treatment systems, could eventually be applied nationally.

-Dr. Ramjee Raghavan

EPA Renews Water Pollution Control Act Rules

N.J.A.C. 7:14, the Water Pollution Control Act Rules, expired on October 5, 2009, pursuant to the provisions of Executive Order No. 66 (1978). The EPA moved to extend the expiration date until April 3, 2010, when the rules will be updated and readopted. The Water Pollution Control Act establishes rules governing a variety of practices, such as establishing construction standards for wastewater treatment facilities as well as defining roles and responsibilities of the owner. Procedures for assessment, payment, and settlement of civil administrative penalties for violations of the Act are also outlined in the rules.

-Source: DEP Proposal No. 13-09-09/728

Did you know…

According to the AHERA regulations, "The local education agency shall ensure…that all members of its maintenance and custodial staff (custodians, electricians, heating/air conditioning engineers, plumbers, etc.) who may work in a building that contains ACBM receive awareness training of at least 2 hours, whether or not they are required to work with ACBM. New custodial and maintenance employees shall be trained within 60 days after commencement of employment." Are you in compliance? Ask us how we can help.

Department of Defense Promotes Green and Sustainable Remediation

The Office of the Undersecretary of Defense released a new directive on August 10, 2009, which requires all Department of Defense (DoD) agencies to consider the use of green and sustainable remediation technologies. In a memo titled 'Consideration of Green and Sustainable Remediation Practices in the Defense Restoration Program,' Dorothy Robyn, Deputy Undersecretary of Defense (Installation and Environment), stated that opportunities to increase the use of green technologies occur throughout all phases of remediation (i.e. Site investigation, remedy evaluation, design and construction, operation, monitoring, and site closeout). Several examples of DoD green remediation efforts are detailed in the EPA publication: *Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites*. This publication can be found at http://cluin.org/greenremediation. For further information, contact Kiran Gill at Kgill@parsenviro.com.

Source: Memorandum from the Office of the Undersecretary of Defense

Nano Technologies for a Green and Sustainable Environment

PARS was invited to give several presentations on nano technologies for green and sustainable remediation, using two innovative nanotechnology products, NanoFe™ and Nano-Ox™. These two technologies have been successfully used for the in-situ treatment of soil and groundwater.

NanoFe™ consists primarily of submicron ($<10^{-6}$ m) nano particles of zero valent iron that rapidly destroys recalcitrant contaminants in-situ by the redox process where the Nanoiron serves as the electron donor and the contaminant serves as the electron acceptor. Contaminants treatable by NanoFe™ include halogenated aliphatics (e.g. TCE, PCE, DCE, VC), halogenated aromatics, halogenated herbicides and pesticides and certain metals (chromium, lead, mercury, arsenic).

Nano-Ox™ is a highly efficient chemical oxidant and oxygen release nanotechnology product that is very effective in treating hydrocarbon compounds including BETX, naphthalene, PAHs, jet fuel, heating oil, as well as gasoline additives MTBE, dioxane and ethanol. Nano-Ox™ consists primarily of submicron particles of calcium peroxide. The chemical oxidation occurs by Fenton's reaction through hydroxyl radical generation. This surface chemical oxidation reaction is very fast and occurs immediately on contact with the contaminant. The oxygen release function is programmed for accelerated aerobic bioremediation of hydrocarbons in soil and groundwater.

NanoFe™ and Nano-Ox™ have several technological advantages over conventional treatment technologies. These advantages occur through the innovative application of nanophysics and nanochemistry. This results in a cheaper, better, and faster solution for material injection, subsurface dispersion, remediation reactions, and site closure.

For further information, contact Harch Gill *at Hgill@parsenviro.com*.

PARS Develops MSDS Software

For an ever increasing number of both public and private entities, PARS provides Materials Safety Data Sheets (MSDS) to cover any and all chemicals or substances the site might contain. A preliminary inventory is performed by PARS; once completed, PARS collects and gathers the MSDS for all products. PARS is currently in the process of vastly expanding our database of MSDS, which contains more than 10,000 files. The database is growing weekly, with a projected total of 35,000 MSDS within the next few months. The product files stored on our server are obtained from the manufacturer and are available to clients who wish to compile on-site MSDS databases. Currently we offer hard-copy binders, MSDS databases on CD, and are working on implementing an online accessible version. Contact PARS at 609-890-7277 for further information.

-Julian Fernandez-Obregon

PARS signs CRADA with PPPL

PARS is currently engaged in a Cooperative Research and Development Agreement (CRADA) with Princeton Plasma Physics Laboratory (PPPL) on research into generating peracetic acid in a plasma. This effort is an extension of current hydrogen peroxide experiments that synthesize hydrogen peroxide in plasma. Peracetic acid is a mixture of acetic acid and hydrogen peroxide in a watery solution. The proposed project would involve using the small plasma chamber at PPPL.

A very powerful oxidant, peracetic acid is used mainly in the food industry, where it is applied as a cleanser and disinfectant, yet has applications elsewhere. It is used for disinfecting recycled rinsing water (removing bacteria and fungi), so has 3rd world environmental benefits--it is used in developing nations as a means to clean water supplies. Peracetic acid is also used for the disinfection of medical supplies, to prevent bio film formation, water purification, and as a plumbing disinfectant.

PARS will provide guidance on the project, actively work on the plasma synthesis of peracetic acid, and support the continuation of current hydrogen peroxide development. PARS will also provide specialized materials in support of the project and will perform evaluations on the process of peracetic acid production. This includes equipment for transfer of the generated product to PARS for analysis, and reporting analytical results back to PPPL. Preliminary results will be carried out by PARS personnel at PPPL. The entire effort is projected to take place until September 30, 2010.

-Source: Appendix A of CRADA Statement of Work

PARS ENVIRONMENTAL INC.
500 Horizon Drive, Suite 540
Robbinsville, New Jersey 08691
Telephone: 800.959.1119
609.890.7277
Fax: 609.890.9116
E-mail: info@parsenviro.com