

## Camp Minden, LA

PIKA has completed an in-depth analysis of the accumulated energetics stored at Camp Minden with respect to potential alternative applications to either destroy or recycle the deteriorating propellants and clean burning igniters (CBI). The staggering quantities involved, their current sensitivity (noting the 2012 explosion of the storage bunker) and immediate public safety concerns, suggest the need for a solution that resolves the problem in the shortest time-frame possible.

Our research into available technologies has identified the following approaches:

- Thermal Destruction – Incineration or Open burning
- Caustic Destruction
- Chemical Destruction – additives for de-construction or neutralization of the energetics
- Chemical Reconstruction - additives for recycling into fertilizer products

Balancing public safety from an unplanned detonation or uncontrolled emissions, waste stream generation leading to further treatment, and sheer quantities of material to be neutralized, we have come to the conclusion that there are no readily available single or combination of alternative technologies that can be fielded, to a magnitude of this scale, to safely process the amount of energetics in a timely manner.

After the completion of the comprehensive analysis it was determined that the only technology resulting in successful accomplishment, within the time constraints, for the quantity of energetics in a safe manner is to conduct thermal destruction by open burning. The open burning of the potentially unstable energetics under an accelerated schedule is the best level of protection to personnel and property.

PIKA has a technical team that includes former-Explosive Ordnance Disposal (EOD) Specialists and Unexploded Ordnance (UXO) Technicians from all four Department of Defense (DoD) military services that includes retired Army Colonel Paul Ihrke. Mr. Ihrke is a former Ammunition Plant Commander and Army Representative on the DoD Explosives Safety Board (DDESB) [*see attached resume*]. PIKA has extensive experience in handling and disposal of bulk energetics and conventional munitions and explosives of concern (MEC), decontamination of explosively contaminated production facilities, and onsite emergency destruction of experimental explosives using our mobile thermal convection furnace. PIKA has combustion engineers, a metal fabrication shop, and environmental permit specialists that have designed/deployed several technologies to address various explosive constituents, both in-situ and ex-situ.

PIKA will continue to review these and newer technologies and other options that could promote complete combustion (burning) of the energetics reducing emissions to the ambient air. As such technologies or processes become available in future, PIKA will present these options to the US EPA, Louisiana Department of Environmental Quality (LDEQ) and the Louisiana Army National Guard for further evaluation and consideration.

## **COL. [RET.] PAUL W. IHRKE**

---

**Vice President, Federal Programs, PIKA International, Inc. – Stafford, Texas**

### **EDUCATION/SPECIAL TRAINING**

- B.S., Architectural Construction, Texas A&M University, 1970
- Ordnance Basic Officer's Course, Army, Aberdeen Proving Ground, 01/71-04/71
- Chemical and Biological Training, Ft. McClellan, AL (part of Indian Head EOD School), 04/71
- Explosive Ordnance Disposal School (Basic and Nuclear Phases), Indian Head, MD, 04/71-08/71
- Airborne School, Army, Ft. Benning, GA, 08/71-09/71
- Ranger School, Army, Ft. Benning, GA, 01/73-03/73
- Explosive Ordnance Disposal Refresher Course, Indian Head, MD, 04/77
- Ordnance Officer Advanced Course, Redstone Arsenal, AL, Munitions Management, Distinguished Graduate, 08/77-12/77
- Several Nuclear Weapons Specialty Courses, Sandia National Labs, NM, 05/72-05/76
- Defense Language Institute, Presidio of Monterey, Modern Greek (Distinguished Graduate), 01/78-12/78
- Armed Forces Staff College, Norfolk, VA, Joint Staff Operations, 08/81-02/82
- Training with Industry Program, Litton Data Systems, Van Nuys, CA, Government/Industry Relations, 08/81-07/82
- Basic and Advanced Government Contracting, Fort Lee, VA, 06/83
- Executive Management Program, Rensselaer Polytechnic Institute, Troy, NY, 04/83-08/83
- National Defense Management, Industrial College of the Armed Forces, Non-resident course, June 1983 – June 1985
- United States Army War College, Carlisle Barracks, PA August 1991-June 1992

### **QUALIFICATIONS**

Colonel Ihrke holds over 26 years of successful military service as an Army officer with demonstrated leadership at command and senior staff positions from company level to the Office of the Secretary of Defense. He has experience in installation management, marketing, business development, strategic planning, and resource management. Since military retirement, he has worked in the private sector, first in the area of Unexploded Ordnance (UXO) training and technology and then in plasma technology applications and now in business development. He played a significant role in setting up the UXO and technology divisions of Sudhakar Company, Inc. (SCI). He has extensive

experience in the unexploded ordnance arena and in the homeland defense arena. In both areas, his focus is on the use of innovative technologies. Since military retirement he has worked with four plasma companies to bring commercial applications of plasma technology into the waste to power industry. He has also worked to apply foreign developed plasma and plasma-related technologies to the United States.

Mr. Ihrke has worked on the development and application of UXO and munitions related scrap management systems to include range maintenance and clean up. His efforts also include the capability to remove ordnance from shallow underwater regions. He has also worked on several plasma initiatives to develop and support the use of plasma power for a variety of purposes both in the United States and overseas, focusing on the support areas including the conversion of both steam and gas turbines to run on syngas. Mr. Ihrke has also worked with representatives of the Russian Academy of Science to apply some of their technologies to both the commercial and government arena, with applications having significant impact on industry, law enforcement, and national defense. Other projects Mr. Ihrke has been involved with include assisting companies by helping them develop a blast and fragmentation mitigation system to be used by law enforcement and others to reduce the damage from improvised explosive devices and small radiological, chemical and biological weapons. His most recent efforts involve the use of hot gas generation in the decontamination of explosives, chemical warfare materials and biological hazards. Mr. Ihrke has experience in infrastructure security and remote surveillance operations. He is also an adjunct instructor for the Texas Engineering Extension Service's Unexploded Ordnance Training Program.

## **RELEVANT EXPERIENCE**

- **Vice President of Federal Programs, PIKA International, Inc. Stafford, Texas, 6/05-Current.** Mr. Ihrke is responsible for all aspects of business development and marketing within the federal sector. His main focus has been securing 8a sole source contracts for the near term and building relationships for future competitive success. He also serves as a valuable resource for explosives safety related issues and is a strong proponent for the use of various technological solutions to unique problems. Because of his experience he also serves as point man for special projects. Mr. Ihrke joined PIKA shortly after it received its Small Business 8a status and has played a key role in making PIKA one of the most successful 8a companies in the industry.
- **Director of Federal Programs, MKM Engineers, Stafford, Texas, 1/03-5/05.** Mr. Ihrke was responsible for liaison with all federal DOD and DOE agencies on behalf of MKM Engineers' contracts. He also had the lead role in DoD sales and marketing and related business development. In addition, he served as a field advisor on the Army Contaminated Equipment Retrograde Team (ACERT) contract with the Joint Munitions Command in Kuwait and provided technical and operational assistance on other munitions response and explosives related programs and provided technical assistance for MKM's remote surveillance systems.

- **Director of Support Operations, DAE Technologies, Houston, Texas, 8/01-7/02.** Took the lead on a number of plasma-based gasification and recycling projects. These included projects supporting the recycling of petrochemical wastes and batteries and waste to energy programs with major power companies. Responsible for support operations that included the incorporation of both gas and steam turbines for power applications. Also worked with both governmental and private entities to develop and commercialize a number of foreign-developed plasma technologies. These have both commercial and military applications especially in the areas of pulse power and other advanced plasma and electromagnetic pulse power technologies.
- **Vice President for Marketing, Plasma Applications Group, Inc. (PAG), Houston, Texas, 1/99-8/01.** Concentrated on developing plasma-based power plant and gasification projects along with efforts to obtain funding for both PAG and individual projects. Worked closely with local officials to secure support for projects in California, Louisiana, Massachusetts, Alabama and Texas. Also assembled a formidable team to perform the engineering, fabrication and construction of the plants. Spent a considerable amount of time studying the electric power industry to better apply the plasma technology and match internal power requirements with overall output.
- **Senior Vice President, Sudhakar Company, Inc. (SCI), Houston, Texas, 2/97-12/99.** Responsible for all international business development, with special emphasis on technology applications for UXO remediation and plasma applications for waste to fuel conversions, waste to water conversions, pollution abatement and ore reduction operations. Served as Program Manager for the International UXO Training Program at Texas A&M, and was responsible for SCI's Houston, Texas Office. Held the lead role in setting up the UXO and technology divisions of SCI and was the driving force behind the founding and operation of the International UXO Training Program (IUTP) with the Texas Engineering Extension Service at Texas A&M. Because of these efforts, the IUTP is the only commercial program certified by the Department of Defense to train and certify UXO Level One Technicians. He also played a key role in obtaining UXO related contracts from various DoD organizations.

## **MILITARY-ARMY**

- **Army Military Representative, Department of Defense Explosives Safety Board, Arlington, VA, 8/94-3/97.** Spearheaded Department of Defense (DoD) level efforts for the Deputy Under Secretary of Defense for Environmental Security to resolve technology challenges in the UXO Clearance Mission. Organized and served as Executive Secretary for the 1996-97 Defense Science Board Study on UXO Operations and Related Technologies. Served on the board that developed the organization criteria for the Joint UXO Coordination Office (JUXOCO). Played a major role in developing DOD level policy for UXO operations. Chosen to represent the DOD on special missions to Estonia and Austria. Conducted explosives safety inspections of DOD and allied facilities worldwide and chaired the North Atlantic Treaty Organization (NATO) Subcommittee responsible for munitions and explosives

storage and safety requirements. Worked extensively with all levels of command and numerous foreign governments.

■ **Munitions Chief, United States Pacific Command, Camp Smith, HI, 7/92-8/94.**

Managed munitions logistics operations for the United States' largest joint command that included approximately one-third of the United States' war reserve munitions assets. Directed all joint explosive ordnance disposal operations, to include support for Joint Task Force Full Accounting (the joint effort to locate, return, and identify the remains of Americans killed and left in Southeast Asia). Enhanced the explosives safety posture of the command and initiated the transition to support the containerization of munitions for the Pacific Theater. Organized the services' munitions activities into a cohesive, cooperative team, streamlining operations and greatly enhancing problem solving. Served on the Operational Planning Team for the Commander and led the Joint Logistics Cell during crisis operations.

■ **Commander, Lone Star Army Ammunition Plant, Texarkana, Texas, 7/89-8/91.**

Commanded the most versatile ammunition plant in the Army (valued at about \$1 billion) with over 2,000 government and contractor personnel, producing everything from small detonators to sixteen-inch diameter battleship ammunition. Accumulated an outstanding safety, quality and production record. The most important contribution at Lone Star resulted in a significant improvement in teamwork between the government and contractor personnel. This saved a tremendous amount of time and other resources in resolving problems and increasing the effectiveness of the operation. This also improved safety and morale.

■ **Staff Officer, Army Materiel Command, Alexandria, VA, 5/88-7/89.** Responsible for the strategic planning and oversight of all Army ammunition plants, and served as the Executive Secretary for the Joint General Officer Steering Group for Insensitive Munitions (IM). Provided the initiative to set up an official IM office in the Army and directed the effort to develop and fund the IM program.

■ **Executive Officer, 6th Ordnance Battalion, Camp Ames, Korea, 5/87-5/88.**

Served as the Executive Officer and Deputy Installation Commander for the Army's largest ammunition battalion. Responsibilities included leading the Battalion staff and managing the installation. He played a key role in the safe and effective execution of the Battalion's munitions management mission (including storage, transportation, surveillance, maintenance, record keeping and security) which was key to supporting the mandated treaty agreement with the Republic of Korea. He developed and ran the officer professional development program. This program enhanced not only the leadership skills, but also the related professional skills of oral and written communication and problem solving. Worked closely with both United States and Korean organizations to effectively run the installation and provide the appropriate level of support for all personnel to include troop morale and welfare programs and community relations.

- **Staff Officer, Department of the Army, The Pentagon, Washington DC, 12/84-4/87.** Served as the Department of the Army Systems Coordinator (DASC) for tank ammunition and direct fire anti-armor munitions involving procurements of over \$400M per year. Spearheaded Department of the Army efforts to type classify the AT4 Anti-Armor Munition and all 120mm first generation main battle tank ammunition for the M1A1 Abrams Tank.
- **Contracting Officer at Watervliet Arsenal, NY, 01/83-12/84.** Served as the Contracting Officer for the Renovation of Armament Manufacturing Program (REARM), responsible for retooling the Arsenal to modern computer numeric controlled machine tool technology (\$1 million approval and unlimited contracting warrant). This tooling was required for the production of howitzer, canon and main tank gun barrels.
- **Operations Officer and Company Commander, 138<sup>th</sup> Ordnance Company, Ellefsis, Greece, 01/79-07/81.** Served in a variety of leadership positions to include installation and weapons security, weapons maintenance, communications security, operations and finally served as the company commander. The unit was responsible for the storage and maintenance of both special and conventional weapons systems and country-wide weapons system support.
- **Commander, 38<sup>th</sup> Ordnance Detachment (EOD), Ft. Stewart, GA. 04/74-08/77.** Provided EOD support for 66 counties in Southeast Georgia and Northeast Florida to include range and training support to Fort Stewart, GA and Camp Blanding, FL. Provided extensive support for Secret Service during the 1976 elections along with continuous support to other federal and local law enforcement agencies such as the FBI and BATF. He worked closely with law enforcement personnel at all levels and played a key role in working with the BATF to set up the initial explosives training program at the Federal Law Enforcement Training Center at Glynco, Georgia. During the 1977 EOD Operational Readiness Test at Redstone Arsenal, AL Captain Ihrke's unit scored the highest rating recorded to date and each member of the unit received a letter of commendation.
- **Platoon Leader and Company Commander, Company C and Combat Support Company, 38<sup>th</sup> Infantry Battalion, 2<sup>nd</sup> Infantry Division, Camp Hovey, Korea, 04/73-04/74.**
- **Commanding Officer, 137<sup>th</sup> Ordnance Detachment (EOD), Corpus Christie, Texas, 9/71-1/73.**

## PROFESSIONAL ORGANIZATIONS/ASSOCIATIONS

Member, Society of American Military Engineers, Houston Chapter  
 Member, National Defense Industrial Association

Benefactor Member, National Rifle Association

## **PUBLICATIONS**

Various presentations to professional societies

## **EMPLOYMENT HISTORY**

2005 – Present	PIKA International, Inc. 12723 Capricorn Drive Stafford, Texas 77477
2003 – 2005	MKM Engineers, Inc. 4153 Bluebonnet Drive Stafford, Texas 77477
2001-2002	DAE Technologies
1999-2001	Plasma Applications Group
1997-1999	Sudhakar Co., Inc.
1971-1997	US Army

## **SECURITY CLEARANCES**

DOD Top Secret Clearance with CNWDI and SCI (all expired 1998)

**MILITARY EXIT RANK AND BRANCH:** Colonel, US Army

**YEARS MILITARY SERVICE:** 26 plus [1971-1997]